

# OFFICERS' Pulse

ISSUE NO. 33 | 20TH JANUARY TO 26TH JANUARY

## Coverage.

The Hindu  
PIB  
Yojana  
Rajya Sabha TV  
All India Radio

## At a Glance & In Depth.

Polity and Social Issues  
Economy  
International Relations  
Environment  
Science and Tech  
Culture..

**CURRENT AFFAIRS  
WEEKLY**

**THE PULSE OF UPSC AT  
YOUR FINGER TIPS.**



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# News @ a glance

## Polity and social issues

### Fool-proof Nature of EVMs

#### Why it is in news?

- An event claiming to demonstrate EVMs used by ECI can be tampered with, has been organised in London.

#### About Electronic Voter Machines (EVMs):

- EVMs used in elections are manufactured in Bharat Electronics Limited (BEL) and Electronics Corporation of India Limited (ECIL) under very strict supervisory and security conditions and there are rigorous Standard Operating Procedures meticulously observed at all stages under the supervision of a Committee of eminent technical experts constituted way back in 2010.

#### ECI reaffirms Non-Tamper ability of EVMs

- In the wake of the motivated controversy about ECI EVMs, attempted to be created by one so called 'cyber expert', the Technical Experts Committee (TEC) members - Prof D T Shahani, Prof Emeritus IIT Delhi and Prof Rajat Moona, Director IIT Bhilai and Prof D K Sharma, Prof Emeritus IIT Bombay (Mumbai), have reconfirmed to the ECI today that:
  - The ECI-EVMs are stand-alone machines designed to connect only amongst ECI-EVM units (Ballot Unit, Control Unit and VVPAT) through cables that remain in full public view.
  - There is no mechanism in ECI-EVMs to communicate with any device through wireless communication on any Radio Frequency.
  - All versions of ECI-EVMs are regularly and rigorously tested against low to high wireless frequencies. These tests include and go beyond the standard tests specified for electronic equipments
- ECI-EVMs are regularly tested for proper functioning under all kind of operating conditions.
- ECI-EVMs are also regularly tested for code authentication and verification.

### We won't be bullied into giving up EVMs, says CEC

- The Election Commission of India recently, put to rest all speculation over whether ballot papers would be used in the 2019 Lok Sabha Elections.
- Speaking at an event in the national capital, Chief Election Commissioner Sunil Arora said that there was no question of returning to the era of ballot papers. "I would like to make it very clear that we are not going back to the era of ballot papers," CEC Arora said.
- "We will continue to use EVMs and VVPATs. We are open to criticism and feedback from any stakeholder, including political parties. At the same time, we are not going to be intimidated, bullied or coerced into giving up these and start era of ballot papers," Arora said at the event.

### National Girl Child Day

#### Why it is in news?

- The Women & Child Development Ministry celebrates National Girl Child Day (NGCD) on the 24th January, 2019
- The programme will also observe **anniversary of Beti Bachao Beti Padhao (BBBP) Scheme**. The theme of this NGCD is "**Empowering Girls for a Brighter Tomorrow**" and celebrating with **objectives of generating awareness on the issue of declining Child Sex Ratio (CSR)** and create a positive environment around valuing the girl child.
- A booklet on "**Innovations under BBBP**" will also be released on the occasion. These innovations have been categorized according to five themes, which are **Survival, Protection, Education, Participation and Valuing Girls**.

#### Background on BBBP

- Beti Bachao Beti Padhao (BBBP) Scheme was launched by Hon'ble Prime Minister on 22<sup>nd</sup> January, 2015 at Panipat in Haryana.

**The main objectives of the e-Court Project are as follows:**

- Out of 640 districts, **405 districts** are covered under **advocacy & multi-sectoral action** while the remaining 235 districts are covered under **media advocacy & outreach**. It is a **tri-ministerial effort of Ministries of Women and Child Development, Health & Family Welfare and Human Resource Development**.
- **BBBP Scheme is a Central Sector Scheme with 100% financial assistance for District level component and the fund are directly released to the DC/DM's account for smooth operation of the Scheme.**
- **BBBP is a comprehensive programme to address the declining Child Sex Ratio (CSR) and related issues of empowerment of women over a life-cycle continuum.**
- The CSR, defined as **number of girls per 1000 boys in the age group of 0-6 years**. The specific objectives of the scheme include **preventing gender biased sex selective elimination; ensuring survival and protection of the girl child and ensuring education and participation of the girl child**.
- The improving trend in Sex Ratio at Birth (SRB) by 9 points has been seen at all India level from 918 in F.Y. 2014-15 to 927 in F.Y. 2017-18 (up to January, 2018) in as per HMIS report received from Ministry of Health and Family Welfare, shows the effectiveness of the BBBP campaign.

## e-Courts through CSC

### Why it is in news?

- Court case information such as judicial proceedings/decisions, case registration, cause list, case status, daily orders, and final judgments of all computerized district and subordinate courts of the country will now be available across all Common Service Centers in the country.
- The E-Courts Project was conceptualised on the basis of "National Policy and Action

### About e-Courts project:

- The E-Courts Project was conceptualised on the basis of "National Policy and Action

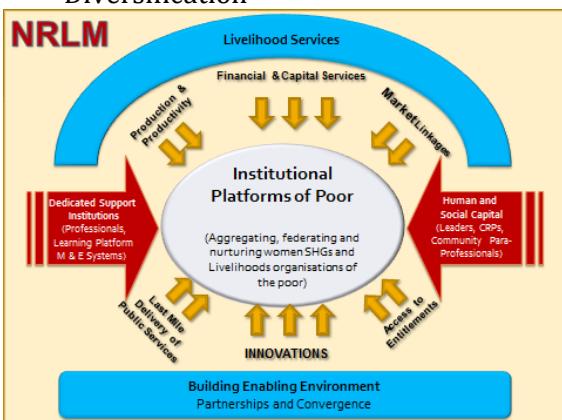
- To ensure affordability, Department of Justice has decided not to charge any fee from the customers for eCourts related services delivered through CSC's. However towards cost of service, CSC's has been authorized to charge Rs.5/- for any of the 23 services available on Courts portal. Printing charges will be Rs.5/- per page, if it is more than one page.

## Deenadayal Antyodya Yojana

**National Rural Livelihood Mission - Reducing Poverty through Livelihood Diversification**

### Why it is in news?

- The pace of **reduction of poverty** in India has speeded up in recent years as per **the Global Multi-dimensional Poverty Index 2018** as also the note published by **the Brookings Institution**.
- Deenadayal Antyodya Yojana** is also found to be one of the reason for reducing poverty in rural areas through Livelihood Diversification



### About Deenadayal Antyodya Yojana - National Rural Livelihood Mission:

- The Deendayal Antyodya Yojana – National Rural Livelihoods Mission (DAY-NRLM) is aimed at alleviation of rural poverty through building sustainable community institutions of the poor.
- It seeks to mobilize **about 9 crore households into SHGs** and link them to **sustainable livelihood opportunities** by building their skills and enabling them to access formal sources of finance, entitlements and services from both public and private sectors.
- It envisaged that **the intensive and continuous capacity building of rural poor women will ensure their social, economic and political empowerment and development**.

### Key Features

- Universal Social Mobilisation** - At least one woman member from each identified rural poor household, is to be brought under the Self Help Group (SHG) network in a time bound manner. Special emphasis is particularly on vulnerable communities such as manual scavengers, victims of human trafficking, Particularly Vulnerable Tribal Groups (PVTGs), Persons with Disabilities (PwDs) and bonded labour. NRLM has devised special strategies to reach out to these communities and help them graduate out of poverty.

- Participatory Identification of Poor (PIP)** - The inclusion of the target group under NRLM is determined by a well-defined, transparent and equitable process of participatory identification of poor, at the level of the community. All households identified as poor through the PIP process is the NRLM Target Group and is eligible for all the benefits under the programme. Target Group is identified through the Participatory Identification of Poor (PIP) method. The NRLM Target Group (NTG) derived through the PIP is de-linked from the BPL.

- Community Funds as Resources in Perpetuity** - NRLM provides Revolving Fund (RF) and Community Investment Fund (CIF) as resources in perpetuity to the institutions of the poor, to strengthen their institutional and financial management capacity and build their track record to attract mainstream bank finance.

- Financial Inclusion** - NRLM works on both demand and supply sides of financial inclusion. On the demand side, it promotes financial literacy among the poor and provides catalytic capital to the SHGs and their federations. On the supply side, the Mission coordinates with the financial sector and encourages use of Information, Communication & Technology (ICT) based financial technologies, business correspondents and community facilitators like 'Bank Mitras'. It also works towards universal coverage of rural poor against risk of loss of life, health and assets. Further, it works on remittances, especially in areas where migration is endemic.

- Livelihoods** - NRLM focuses on stabilizing and promoting existing livelihood portfolio of the poor through its three pillars – 'vulnerability reduction' and 'livelihoods'

enhancement' through deepening/enhancing and expanding existing livelihoods options and tapping new opportunities in farm and non-farm sectors; 'employment' - building skills for the job market outside; and 'enterprises' - nurturing self-employed and entrepreneurs (for micro-enterprises).

- **Convergence and partnerships**

- **Convergence:** NRLM places a high emphasis on convergence with other programmes of the MoRD and other Central Ministries. Convergence is also sought with programmes of state governments for developing synergies directly or indirectly with institutions of the poor.
- **Partnerships with NGOs and other CSOs:** NRLM has been proactively seeking partnerships with Non-Government Organizations (NGOs) and other Civil Society Organizations (CSOs), at two levels - strategic and implementation. The partnerships are guided by NRLM's core beliefs and values, and mutual agreement on processes and outcomes. Partnership guidelines to partner with NGOs, CSOs have been finalized and approved this year.
- **Linkages with PRIs:** In view of the eminent roles of Panchayat Raj Institutions (PRIs), it is necessary to consciously structure and facilitates a mutually beneficial working relationship between Panchayats and institutions of the poor, particularly at the level of Village Panchayats. Formal platforms would be established for regular consultations between such institutions and PRIs for exchange of mutual advice, support and sharing of resources.

Officers IAS Academy, Chennai

- Jan Shikshan Sansthans (JSSs) are established to provide vocational training to non-literate, neo-literate, as well as school drop outs by identifying skills as would have a market in the region of their establishment.
- Formerly under the Ministry of Human Resources Development, **Jan Shikshan Santhan** has been transferred to the **Ministry of Skill Development & Entrepreneurship in 2018.**

#### Scope of Work:

The Scope of Work of Jan Shikshan Sansthans (JSSs) will include the following:

- Develop/ Source appropriate curriculum and training modules covering vocational elements general awareness and life enrichment components.
- Wherever possible, JSS are encouraged to undertake
- Training equivalent to courses designed by the Directorate of Adult education, National Institute of Open Schooling and Director General Employment & Training.
- Provide training to a pool of resource persons and master trainers for conducting training as also availability of infrastructure and training - specific equipment.
- Administer simple tests and award certificates
- Network with employers and industries for trainees to get suitable placements.
- In a bid to boost skill training and entrepreneurship in the remotest corners of the country, Shri Dharmendra Pradhan, Minister of Skill Development and Entrepreneurship, Petroleum and Natural Gas (MSDE) announced **comprehensive reforms for Jan Shikshan Santhan (JSS)**, to further strengthen the skills ecosystem benefiting those in the underprivileged sections of society.
- The Ministry considers Jan Shikshan Santhan (JSS) has been instrumental in skill training and introducing avenues of entrepreneurship among the socio-economically backward and educationally disadvantaged groups such as neo-literates, semi-literates, SCs, STs, women and girls, slum dwellers, migrant workers.
- By bringing them under the aegis of the national skill framework, the agenda of

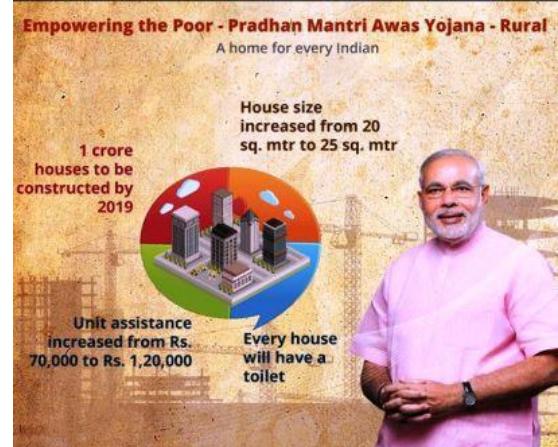
## Jan Shikshan Sansthans

### Why it is in news?

- Shri Dharmendra Pradhan Minister for Skill & Development Ministry launches new reforms, guidelines to strengthen Jan Shikshan Santhans (JSS)

### About Jan Shikshan Sansthans:

## About Pradhan Mantri Awas Yojana (Grameen):



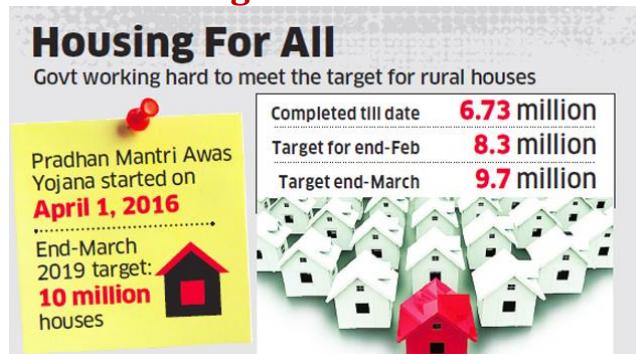
today's event was to align all skilling activities to a common cause of skill development at the district and gram level.

### Release of New Guidelines

The launch of these strategic guidelines is an attempt by the MSDE to re-energize and reinvigorate the Jan Shikshan Sansthanas. By aligning JSSs to the National Skill Framework, the Government aims to provide standardised training across sectors. Key highlights of the guidelines are:

- Alignment of JSS course and curriculum to National Skill Qualification Framework (NSQF) to standardize training
- Decentralization of powers for JSSs- giving more accountability and independence to district administration
- To identify and promote traditional skills in the district through skilling / upskilling;
- Evidence based assessment system
- Easy Online certification
- Linking JSS to PFMS (Public Finance Management system) maintaining transparency and accountability of the ecosystem
- Creating livelihood linkages
- Training of Trainers to develop the capacity through NSTIs (National Skills Training Institutes)

### Rural housing



### Why it is in news?

- The Government's flagship program Housing for All in rural areas has only achieved 66% of target.
- The government had aimed to complete 10 million houses in the first phase under the Pradhan Mantri Awas Yojana-Gramin (PMAY-G), the rural component of the scheme, by the end of the current fiscal. So far, about 6.7 million houses have been completed and 1.7 million are in the final stages of construction.

- Housing is one of the basic requirements for human survival. For a normal citizen owning a house provides significant economic and social security and status in society. For a shelter less person, a house brings about a profound social change in his existence, endowing him with an identity, thus integrating him with his immediate social milieu.
- In pursuance to the goal - Housing for all by 2022, the **rural housing scheme Indira Awas Yojana has been revamped to Pradhan Mantri Awas Yojana - Gramin** and approved during March 2016.
- Under the scheme, financial assistance is provided for construction of pucca house to all houseless and households living in dilapidated houses. It is proposed that one crore households would be provided assistance for construction of pucca house under the project during the period from 2016-17 to 2018-19.
- The scheme would be implemented in rural areas throughout India except Delhi and Chandigarh. The cost of houses would be shared between Centre and States.

### Funding Pattern:

- Under PMAY, the cost of unit assistance is to be shared between Central and State Governments in the ratio 60:40 in plain areas and 90:10 for North Eastern and hilly states.
- The unit assistance given to beneficiaries under the programme is Rs 1,20,000 in plain areas and to Rs 1,30,000 in hilly states/difficult areas /Integrated Action Plan (IAP) for Selected Tribal and Backward Districts. Presently the NE States, States of HP, J&K and Uttarakhand and all 82 LWE districts are identified as difficult and hilly areas. The unit size is 25

- sq.m including a dedicated area for hygienic cooking.
- The beneficiary is entitled to 90 days of unskilled labour from MGNREGA.
  - The beneficiary would be facilitated to avail loan of up to Rs.70,000/- for construction of the house which is optional.
  - Funds will be transferred electronically directly to the account of the beneficiary.

#### **Why problem in achieving the target?**

- Due to unavailability of land, the states are unable to allocate land to the beneficiaries for house construction.
- However, the Centre had written to the states about a large number of landless poor not being sanctioned houses because of land unavailability, and asked States to speed up the process of land allocation.

## **Meghalaya-regulated coal mining**

#### **Why it is in news?**

- National Green Tribunal has banned rat-hole mining in the state of Meghalaya after the Assam-based All Dimasa Student's Union and Dima Hasao district committee filed a petition, stating the acidic discharge from unscientific coal mines of Meghalaya was polluting **the Kopili river** downstream.
- Also in Meghalaya recently a mine collapsed and rescue operations are still underway. It also said that the Coal Mines are used as disposal pits of bodies by murderers.
- The court had also directed to put an end to rat hole mining, the Meghalaya government should evolve an appropriate scheme and statutory rules , plan to submit to the court.
- However the Chief Minister of the state Mr Sagma said recently, "There is a need to have regulated mining in Meghalaya with utmost care on safety of miners and environment. The ban on mining has affected **the socio-economic condition of the people who are dependent on coal as well as loss of revenue generation for the State**"

#### **Rat-hole coal mining:**

- The method of rat-hole mining involves digging pits ranging from five to 100 m<sup>2</sup> into the ground to reach the coal seam. Thereafter, tunnels are made into the seam sideways to extract he coal. Coal seams are reached by excavating the side edge of the

Officers IAS Academy, Chennai hill slopes and then coal is extracted through a horizontal tunnel.

- The coal from the tunnel or pit is taken out and dumped on nearby un-mined area, from where it is carried to the larger dumping places near highways for its trade and transportation.
- The impact of such mining activities is in the water quality of the region. The water in the region is severely affected by acid mine drainage originating from mines and spoils, leaching of heavy metals, organic enrichment and silting by coal and sand particles.
- The pollution of the water, can be gauged by the colour of water which in most of the rivers and streams in the mining area varies from brownish to reddish orange. The water **also has high concentration of sulphates, iron and toxic heavy metals, low dissolved oxygen (DO) and high BOD**, showing its degraded quality. The roadside dumping of **coal is a major source of air, water and soil pollution too**. Off road movement of trucks and other vehicles in the area for coal transportation also adds to the **ecological and environmental damage of the area**.
- Mining activity in Jaintia hills is a small-scale venture controlled by individuals who own the land, it is a primitive mining method and has been in practice in Jaintia hills and the state for years now.

## **Long-term visas to minorities**

#### **Why it is in news?**

- Union Home Ministry has said in response to a Right to Information (RTI) request filed by *The Hindu* that only 230 Hindus from Pakistan and four Sikhs from Afghanistan had been given long-term visas (LTVs) till September 2018.
- In response to an RTI query on the "number of long-term visas given to Hindus, Jains, Sikhs, Parsis, Christians and Buddhists from Pakistan, Afghanistan and Bangladesh from January 1, 1990 to September 6, 2018", the Home Ministry said, "As per the available information no. of certificates issued to Pakistani Hindus are 230, and Afghanistani Sikhs are 4.
- No other information is available to the undersigned CPIO (Central Public Information Officer)."



**NUMBER GAME** The various replies provided by the government on long-term visas (LTV) issued to Hindus from Pakistan suggest a mismatch

- MHA in an RTI reply LTVs granted till September 2018: 230
- Minister Kiren Rijiju's reply in Rajya Sabha on August 8, 2018 Visas given to Pakistan nationals between 2016 and 2018: 9,152
- According to an MHA official, the number of visas granted between 2011 and 2014: 14,726
- Submissions before JPC LTVs granted to Hindus from Pakistan, Afghanistan and Bangladesh so far: 25,447

- The Long-Term Visas were introduced in 2011 for persecuted Hindus from Pakistan by the then United Progressive Alliance **government**. Those granted to Pakistani Hindus from 2011 to 2014 stood at 14,726.
- Submissions by the Ministry before the Joint Parliamentary Committee on the Citizenship (Amendment) Bill say that till now, 31,313 persons belonging to the minority communities (25,447 Hindus, 5,807 Sikhs, 55 Christians and two each Buddhists and Parsis) have been given the Long-Term Visas, a precursor to Indian citizenship, on the basis of their claim of religious persecution.
- **These persons will be the immediate beneficiaries of the contentious Citizenship Amendment Bill, 2019** that proposes to grant citizenship to Hindus, Jains, Sikhs, Parsis, Christians and Buddhists from Pakistan, Afghanistan and Bangladesh who **came to India before December 31, 2014**. The Bill, passed by the Lok Sabha on January 8, is pending in the Rajya Sabha.
- So there are different numbers given by Centre at different instances, leading to confusion in the public domain.

## Collegium Controversy

### Why it is in news?

- The Collegium recently changed its earlier decision over appointment of certain judges to Supreme Court and recommended names of new judges for appointment to the top court.

### What is the controversy?

- The Collegium dropping the names of two judges considered earlier and the reasons given for changing its decision.
- Several reasons have been assigned as to why the Collegium led by Chief Justice Gogoi changed its mind after December 12.
- These include unauthorised media leaks, "additional materials",

- Officers IAS Academy, Chennai intervening Winter vacation and subsequent change in the composition of the Collegium on the retirement of Justice Madan B. Lokur during the holidays.
- Finally, it has been reported that the CJI has the last word in recommendations for appointment to the Supreme Court

In the backdrop of the controversy over the appointment of Justice Sanjiv Khanna, a **1998 opinion** by the Supreme Court may shed light on the questions raised by the episode.

- **The Second Judges Case** (Supreme Court Advocates on Record Association versus Union of India) judgment in October 1993, and later the **court's opinion in the 1998 Special Reference**, confirm that "strong cogent reasons" should be the basis for appointing a judge to the Supreme Court by superseding others senior to him.
- Finally, both the **1993 judgment and 1998 opinion** have held that the CJI's "final opinion" is not merely his individual opinion. The CJI's opinion "must necessarily have the element of plurality in its formation"
- The 1998 Special Reference case explains that when a Collegium judge retires in the midst of an appointment process and reasons are later made available for the non-appointment of the person under consideration, such reasons should be placed before the newly constituted Collegium.
- It is not clear that whether such strong reasons for non-appointment are placed before the newly constituted collegium, and the recent episode of controversy in collegium over appointment is a first of its kind for changing its earlier decisions.

## Oral mentioning

### Why it is in news?

- Chief Justice of India Ranjan Gogoi informed recently in a courtroom that new guidelines have been settled by which urgent cases would automatically come up before a Bench for hearing within four days of their being filed.
- "We are trying to get rid of urgent mentioning before the court, which unnecessarily takes away time," the Chief Justice said.
- If such cases did not come up for hearing, the lawyers concerned could

**make a mention before the Registrar to have their cases listed**, The CJI said.

#### **What is oral mentioning?**

- Oral mentioning is a convention by which lawyers find a way to short-circuit the long-winded filing procedures and **make a direct appeal to the CJI**, who is the court's administrative head and master of roster, for early hearing.
- The CJI takes a call on the spot, after glancing through the case papers, whether the case deserves to be heard out-of-turn. Hearing a case out-of-turn would mean pushing other cases off the list.
- The CJI has often complained about how a case orally represented by a lawyer during mentioning does not later, when the judges read the papers in detail, turn out to be not as urgent as it was initially made out to be by the lawyer.
- "For over an hour everyday, the CJI is made to read the case papers just to see whether a case mentioned is important enough to deserve an urgent hearing...this is a waste of judicial time," Chief Justice Gogoi had once complained in court.

## **Northeast autonomous councils**

#### **Why it is in news?**

- The Union Cabinet recently approved a Constitutional amendment to increase the financial and executive powers of the 10 autonomous councils in the Sixth Schedule areas of the northeast.

#### **Proposed Constitutional Amendment:**

- As per the proposed amendment, at least one third of the seats would be reserved for women in the village and municipal councils in the Sixth Schedule areas of Assam, Mizoram and Tripura.
- The amendment also provides for transfer of additional 30 subjects including departments of Public Works, Forests, Public Health Engineering, Health and Family Welfare, Urban Development and Food and Civil Supply to Karbi Anglong Autonomous Territorial Council and Dima Hasao Autonomous Territorial Council in Assam.
- Amendment to Article 280 and Sixth Schedule of the Constitution is also

Officers IAS Academy, Chennai proposed. The most important part of these amendments is that these will significantly improve" the financial resources and powers of the autonomous districts councils in Assam, Meghalaya, Mizoram and Tripura, fulfilling long-standing aspirations of the tribal population in these North-eastern States," the government said.

#### **Effects of the Amendments for the 6<sup>th</sup> Schedule States:**

- The proposed amendments provide for elected village municipal councils, ensuring democracy at the grass-roots level.
- The village councils would be empowered to prepare plans for economic development and social justice including those related to agriculture, land improvement, implementation of land reforms, minor irrigation, water management, animal husbandry, rural electrification, small scale industries and social forestry.
- The State Election Commissions would hold elections to the autonomous councils, village and municipal councils in the areas of Assam, Mizoram and Tripura. There would be a provision for anti-defection too.
- Meghalaya has for the time being opted out of the provision for elected village and municipal councils and one-third reservation for women.
- The amendment proposes renaming the existing autonomous councils as Karbi Anglong Autonomous Territorial Council (KAATC), Dima Hasao Autonomous Territorial Council (DHATC), Garo Hills Autonomous Territorial Council (GHATC), Khasi Hills Autonomous Territorial Council (KHATC), Jaintia Hills Autonomous Territorial Council (JHATC) and Tripura Tribal Area Autonomous Territorial Council (TTAAC) as the present jurisdiction of these councils extend to more than one district.
- There would also be an increase in the numbers of seats: in KAATC (from 30 to 50 seats), DHATC (30 to 40 seats), GHATC (30 to 42), KHATC (30 to 40) and JHATC (30 to 34).

## Economy

### UDAN 3.0 results

#### UDAN scheme

- In 2017, the Ministry of Civil Aviation launched the Regional Connectivity Scheme (RCS) " UDAN" (Ude Desh Ka Aam Naagrik) which aims at providing connectivity to un-served and under-served airports of the country through revival of existing air-strips and airports to make flying affordable to the common man.
- UDAN has a unique market-based model. Airline routes are allocated to operators selected through a competitive bidding mechanism.
- Airlines have to set aside 50% of the total aircraft capacity for cheaper fares to be offered at the rate of Rs 2,500 per hour of flight, in return for which airlines are given a subsidy by the Centre and the State government concerned.

#### Why in News?

- Following the third round of bidding under UDAN, the union Minister for Civil Aviation and Commerce Suresh Prabhu has handed over the letters of award to successful Airlines.
- The proposals identified to be awarded would add another 69.30 lakh seats annually across the RCS Routes. This is in addition to the number of seats created under UDAN 1 (13 lakh) and UDAN 2 (29 lakh).
- The success of UDAN 3 has come on the back of strong performance of UDAN 1 and UDAN 2. Out of 46 Unserved Airports and 16 Underserved Airports awarded in UDAN 1 and UDAN 2, operations have commenced on 23 Unserved Airports and 15 Underserved Airports respectively.

#### Key Features of UDAN 3

- Inclusion of Tourism Routes under UDAN 3 in coordination with the Ministry of Tourism
- Inclusion of Seaplanes for connecting Water Aerodromes, and
- Bringing in a number of routes in the North-East Region under the ambit of UDAN

### Baba Kalyani Group Report on SEZ

#### What is a Special Economic Zone (SEZ)?

- SEZ is a specifically delineated **duty-free enclave** and deemed to be foreign territory for the purposes of trade operations and duties and tariffs.
- SEZs' economic laws are more liberal than a country's typical economic laws. India's SEZ policy offers various fiscal and regulatory incentives to the developers within the zone like exemption from customs duties, central excise duties.
- The idea was to create a level playing field to the domestic enterprises and manufacturers to be competitive globally.

#### Statutory provisions

- THE SPECIAL ECONOMIC ZONE ACT 2005 provides for the establishment, development and management of the SEZs for the promotion of exports and for the matters connected therewith.

#### Baba Kalyani Group Report

- In November 2018 the committee headed by Baba Kalyani, which was constituted to study the SEZ Policy of India, submitted its report to the Government.

#### Key recommendations

- Framework shift from export growth to broad-based Employment and Economic Growth (Employment and Economic Enclaves-**3Es**).
- Formulation of separate rules and procedures for manufacturing and service SEZs.
- Shift from supply driven to demand driven approach for 3Es development to improve efficiency of investment-based on certain industries, current level of existing inventory in the region.
- Enabling framework for Ease of Doing Business (EoDB) in 3Es in sync with State EoDB initiatives. One integrated online portal for new investments, operational requirements and exits related matters.
- Enhance competitiveness by enabling ecosystem development by funding high speed multi modal connectivity, business services and utility infrastructure. Critical to provide support to create high quality infrastructure either within or linked to the zones eg. High Speed Rail, Express

- roadways, Passenger/Cargo airports, shipping ports, warehouses etc.
- Promote integrated industrial and urban development- walk to work zones, States and center to coordinate on the framework development to bring linkages between all initiatives.
- Procedural relaxations for developers and tenants to improve operational and exit issues.
- Export duty should not be levied on goods supplied to developers and used in manufacture of goods exported.
- Infrastructure status to improve access to finance and enable long term borrowing.
- Promote MSME participation in 3Es and enable manufacturing enabling service players to locate in 3E.
- Dispute resolution through arbitration and commercial courts.

#### Why in News?

- Department of Commerce, Ministry of Commerce & Industry has invited suggestions/comments on the recommendations of the report.

## Inter-state trade through e-NAM

### About e-NAM

- The e-NAM platform is a pan-India electronic trading portal to network the existing physical regulated wholesale market (known as APMC market) through a virtual platform to create a unified national market for agricultural commodities.
- Launched in 2016 in 21 Mandis across 8 States, the e-NAM portal has integrated 585 Regulated Markets on the common e-market platform in 16 States and 2 Union Territories with trading in 124 commodities.
- e-NAM platform promotes better marketing opportunities for the farmers to sell their produce through online, competitive and transparent price discovery system and online payment facility.
- Already 2.29 crore MT trade with value of more than Rs.60,000 crore has been recorded on e-NAM platform. The Government plans to integrate another 415 mandis by March 2020 with the e-NAM portal.

#### Why in News?

- The first inter-State trade on e-NAM portal between Andhra Pradesh and Telangana has been carried out on 19.01.2019.
- Initially, trade on e-NAM started inside the individual e-NAM mandi, with involvement of farmers and traders of that mandi. After persuasive efforts by the Government of India, inter-mandi trade on e-NAM platform started within the State. Now inter-mandi trade within e-NAM States is happening in 10 States. More States are planning to start inter-State trade on e-NAM platform.

## National conference on agriculture

### What's in the news?

- National Conference on Agriculture for Zaid Campaign-2019 was organized by the Ministry of Agriculture & Farmers Welfare in New Delhi on 24 January 2019. Minister of State for Agriculture Parshottam Rupala highlighted the achievements made by the Ministry in the last 4 years.
- Speaking on irrigation Rupala said that out of about 141 m.Ha of net area sown in the country, about 65 million hectare (or 45%) is presently covered under irrigation. Substantial dependency on rainfall makes cultivation in unirrigated areas a high risk, less productive profession.
- To this effect **Pradhan Mantri Krishi Sinchayee Yojana** (PMKSY) has been formulated with the vision of extending the coverage of irrigation and improving water use efficiency '**More crop per drop**' in a focused manner.
- He added that there has been a record production of foodgrains in the country. As a result of various policy initiatives taken by the Government, total foodgrain production in the country is estimated at 284.83 million tonnes in 2017-18 compared to 275.11 million tonnes achieved during 2016-17.
- The Ministry is coming up with many new initiatives during the current year. These include implementation of scheme for managing burning of crop residue in northern states, fixing of Minimum Support Price at 1.5 times the production cost, establishment of an Agri-Market Infrastructure Fund, Operation Green for Tomato, Onion and Potatoes, National Bamboo Mission, Kisan Credit Cards for animal husbandry farmers, an Animal

Husbandry Infrastructure Fund, computerization of Primary Agricultural Credit Societies.

- The Secretary, Department of Agriculture Sanjay Aggarwal urged the states to submit action plan for Zaid / Summer season area coverage and stated that summer rice should be discouraged and less water demanding crops like pulses, oilseeds and millets should be promoted during Zaid Season because there is shortage of water during summer season.

## Debt-to-GDP ratio

### FRBM Review committee

- Fiscal Responsibility and Budget Management (FRBM) Act was enacted in 2003 which set targets for the government to reduce fiscal deficits. It was mandated that both states and centre would wipe out revenue deficit and cut fiscal deficit to 3% by 2008-09. The targets were put off several times.
- In 2016, the government set up a committee under NK Singh to review the FRBM Act.
- The committee recommended that the government should bring down the **fiscal deficit** to 3% of the GDP by 2020, cut it to 2.8% in 2020-21 and 2.5% by 2023.
- It also suggested that India should adopt **debt-to-GDP ratio** as a new anchor of fiscal policy along with the fiscal deficit and gradually bring it down to 60 per cent — comprising of 40 per cent for the Centre and 20 per cent for the states. It is an essential parameter to attract a better rating from the credit ratings agencies.
  - (debt-to-GDP ratio indicates debt of the government as a percentage of GDP. It shows the level of indebtedness of the government)*

### Why in News?

- According to the Status Paper on Government Debt for 2017-18, the Centre's total debt as a percentage of GDP reduced to 46.5% in 2017-18 from 47.5% as of March 31, 2014. The total debt of the States, however, has been rising over this period, to 24% in 2017-18, and is estimated to be 24.3% in 2018-19.
- In absolute terms, the Centre's total debt increased from Rs 56,69,429 crore at the end of March 2014 to Rs 82,35,178 crore in 2017-18, representing a 45% increase. The

Officers IAS Academy, Chennai total debt of the States increased from Rs 24,71,270 crore to Rs 40,22,090 crore over the same period, an increase of almost 63%.

- While the Centre is moving in the right direction in terms of meeting the N.K. Singh Committee recommendations on public debt, the States are moving in the opposite direction.

### Some leeway

States do have some fiscal space to reduce borrowings over the years due to the large cash surpluses they hold



Source: Department of Economic Affairs Status Paper on Government Debt

## World economy outlook

### What's in the news?

- The IMF in its January **World Economy Outlook** update said India would remain the fastest growing major economies of the world.

### Highlights of the report

- India is projected to grow at 7.5 per cent in 2019 and 7.7 per cent in 2020, ahead of China's estimated growth of 6.2 per cent in these two years.
- The IMF report says that India's economy is poised to pick up in 2019, benefiting from low oil prices and a slower pace of monetary tightening than previously expected as inflation pressures ease.
- China's economy will slow down due to the combined influence of needed financial regulatory tightening and trade tensions with the US. While, the Chinese growth rate has been on a downward slope India has experienced an upward trajectory in these years. The IMF said India's growth rate in 2018 was 7.3 per cent.
- Growth in emerging and developing Asia will dip from 6.5 per cent in 2018 to 6.3 per cent in 2019 and 6.4 per cent in 2020.

### 'In 2019, India to beat U.K. in economy size'

- The IMF report comes days after the global consultancy firm PwC's **Global Economy Watch** said that India is likely to surpass

- the United Kingdom in the world's largest economy rankings in 2019.
- While the U.K. and France have regularly switched places owing to similar levels of development and roughly equal populations, India's climb up the rankings is likely to be permanent.
- As per the report, India and France are likely to surpass the U.K. in world's largest economy rankings in 2019, knocking it from the fifth to seventh place.
- It projects real GDP growth of 1.6% for the U.K., 1.7% for France and 7.6% for India in 2019.

## Universal labour guarantee

### What's in the news?

- The International Labour Organisation (ILO) has released the '**Future of Work**' report to mark its centenary.

### Highlights of the report

- Around the world, 190 million people are unemployed, while 300 million workers live in extreme poverty. Wage gaps are growing at a time of declining wage growth.
- Two-thirds of jobs in the developing world are susceptible to automation, and only 15% of households in emerging countries have Internet access. Implementing the Paris Climate Agenda could create 24 million new jobs, but it could still be brutal to the 6 million workers expected to lose their jobs in the transition to a greener economy.
- In such a situation, the ILO asked all countries to place people at the centre of economic and social policy, ensuring that final decisions are taken by human beings.
- It suggested that an international governance system be set up to police the **gig economy**, and ensure that digital labour platforms such as Uber and Swiggy respect certain minimum rights and protections.
- (*gig economy is a labour market characterised by the prevalence of short-term contracts or freelance work, as opposed to permanent jobs*)
- To reduce inequalities, the ILO recommends that the development of the rural economy, where the future of many the world's workers lies, should become a priority.

- Urging a universal labour guarantee to ensure a living wage, the ILO sought limits on working hours and work safety norms. In order to cope with change, it suggests that countries commit to a universal entitlement to lifelong learning, which would help people reskill and upskill.

## Bihar outgrew others

### What's in the news?

- Crisil, a global analytical company, has released its latest report named '**States of growth 2.0**'.

### Highlights of the report

- Bihar and Andhra Pradesh led the pack among States in terms of GDP growth in financial year 2017-18, clocking 11.3% and 11.2% growth, respectively, compared with the national GDP growth of 6.7% for the year. Jharkhand, Kerala, and Punjab were at the bottom.
- 12 of the 17 non-special States considered in the analysis grew faster than the national growth rate. However, the growth was not equitable, with the gap between the per capita incomes in low-income and high-income States widening over the last five years.
- The analysis found that between the financial years 2012-13 and 2016-17, Gujarat, Madhya Pradesh and Karnataka were the fastest growing states, on average.
- West Bengal, Jharkhand and Bihar had ranked at the bottom in the past five years. In financial year 2017-18, however, Bihar rose to the top spot and West Bengal rose to the sixth rank, with a growth of 9.1%, significantly stronger than the national GDP growth rate.

### Fiscal deficit

- Rajasthan, Jharkhand and Uttar Pradesh topped the tally in proportion of Capital expenditure in state spending in the past three years. But most states are not spending as they ought to, in areas such as health, irrigation, and education.
- While the FRBM Act had helped states recover their fiscal health considerably, recent trends show they are slipping. Debt-to-GDP ratio have risen in many States—with the assimilation of Ujwal Discom Assurance Yojana (UDAY), farm loan waivers, and Pay Commission hikes.

- The combined fiscal deficit of States crossed the 3% of GSDP threshold, in both fiscals 2016 and 2017. This improved in fiscal 2018 to 3.1%, but this was still higher than the FRBM limit, and also the 2.7% of GSDP budgeted for the year.

## Credit flows to agri sector

### Prime Minister's Economic Advisory Council (EAC-PM)

- It is a non-constitutional, non-permanent and independent body constituted to give economic advice to the Government of India, specifically the Prime Minister.
- The council serves to highlight key economic issues facing the country to the government of India from a neutral viewpoint.
- It advises the Prime Minister on a whole host of economic issues like inflation, microfinance, industrial output, etc.
- The PMEAC is chaired by a Chairperson and consists of eminent economists as members.

### Why in News?

- EAC-PM said that the agriculture sector should be bolstered through increased credit flows and schemes such as the Mahatma Gandhi National Rural Employment Guarantee Scheme. The Council also added that it strongly felt that the government should not deviate from its fiscal consolidation path.
- The prospects for world economic growth does not look very promising, particularly in the advanced economies. Nevertheless, India's growth is expected to be in the 7-7.5% range in the next few years; one of the fastest in the world.
- However, it added that with reforms designed to address the structural problems, growth rates can easily be enhanced by at least 1%.
- Among the challenges that need to be addressed are reforms in the agricultural sector, the MSME sector, skill development, credit issues, digital payments and the banking sector reforms.

## GST Appellate Tribunal

### What's in the news?

- The Union Cabinet has approved the creation of National Bench of the Goods

Officers IAS Academy, Chennai and Services Tax Appellate Tribunal (GSTAT).

- The National Bench of the Appellate Tribunal shall be situated at New Delhi. GSTAT shall be presided over by its President and shall consist of one Technical Member (Centre) and one Technical Member (State).

### About GSTAT

- GSTAT is the forum of second appeal in GST laws and the first common forum of dispute resolution between Centre and States.
- The appeals against the orders in first appeals issued by the Appellate Authorities under the Central and State GST Acts lie before the GST Appellate Tribunal, which is common under the Central as well as State GST Acts.
- Being a common forum, GST Appellate Tribunal will ensure that there is uniformity in redressal of disputes arising under GST, and therefore, in implementation of GST across the country.
- GSTAT will be created as per the CGST Act which empowers the Central Government to constitute such appellate tribunal.

## GSTN

### Goods and Services Tax Network

- The Goods and Services Tax Network (GSTN) is a non-government, non-profit, private limited company created for providing the front end and back end IT and infrastructural support for the working of GST.
- The Centre and states together hold 49% stake (24.5% each) in GSTN. The remaining 51% share is divided among five private financial institutions—LIC Housing Finance, ICICI Bank, HDFC, HDFC Bank and NSE Strategic Investment Corporation Ltd.
- Though the shareholding looks non-government, governments have more say in the management of GSTN as they have more members in the GSTN board. This means that the strategic control of the company lies with government.

### Why in News?

- The GSTN is developing an IT system such that businesses that have not filed returns for two straight returns filing cycles, which is six months, would be barred from generating e-way bills.

- The e-way bill system was rolled out on April 1, 2018, for moving goods worth over Rs 50,000 from one State to another. The system for within the State movement was rolled out in a phased manner from April 15, 2015.
- Officials said the move would help check Goods and Services Tax evasion. Central tax officers have detected 3,626 cases of GST evasion or violations cases, involving Rs 15,278.18 crore in the April-December period.
- To shore up revenue and raise compliance, strict anti-evasion measures must be adopted. The revenue department is working towards integrating the e-way bill system with NHAI's FASTag mechanism beginning April to help track movement of goods.

## Resource Efficiency & Circular Economy

### What's in the news?

- Ratan P Watal, Principal Adviser, NITI Aayog unveiled the "Status Paper and Way Forward on Resource Efficiency & Circular Economy" in a release event hosted by NITI Aayog in collaboration with Ministry of Environment, Forest and Climate Change and the European Union delegation to India.
- Ratan P Watal said the objective of the Resource Efficiency Strategy was to make recommendations for enhancing the resource-use efficiency in the Indian economy and industry, develop indicators for monitoring progress, and create an ecosystem for improving the resource security and minimizing environmental impacts.
- The status paper brings out 30 recommendations out of which 14 recommendations have identified as priority actions.
- It includes
  - Formulation of a National Policy on RE/CE,
  - Establishment of Bureau of Resource Efficiency (BRE),
  - Mainstreaming RE&CE in existing flagship missions,
  - A Modern Recycling Industry with level playing between primary and secondary producers,

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- R&D for development of scalable technologies for RE & CE,
- Development and promotion of skill and capacity building programmes for informal sector.

- Tomasz Kozlowski, Ambassador, European Union Delegation to India mentioned that RE & CE is closely interlinked with climate change and it would not be possible to achieve the climate change target of limiting temperature increase to 2 degrees Celsius.

### What is a circular economy?

- A circular economy is an industrial system in which the potential use of goods and materials is optimized and their elements returned to the system at the end of their viable life cycles.



- Materials and products have a closed-loop life cycle and, ideally, all elements that go into the creation of a product are reused, recycled or remanufactured rather than discarded.

## Non-filers Monitoring System (NMS)

### What's in the news?

- The Non-filers Monitoring System (NMS) aims to identify and monitor persons who enter into high value transactions and have potential tax liabilities but have still not filed their tax returns.
- Data analysis by the Central Board of Direct Taxes has identified several potential non-filers who have carried-out high value transactions in Financial Year 2017-18 but have still not filed Income Tax Return for Assessment Year 2018-19.
- The Income Tax Department has enabled e-verification of these NMS cases to reduce the compliance cost for taxpayers by soliciting their response online.

- Non-filers are requested to assess their tax liability for AY 2018-19 and file the Income Tax Returns (ITR) or submit online response within 21 days. If the explanation offered is found to be satisfactory, matters

Officers IAS Academy, Chennai will be closed online. However, in cases where no return is filed or no response is received, initiation of proceedings under the Income-tax Act, 1961 will be considered.

## International Relations

### IAFTX- 2019

#### About

- The final planning of Indian Africa Field Training Exercise (IAFTX)-2019 was conducted.
- Indian Africa Field Training Exercise (IAFTX)-2019 is scheduled to be conducted at Aundh Military Station and College of Military Engineering, Pune from 18 March to 27 March 2019.
- The joint training exercise is being conducted with more than a dozen African countries & India.
- The countries are said to be Egypt, Ghana, Nigeria, Senegal, Sudan, South Africa, Tanzania, Namibia, Mozambique, Uganda, Niger & Zambia.
- This exercise tries to increase the political and military ties with the member nations of African continent and will boost the strategic cooperation between the countries.

#### Why in news?

- The final planning to work out the modalities for Indian Africa Field Training Exercise (IAFTX)-2019 was conducted at Pune on January 2019.

### SAARC

#### Overview

- SAARC stands for South Asian Association for Regional Cooperation
- It is regional intergovernmental organization and geopolitical union in South Asia.
- Founded in Dhaka in 1985.
- Secretariat: Kathmandu.
- The member countries are Afghanistan, Bhutan, Bangladesh, India, Pakistan, Nepal, Sri Lanka and Maldives.
- The objective of SAARC is said to be to promote the welfare of the peoples of South Asia and to improve their quality of life, to accelerate economic growth, social progress and cultural development in the region.

#### Relevance of SAARC

- The South Asian nations are finding other alternative in bilateral and multilateral modes. India moved on to focus on Bangladesh, Bhutan, India and Nepal

(BBIN) forum for sub-regional cooperation in the eastern subcontinent.

- The Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation (BIMSTEC) forum was also being reactivated.
- This has widely reduced the relevance of SAARC among the member countries.
- The unstable political condition in the regional states like Afghanistan, Maldives, Pakistan and Nepal also make the union less empowered in decision making and implementations.
- China's influence had also been increasing in this part of the world in recent times.
- The bilateral problem of India and Pakistan had also decreased the importance of SAARC.
- The coordination among the SAARC countries must be increased in order to maintain stability and gain the economic benefits among the member nations.

#### Why in news?

- Various experts were discussing about the coordination among SAARC countries during the Jaipur literature festival.
- The Jaipur Literature Festival is an annual literary festival[1] which takes place in the Indian city of Jaipur each January.
- It was founded in 2006.

### Aadhaar is now passport

#### About

- India has an open-door policy with Nepal and Bhutan.
- India's open-door policy with Nepal and Bhutan is in recognition with the shared history, culture and deep-rooted people to people ties of Indians with the citizens of these countries.
- Indians don't require a passport to travel to either of these countries.
- Indians can enter these countries by showing any of the acceptable photo identity documents like Passport, Voter Id etc.
- As per the new provisions released by Ministry of Home affairs, Indians can travel to Nepal and Bhutan by producing Aadhaar as Identity proof.

- But this is only for those Indians aged under 15 and over 65 years.
- Indians other than in those age brackets will not be able to use Aadhaar to travel for Nepal and Bhutan.

#### Why in news?

- Union Home Ministry added Aadhar as a proof for visiting Nepal and Bhutan for people of certain age bracket.

## Gilgit-Baltistan

### Overview

- Gilgit-Baltistan is a territory at the north-western corner of Jammu and Kashmir.
- The region was a part of the erstwhile princely state of Jammu and Kashmir, but has been under Pakistan's control since November 4, 1947, following the invasion of Kashmir by the Pakistan army.
- At present it has an elected Assembly and a Council headed by the Prime Minister of Pakistan. This Council has all powers, and controls the resources and revenues from the region.
- Gilgit-Baltistan or Northern Areas do not find any mention in the Pakistani constitution: it is neither independent, nor does it have provincial status.
- India sees Gilgit-Baltistan as part of Indian territory illegally occupied by Pakistan.
- The unanimous parliamentary resolution of 1994 had reaffirmed that the region is a "part of the State of Jammu and Kashmir, which is an integral part of India by virtue of its accession to it in 1947".



### Recent Developments

- Supreme court of Pakistan in a recent order said that Gilgit-Baltistan came within its domain.
- This order came after Government of Pakistan ordered constitutional safeguards for the region which previously was not given.

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- This region is more important to Pakistan as China-Pakistan Economic Corridor passes through the region.

#### Why in news?

- The External Affairs Ministry summoned Deputy High Commissioner of Pakistan and registered its protest against the order by Supreme court of Pakistan on Gilgit-Baltistan.
- It also said that the region was, and would remain, an integral part of India.

## Currency Swap with SAARC

### What is this Currency Swap Arrangement?

- This arrangement, between two friendly countries, which have regular, substantial or increasing trade, is to involve in trading in their own local currencies.
- The local currency payment can be done for both import and export trade, at the pre-determined rates of exchange, without bringing in third country currency like the US Dollar.

### Swap with SAARC

- India has currency swap agreement with SAARC nations from 2012.
- All 7 SAARC member countries including Bangladesh, Afghanistan, Maldives, Bhutan, Nepal, Pakistan and Sri Lanka can avail the facility.
- Under the arrangement, RBI will be offering swap arrangement up to an overall amount of US \$ 2 billion dollars both in foreign currency and Indian rupee.
- RBI offers swaps of varying sizes in USD, Euro or INR to each SAARC member country depending on their requirement and not exceeding US\$ 2 billion in total. The swap amount for each country has been defined as USD 400 Million per country.
- This move of RBI aims at enhancing economic cooperation and strengthening financial stability among the SAARC countries.

### Recent Developments

- Due to heightened financial risk and volatility in global economy, short term swap requirements of SAARC countries could be higher than the agreed ones.
- The incorporation of 'Standby Swap' within the approved SAARC Swap Framework would provide necessary flexibility to the Framework.
- This 'standby provision' would enable India to provide a prompt response to the

request from SAARC member countries for availing the swap amount exceeding the present limit prescribed under the SAARC Swap Framework.

- The provision gives out USD 400 million operated within the overall size of the Facility of USD 2 billion.

#### Why in news?

- Cabinet approves Amendment to the 'Framework on Currency Swap Arrangement for SAARC Member Countries' to incorporate 'Standby Swap' provision.

## India-Africa Relations

### Overview

- Africa's is an emerging continent with collective GDP expected to touch \$3.6 trillion by 2020.
- Africa is key to India's economic and maritime interests in the Indian Ocean region.
- The trade between India and Africa is said to be US \$ 62.66 billion for 2017-18, which is 22% higher than the previous year.
- India is the fifth largest investor in Africa with investments of US \$ 54 billion.

### Cooperation in Other sectors

- Indian plans to import 1 lakh tonnes of arhar and moong dal from Mozambique.
- India has started "solar mamas training programme" that equips older village women on installing and maintaining village solar equipment in African countries.
- India is emerging as a major destination for African students. Along with this collaboration with Africa universities, faculty exchange programmes can be started to strengthen the co-operation in the field of education.
- Other major areas identified for investments are minerals and mining, chemicals and pharmaceuticals, infrastructure and information and communication technology.

### Concerns

- The instances of racial attacks on African students and others in India has become a source of tension and Nigeria even threatened to advise its students from coming to India.
- China is quickly expanding its footprint in the region.

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- India has not been able to match Chinese investments in Africa and is lagging behind in capital investment.

#### Why in news?

- External Affairs Minister Ms. Sushma Swaraj was in Gandhinagar to participate in Africa Day event held as part of the Vibrant Gujarat Summit in which representatives of over 50 African countries participated.
- It was the first time India dedicated an entire day to a continent during the investors' meet.

## Pact on Kartarpur Corridor

### Gurudwara Darbar Sahib

- It is 16th century Gurdwara located on the banks of the river Ravi in Shakargarh in Narowal district of Punjab province of Pakistan.
- It is located about 3 to 4km from Indo-Pak border in Pakistan in Punjab. This gurudwara was established by the first Sikh Guru called Guru Nanak Dev in 1522.
- It is important for Sikhs as, the founder of Sikhism and its first guru had assembled Sikh community and lived for 18 years until his death in 1539.

### Kartarpur Corridor

- The corridor will connect India's border district of Gurdaspur with Gurudwara Darbar Sahib in Pakistan.
- The main purpose of the corridor is to let Sikh pilgrims visit holy shrine without visa.
- The project corridor is 4 lanes with service road and will encompass all other appropriate amenities needed by pilgrims while visiting the Gurudwara Darbar Sahib in Pakistan.
- The Indian side of the corridor will be developed by National Highways Authority of India (NHAI) and will be funded by the Union Government.
- It will help to boost tourism and people to people contact between both countries as more pilgrims will visit holy shrine throughout the year between two countries.
- Both countries have started drafting pacts on corridor on account of 550th birth anniversary of the Guru Nanak Dev in 2019.

#### Why in news?

- Pakistan government had announced that it had shared the draft of the agreement, to

be signed by the two governments relating to Kartapur corridor.

#### Draft agreement

- Pakistan proposed the following statements in the draft.
- 1. Setting up a database of all pilgrims visiting.
- 2. Cap of 500 pilgrims per day.
- 3. It also proposed to keep the corridor open from 8 a.m. to 5 p.m. every day.

### Pravasi Bharatiya Divas 2019

#### About

- Pravasi Bharatiya Divas (PBD) is celebrated to strengthen the engagement of the overseas Indian community with the Government of India and reconnect them with their home country.
- Pravasi Bharatiya Divas (PBD) is celebrated on 9th January every year to mark the contribution of Overseas Indian community in the development of India.
- January 9 was chosen as the day to celebrate this occasion since it was on this day in 1915 that Mahatma Gandhi, returned to India from South Africa.
- It is now celebrated once in two years.
- It is sponsored by the Ministry of External Affairs of the government of India and the Federation of Indian Chambers of

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Commerce and Industry (FICCI) the Confederation of Indian Industry (CII) and the Ministry of Development of the North Eastern Region of India.

- During the Convention, selected overseas Indians are also honored with the prestigious Pravasi Bharatiya Samman Award to recognize their contributions to various fields both in India and abroad.

#### 2019 edition

- The 15th PBD Convention is being held on 21-23 January 2019 in Varanasi, Uttar Pradesh.
- The theme of PBD Convention 2019 is "Role of Indian Diaspora in building New India".
- The partner state of 2019 is Uttar Pradesh.
- The usual date of January 9 has been changed to 21 to 23 January 2019 to help the diaspora to participate in Kumbh Mela and Republic Day celebrations.
- Prime Minister of Mauritius Mr. Pravind Jugnauth is the chief guest of the PBD convention.
- Various cultural activities and exhibition had been arranged by Ministry of culture.

#### Why in news?

- The 15th PBD Convention is being held on 21-23 January 2019 in Varanasi, Uttar Pradesh.

## Science & Technology

### Gene-edited babies

#### What is Gene editing?

- Genome editing, or gene engineering, is a type of genetic engineering in which DNA is inserted, deleted, modified or replaced in the genome of a living organism.
- Genome-It is the complete set of genes or genetic material present in a cell or organism.

#### What is CRISPR-CAS 9?

- Crispr/Cas9 is related to genome editing. (Genome: Complete DNA sequence)
- CRISPR stands for clustered regularly interspaced short palindromic repeats
- In simple terms, a DNA sequence is cut at a particular spot and then with help of a guide RNA (gRNA) that place is re-made with desired base pairing. This way genes can be altered.
- It allows scientists to selectively edit genome parts and replace them with new DNA stretches
- Cas9 is the enzyme which acts as a “molecular scissors” and helps in cutting the DNA sequence.
- CRISPR is a collection of DNA sequences that direct Cas9 where to cut and paste.

#### Why in news?

- A researcher who claimed to have created the world's first genetically-edited babies will face a Chinese police investigation, state media said on Monday, as authorities confirmed that a second woman fell pregnant during the experiment.

#### Details of the issue:

- He Jiankui shocked the scientific community last year after announcing he had successfully altered the genes of twin girls born in November to prevent them from contracting HIV.
- He had “privately” organised a project team that included foreign staff and used “technology of uncertain safety and effectiveness” for illegal human embryo gene-editing, investigators said.
- Investigators revealed that the scientist was “pursuing personal fame” and used “self-raised funds” for the controversial experiment.
- Eight volunteer couples — HIV-positive fathers and HIV-negative mothers —

signed up to Mr. He's trial, investigators found, with one couple later dropping out.

- Speaking at the genome summit in Hong Kong in November, Mr. He said he was “proud” of altering the genes of the babies, given the stigma affecting AIDS patients in the country.
- But such gene-editing work is banned in most countries, including China. Mr. He will be “dealt with seriously according to the law,” and his case will be “handed over to public security organs for handling,” Xinhua said.

### Kaveri crater

#### Why in news?

- Research by two scientists hints at asteroid strike 800 million to 550 million years ago, creating a crater.
- The land between present day Nilgiris and Kodaikanal located on a crater is believed to be formed by the asteroid impact. They have named it as “Kaveri crater”.

#### About the findings:

- The asteroid hit may have taken place 800 million to 550 million years ago.
- Unlike the impact event that led to the extinction of the dinosaurs about 65 million years ago, this one took place when there were very primitive life forms.
- Based on crater size and impact angle, the geologists conclude that the extra-terrestrial object was at least five km in diameter.
- Unlike smaller craters, Kaveri Crater can be visualised only through satellite images.

#### What are asteroids?

- Asteroids are small, airless rocky worlds revolving around the sun that are too small to be called planets. They are also known as planetoids or minor planets.
- In total, the mass of all the asteroids is less than that of Earth's moon. But despite their size, asteroids can be dangerous. Many have hit Earth in the past, and more will crash into our planet in the future.
- Most asteroids lie in a vast ring between the orbits of Mars and Jupiter.

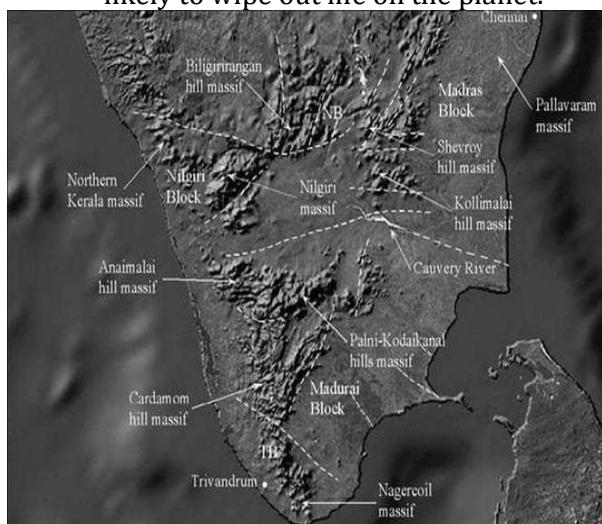
#### What are the differences between an asteroid, comet, meteoroid, meteor and meteorite?

- Asteroid: A relatively small, inactive, rocky body orbiting the Sun.

- Comet: A relatively small, at times active, object whose ices can vaporize in sunlight forming an atmosphere (coma) of dust and gas and, sometimes, a tail of dust and/or gas.
- Meteoroid: A small particle from a comet or asteroid orbiting the Sun.
- Meteor: The light phenomena which results when a meteoroid enters the Earth's atmosphere and vaporizes; a shooting star.
- Meteorite: A meteoroid that survives its passage through the Earth's atmosphere and lands upon the Earth's surface.

#### **What if an asteroid hits the earth?**

- It is believed that an asteroid which hit 65 million years ago threw so much moisture and dust in to the atmosphere that it cut off sunlight, lowering temperatures worldwide and causing the extinction of the dinosaurs.
- If the asteroid is a mile in diameter, it's likely to wipe out life on the planet.



## Bio-jet fuel for Aircraft

#### **About Biojet fuel:**

- Bio jet fuel is greenhouse gas (GHG) neutral, carbon neutral, reduces air pollution.
- It is been derived from Jatropha seeds.
- When blended with conventional air jet fuel it reduces the cost and is environment friendly.

#### **Jatropha:**

- Jatropha is drought-resistant perennial plant that can grow in marginal or poor soil.
- It is grows relatively quickly and lives, produces seeds for 50 years.
- It is found to be growing in many parts of the country, especially in rugged terrain

- Officers IAS Academy, Chennai and can survive with minimum inputs and easy to propagate.
- Its seeds has oil content of 37% which be combusted as fuel without being refined.
  - It burns with clear smoke-free flame.
  - It has been tested successfully as fuel for simple diesel engine.

#### **Centre for Navy Airworthiness and Certification (CEMILAC):**

- The Centre for Military Airworthiness & Certification is a laboratory of the Indian Defence Research and Development Organisation.
- Located in Bangalore, its primary function is certification and qualification of military aircraft and airborne systems.
- Any hardware or program which is to be made use of on Indian navy aircraft, which includes those people operated by Indian Navy or Military, has to be cleared for use by CEMILAC in advance of remaining inducted for regular use.

#### **Why in news?**

- The indigenous produced bio-fuel has been finally cleared for use by the the Centre for Military Airworthiness and Certification (CEMILAC).

## Technology Mission Centre on Solar Energy & Water Treatment

#### **Why in news?**

- Government to launch Technology Mission Centre on Solar Energy & Water Treatment in Chennai.

#### **More on the project:**

- Union Minister for Science & Technology, Earth Sciences and Environment, Forests & Climate Change, Dr. Harsh Vardhan will be launching three important centre's set up by Department of Science and Technology (DST), nucleated at Indian Institute of Technology, Madras (IITM) on 25th January 2019 at IIT Madras in Chennai.
- The first of these is the establishment of DST -IITM Solar Energy Harnessing Centre.
- The Centre will focus on a wide range of research and technology development activities such as silicon solar cells that promise high efficiency and are suited for Indian conditions.
- The centre is likely to be true change agent in the energy landscape of India.

- The consortium will be duly poised to address the sustainability requirements in the spirit of 'Make in India'.
- Department of Science Technology- IIT Madras (DST-IITM) (**Water Innovation Centre for Sustainable Treatment, Reuse and Management for Efficient, Affordable and Synergistic Solutions**) which has been established with an aim to undertake synchronized research and training programs on various issues related to wastewater management, water treatment, sensor development, storm water management and distribution and collection systems.
- The third one would be the **Test bed on Solar thermal desalination solutions** which are being established by IIT Madras and Empereal KGDS as solution providers in Naripaiyur, Ramanathapuram District, Tamil Nadu with the aim to deliver customized technological solutions to address prevalent water challenges in the arid coastal village located on the shores of the Bay of Bengal.

## Microsat-R and Kalamsat-V2

### About the satellite:

#### Kalamsat:

- Kalamsat, built at a cost of just Rs 12 lakh, is an experimental satellite built to study the **communication system of nanosatellites**.
- The satellite has been contributed by Space Kidz India, a Chennai-based students' organization.
- So far, ISRO has sent up nine satellites built by students, but this is the first to be launch in the new PSLV variant.

#### Microsat-R:

- Microsat-R is a **small Indian earth observation satellite** built for the Indian military Defence Research and Development Organization (DRDO).
- it is built by a handful of **Defence Research and Development Organisation (DRDO) laboratories, not by ISRO**.

### About PSLV-C44:

- PSLV-C44 is the 46th Flight of PSLV and 1st flight of PSLV-DL (with two strap-ons) variant PSLV-C44, which launched the Microsat-R and Kalamsat.
- PSLV-C44 was launched from the First Launch Pad (FLP) at Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota.

Officers IAS Academy, Chennai

- PSLV-C44 placed the 740-kg primary satellite Microsat-R in a 274-km polar sun-synchronous orbit
- Kalamsat is said to be the lightest satellite of the country.
- Kalamsat, a student satellite, is the first to use the fourth stage of PSLV as orbital platform Microsat-R is an imaging satellite.
- In the previous PSLV launch on November 29 last year, PSLV-C43 had successfully launched India's HysIS as well as 30 customer satellites from abroad.

### Significance of PSLV-C44:

- The mission with PSLV-C44 is not an ordinary one. PSLV C44 is the first mission of PSLV-DL and is also a new variant of PSLV. It's the lowest altitude the PSLV flown still now.
- This newly added variant, PSLV-DL, is the first to sport two strap-on boosters for providing added thrust.
- The PSLV rocket is not just any other PSLV rocket a lot of innovation have been incorporated in it such as "use of aluminium tank in the fourth stage and using it as an orbital platform for the five-member student team and Space Kidz India built nano-satellite Kalamsat.
- The aluminium tank is used to reduce weight and increase the mass.
- In PSLV-C44, the fourth stage (PS4) of the vehicle was moved to a higher circular orbit so as to establish an orbital platform for carrying out experiments.

### About PSLV:

- PSLV (Polar Satellite Launch Vehicle) is ISRO's indigenously-developed expendable launch system.
- It has a four-stage system comprising a combination of solid and liquid-fuelled rocket stages.
- The first stage of PSLV at the very bottom is solid-fuelled having six strap-on solid rocket boosters wrapped around it.
- The second stage is liquid-fuelled whereas the third stage has a solid-fuelled rocket motor.
- At the fourth stage, the launcher uses a liquid propellant to boost in the outer space.

### Why in news?

- In its first mission of 2019, India's Polar Satellite Launch Vehicle (PSLV-C44) successfully has injected 'Microsat-R' and 'Kalamsat-V2' satellites into space.

## Gaganyaan

### Gaganyaan Mission:

- It is India's first manned space mission. Under it, India is planning to send three humans (Gaganyaatris) into space i.e. in low earth orbit (LEO) by 2022 i.e. by 75th Independence Day for period of five to seven days.
- The mission was announced by Prime Minister Narendra Modi during his 72nd Independence Day speech.
- Under this mission, crew of three astronauts will conduct experiments on microgravity in space.
- The crew will be selected jointly by Indian Air Force (IAF) and ISRO after which they will undergo training for two-three years.
- This mission will make India fourth nation in the world after USA, Russia and China to launch human spaceflight mission.

### Why in news?

- The Indian Space Research Organisation (ISRO) announced that working on the human space flight programme Gaganyaan and launching a major student outreach apart from the scheduled missions is its top priority.
- A separate Human Space Flight Centre has been formed in ISRO. The Gaganyaan project will come under it and that's how we will target the first unmanned mission in December 2020.
- Dr. Sivan, Chairman of ISRO, announced a Young Scientist Programme (YSP) and termed it their most important project to reach out to students.

### Young Scientist Programme:

- Stating that this year ISRO is planning to expand its wings in areas it wasn't before, Dr. Sivan said termed Young Scientist Programme (YSP) the as the most important in their effort to reach out to students.
- Under the YSP, three students, eighth standard pass, will be selected from each of the 29 states and seven Union Territories and will spend one month at ISRO during which they will be given lectures, get access to research and development and will be given experience to build a satellite.

## AI in India

### What is Artificial Intelligence (AI):

- In computer science, artificial intelligence (AI), sometimes called machine intelligence, is intelligence demonstrated by machines, in contrast to the natural intelligence displayed by humans and other animals.
- AI is the study of "intelligent agents": any device that perceives its environment and takes actions that maximize its chance of successfully achieving its goals.

### Why in news?

- India ranks third in the world in terms of high-quality research publications in artificial intelligence (AI) but is at a significant distance from world leader China, according to an analysis by research agency Itihaasa, which was founded by Kris Gopalakrishnan, former CEO and co-founder of Infosys.

### More on the report:

- The agency computed the number of 'citable documents' the number of research publications in peer-reviewed journals, in the field of AI between 2013-2017 as listed out by Scimago, a compendium that tracks trends in scientific research publications.
- India, while third in the world with 12,135 documents, trailed behind China with 37, 918 documents and the United States with 32,421 documents.
- However, when syntax analysis by another metric 'citations' (*Citations-Reference to published or unpublished source*) or the number of times an article is referenced — India ranked only fifth and trailed the United Kingdom, Canada, the U.S. and China.
- This suggests that India must work at improving the quality of its research output in AI.
- Given India's traditional strength in information technology and AI said to pose a transformation in industry and academic circles, the report was an attempt at mapping the state of AI-based research in India.
- There were only about 50 to 75 principal researchers in the AI-space in India and they were tended to collaborate with each other.
- The Indian Institutes of Technology and the Indian Institutes of Information Technology were among the key centres for AI research.

- Healthcare, financial services, monsoon forecasting, retail and education were the key fields likely to benefit from AI and the field was “unlikely to lead” to a destruction of jobs, a key global concern regarding the field.
- The report authors interviewed 25 AI researchers across the country, who said that as of now “There was adequate support and funding from the government and industry for AI research.”

## #10YearChallenge

### What is 10 Year Challenge?

- The 10-year challenge is a trend on American social networking internet site Facebook started in January 2019 in which people post one photograph from 10 years ago (2009) alongside a more recent photograph.

### Why in news?

- An American journalist [Ms. O'Neill's tweet on Jan 1<sup>st</sup> week 2019], got more than

Officers IAS Academy, Chennai 10,000 retweets and more than 20,000 likes in few minutes.

- The post said that the 10-year challenge was a step by Facebook to do mass surveillance.

### Is it a viral trend or a boon to Giant tech firms?

- Facebook announced it was using facial recognition technology in 2010.
- When people upload photos of their friends, Facebook can use the technology to suggest the names of people in the picture.
- It can also alert users if they are in a photo posted by a friend.
- Supporters of facial recognition technologies said they can be indispensable for catching criminals or finding missing people.
- But critics warned they can enable mass surveillance.
- Some of the journalists claim that this is a plot by Facebook to develop algorithms to do face recognition, age progression and the behavioural changes of people.

## Environment

### SCATFORM project

#### Why in news?

- Tripura has launched a project for **Sustainable Catchment Forest Management** at Hatipara in West Tripura.

#### About the project:

- The project is jointly **funded by the Japan International Cooperation Agency (JICA)** and Government of India.
- It aims to **improve quality of forest in the catchment area by sustainable forest management, soil and moisture conservation and livelihood development.**
- The Tripura Forest Department (TFD) is the Executing Agency of the Project.
- Eighty per cent of the project would be funded by JICA while Government of India would fund 20 per cent of the project value.
- The SCATFORM project has got provisions to built 1,447 check dams in hilly terrains of Tripura.
- This new project has got many components including fisheries, agriculture, forest, tourism etc.
- 1,447 check dams would be constructed in hilly terrains of the state to make sure that there is no chance of a flood in the plains.
- The water thus conserved would be used for agricultural purposes and for fisheries and poultry farming (ducks).

### Great Indian Bustard

#### Why in news?

- Wildlife activists have called for enforcement of recovery plan for the country's *most critically endangered bird-Great Indian Bustard.*
- Once the contender for becoming India's national bird, the Great Indian Bustard is now facing extinction.

#### Key facts:



- Great Indian Bustard is listed in **Schedule I of the Indian Wildlife (Protection) Act, 1972**, in the CMS Convention and in **Appendix I of CITES**, as **Critically Endangered on the IUCN Red List**.
- It has also been identified as one of the species for the recovery programme under the **Integrated Development of Wildlife Habitats of the Ministry of Environment and Forests**, Government of India.
- **Project Great Indian Bustard:** state of **Rajasthan** identifying and fencing off bustard breeding grounds in existing protected areas as well as provide secure breeding enclosures in areas outside protected areas.
- **Protected areas:**
  1. **Desert National Park Sanctuary : Rajasthan.**
  2. **Rollapadu Wildlife Sanctuary : Andhra Pradesh.**
  3. **Karera Wildlife Sanctuary : Madhya Pradesh.**

### Mount shikande

#### Why in news?

- A volcano *Mt Shindake* has erupted on *Kuchinoerabu Island of Japan*.
- Kuchinoerabu Island belongs to Kagoshima Prefecture, Japan. The entire island lies within the borders of the Kirishima-Yaku National Park.

**Mount Shindake eruption**



#### About volcano:

- A volcano is an opening in the earth's crust through which gases, molten rocks materials (lava), ash, steam etc. are emitted outward in the course of an eruption.
- Such vents or openings occur in those parts of the earth's crust where the rock strata are relatively weak.

- Volcanic activity is an example of **endogenic process**.
- Depending upon the explosive nature of the volcano, different land forms can be formed such as a plateau (if the volcano is not explosive) or a mountain (if the volcano is explosive in nature).

## Alliance to End Plastic Waste

### Why in news?

- An alliance of global companies has launched a new organization-AEPW- to help eliminate plastic waste, especially in the ocean.

### About the AEPW:

- The Alliance to End Plastic Waste (AEPW), comprising about 30 companies, pledged over \$1 billion to eliminate plastic waste across the world. They aim to invest \$1.5 billion over the next five years for the same.
- The alliance is designed as a non-profit organization.
- It includes companies from across North and South America, Europe, Asia, Southeast Asia, Africa as well as the Middle East are part of the Alliance.
- **The aim is to develop solutions to mitigate plastic pollution and promote a circular economy by utilizing used plastics.**
- Member companies include those that make, use, sell, process, collect and recycle plastics, as well as chemical and plastic manufacturers, consumer goods companies, retailers, converters, and waste management companies, also called the plastics value chain. From India, Reliance Industries will advance efforts towards a sustainable future.



## Two new species of moss rose

### What's in the news?

- **Portulaca badamica** is named after the site of its discovery that is, the Badami hills.
- The second new species—**Portulaca lakshminarasimhaniana** honours Pakshirajan Lakshminarashimhan, who is the head of the Botanical Survey of India, western regional circle in Pune, for his significant contribution to plant taxonomy.

## Small Woodbrown butterfly

### Why in news?

- After a span of 120 long years, researchers in Sikkim have rediscovered the *Small Woodbrown butterfly* species from Bakhim in **Khanchendzonga National Park**.

### About the species:



- The Small Woodbrown butterfly, scientifically known as **Lethe nicetella** is named after its brown-coloured wings patched with white round spots.
- **It is amongst the smallest members of the genus Lethe**, with wings that are up to 50 millimeters long.
- The species is **endemic to the eastern Himalayas** and occurs in forests lying between elevations of 1,800-2,800 metres.
- **Distribution:** Across the world, species of Lethe are found in **Sunda Islands, Japan, Siberia, Himalayas and peninsular India**. Of the 41 species of Lethe that are found in India, 32 species are reported from Sikkim alone.

### Khanchendzonga National Park:

- KNP was added in the 'mixed' heritage site category of the list i.e. it exhibits qualities of both natural and cultural significance.
- With this, it becomes the **first 'mixed' heritage** site from India to make it to the list.
- KNP covers 25% of Sikkim and is home to a significant number of endemic, rare and threatened plant and animal species including large number of bird and mammal species.

- Geographically the park includes a unique diversity of plains, valleys, lakes, glaciers and spectacular snow-capped mountains covered with ancient forests.
- The park combines the **religious and cultural practices of Buddhism** as well as the ecological significance of the region.
- It signifies an outstanding example of traditional knowledge and environmental preservation.
- **Khangchendzonga Biosphere Reserve** in Himalayan state of **Sikkim** was included in UNESCO designated World Network of Biosphere Reserves (**WNBR**), making it **11th** Biosphere Reserve from India to achieve this recognition.
- The decision was taken at 30th Session of International Coordinating Council (ICC) of Man and Biosphere (MAB) Programme of UNESCO held in **Palembang, Indonesia**.

## Elephant corridor

### Why in news?

- The Supreme Court dismissed an appeal filed by Numaligarh Refinery Ltd. (NRL) and ordered demolition of a 2.2-km boundary wall erected on an elephant migration corridor in eastern Assam's Golaghat district.

### About the issue:

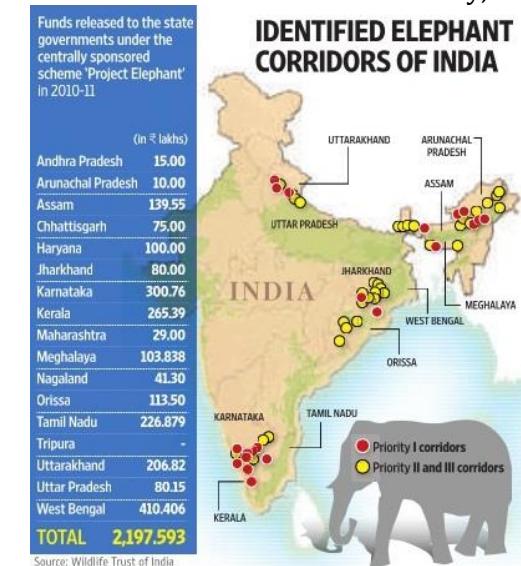
- Environmentalists had objected to the wall the refinery had erected in 2011 for a proposed township in – as the National Green Tribunal (NGT) had observed later – a part of the **Deopahar Reserve Forest**.
- The refinery received flak from wildlife activists when a seven-year-old male elephant died of haemorrhage (an escape of blood from a ruptured blood vessel) in May 2015 after trying to force its way through the wall. Videos also captured herds trying to cross the high boundary wall with barbed wire in vain. In August 2016, the NGT ordered NRL to demolish the wall within a month, but only a 289-metre stretch was demolished.
- Dismissing the NRL's appeal in the apex court, Justice D.Y. Chandrachud said there cannot be any township as elephants have the first right on forest. "Elephants do not go to office in a designated route. We cannot encroach upon the elephant's area," he observed.

### Elephant Corridors:

Funds released to the state governments under the centrally sponsored scheme 'Project Elephant' in 2010-11

	(in ₹ lakhs)
Andhra Pradesh	15.00
Arunachal Pradesh	10.00
Assam	139.55
Chhattisgarh	75.00
Haryana	100.00
Jharkhand	80.00
Karnataka	300.76
Kerala	265.39
Maharashtra	29.00
Meghalaya	103.838
Nagaland	41.30
Orissa	113.50
Tamil Nadu	226.879
Tripura	-
Uttarakhand	206.82
Uttar Pradesh	80.15
West Bengal	410.406
<b>TOTAL</b>	<b>2,197.593</b>

Source: Wildlife Trust of India



- Elephant corridors are narrow strips of land that connect two large habitats of elephants.
- Nearly 40% of elephant reserves are vulnerable, as they are not within protected parks and sanctuaries. Also, the migration corridors have no specific legal protection.
- Illegal structures in these pathways should be removed without delay.
- Efforts should be to expand elephant corridors, using the successful models within the country.
- This includes acquisition of lands using private funds and their transfer to the government.
- Forests that have turned into farms and unchecked tourism are blocking animals' paths. Animals are thus forced to seek alternative routes resulting in increased elephant-human conflict.
- Weak regulation of ecotourism is severely impacting important habitats. It particularly affects animals that have large home ranges, like elephants.
- The movement of elephants is essential to ensure that their populations are genetically viable.
- It also helps to regenerate forests on which other species, including tigers, depend.
- Elephant corridors are also crucial to reduce animal fatalities due to accidents and other reasons. So fragmentation of forests makes it all the more important to preserve migratory corridors.
- Ending human interference in the pathways of elephants is more a conservation imperative.

## Flamingo festival

### Why in news?

- It was a treat for the birdwatchers who thronged **Pulicat Lake** at Sullurpetta and its surroundings in Nellore district for the three-day Flamingo Festival that concluded on 22 January 2019.

### Key facts:



- *Nelapattu Bird Sanctuary* is considered one of the biggest habitat for some hundreds of pelicans and other birds. Located about 20 km north of the Pulicat Lake on the Andhra Pradesh-Tamil Nadu border, the sanctuary is spread in about 459 hectares.
- *Pulicat lake* is the **second largest brackish water lake or lagoon** in India, after Chilika Lake.
- It straddles the border of Andhra Pradesh and Tamil Nadu states with over 96% of it in Andhra Pradesh.
- *The lake encompasses the Pulicat Lake Bird Sanctuary.*
- *The barrier island of Sriharikota separates the lake from the Bay of Bengal and is home to the Satish Dhawan Space Centre.*
- Two rivers which feed the lagoon are the *Arani river at the southern tip and the Kalangi River from the northwest*, in addition to some smaller streams.
- *The Buckingham Canal, a navigation channel, is part of the lagoon on its western side.*

## Construction plan in Bandipur

### Why in news?

- The Ministry of Environment, Forest and Climate Change (MoEF&CC) has opposed a proposal to construct elevated roads over the Bandipur Tiger Reserve.
- The proposal had triggered outrage and protests from NGOs.

### Bandipur Tiger reserve:

- The tiger reserve, spread over nearly 912 sq km, is located in Chamarajanagar district of Karnataka, constitutes an important

Officers IAS Academy, Chennai component of a forest landscape comprising Nagarhole (Karnataka), Mudumalai and Sathyamangalam (Tamil Nadu) and Wayanad (Kerala).

- The tiger reserve is home to nearly 120 to 150 tigers as per the 2014 estimates made by the National Tiger Conservation Authority (NTCA).
- Bandipur also supports nearly 1,600 elephants, according to a 2012 count by the Karnataka Forest Department. Conservationists feel any infrastructure project through the forests is bound to impact the wildlife habitat and should be dropped.
- But there are supporters of the project who want the night traffic ban lifted. The matter is pending before the Supreme Court.

### Why was the project proposed?

- The ban on traffic through Bandipur, located 80 km from Mysuru in Karnataka, from 9 p.m. to 6 a.m. was introduced on the directives of the High Court of Karnataka to reduce disturbance to wildlife and curb road kills.
- It has been in place since 2009.
- But the ban evoked opposition from a section of stakeholders, including the Kerala government which challenged the High Court order in the Supreme Court on the grounds that it was impeding economic growth of the region.
- The Supreme Court constituted a committee to examine the disputes between Karnataka and Kerala. In an affidavit, the MoRTH, which was part of the committee, proposed construction of elevated highways: five sections of 1 km each (four in Bandipur and one in the Wayanad sanctuary).

### Why is it being opposed?

- Activists have argued that such projects are prohibited under the final notification of the Eco-Sensitize Zone for Bandipur issued in September 2011 based on the Environment Protection Rules, 1986.

## Bird sanctuary in Manipur

### Why in news?

- Manipur Government has proposed a bird sanctuary at Loktak lake in Bishnupur district.
- The people in the village are protesting because once the bird sanctuary will be

established, the fishing will be banned in the lake and poor people who drive their livelihood will starve to death.

- The villagers of Thingnungei are poor and they have no other means of earning a livelihood except for catching fish and plucking vegetables from the lake.

#### Why Government proposed bird sanctuary?

- Loktak is **largest freshwater lake in India** and attract thousands of Migratory birds.
- However, in a recent year, there has been sharp decline in their number which has forced the state government to provide protection to these migratory species.
- Poaching is the one of the main reason cited.
- Human intrusion and Hydro Electric power projects are also responsible for decline.

#### About loktak lake:



- Largest freshwater Lake in North-East India
- It is known for its circular **floating swamps (called phumdis in the local language)**.
- The Phumdis are collection of heterogeneous mass of vegetation, soil, and organic matter.
- **The lake was initially designated as a wetland of international importance under the Ramsar Convention and it was also listed under the Montreux Record**
- Keibul Lamjao National Park located at the south western part of the lake. It is the world's only floating national park and is home to the endangered **Manipuri brow-antlered deer, Sangai (State Animal)**
- Keibul Lamjao National Park was initially declared as a Sanctuary in 1966, was subsequently declared a National Park in 1977.

## Critically Endangered Species

#### Why in news?

- An updated list of Indian amphibians was released on the Zoological Survey of India (ZSI) website with 19 species being treated as critically endangered and 33 species as endangered.
- The list describes 19% of amphibians as data deficient species and 39% as not assessed by the IUCN.
- The list is updated and launched by ZSI from time to time as per the IUCN.

#### IUCN criteria:

- **Extinct (EX):** It is a designation applied to species in which the last individual has died or where systematic and time-appropriate surveys have been unable to log even a single individual
- **Extinct in the Wild (EW):** It refers to a category containing those species whose members survive only in captivity or they are artificially supported populations far outside their original geographic range.
- **Critically Endangered (CR):** It is a category which contains those species that possess an extremely high risk of extinction as a result of rapid population **declines of 80 to 90 per cent over the previous 10 years** (or three generations), a current population size of fewer than 50 individuals, or other factors
- **Endangered (EN):** It is a designation applied to species that possess a very high risk of extinction as a result of rapid population **declines of 50 to more than 70 per cent over the previous 10 years** (or three generations), a current population size of fewer than 250 individuals, or other factors
- **Vulnerable (VU):** It is a category containing those species that possess a very high risk of extinction as a result of rapid population **declines of 30 to more than 50 per cent over the previous 10 years** (or three generations), a current population size of fewer than 1,000 individuals, or other factors
- **Near Threatened (NT):** It is a designation applied to species that are close to becoming threatened or may meet the criteria for threatened status in the near future
- **Least Concern (LC):** It is a category containing species that are pervasive and abundant after careful assessment
- **Data Deficient (DD):** Unlike the other categories in this list, this category does not

**base flow to rivers and wetlands a long time later.**

- The process through which rainwater is filtered through bedrock and accumulated underground can take centuries and varies greatly by region.
- As climate change delivers longer droughts and bigger super storms, the extremes of rainfall become more pronounced, impacting groundwater reserves for generations to come.
- In arid areas took far longer several thousand years in some cases to respond to alterations in climate than reserves in more humid parts.

#### **Situation of groundwater in India:**

- Today, India is the largest user of the groundwater in the world with almost 90% being used for drinking water and almost 60-70% for irrigation.
- Current statistics also show that nearly 50% of urban water supply comes from groundwater.
- India is on the threshold of a very serious groundwater crisis, which needs mitigation both in the fields and at the policy corridors of the country.

## **Ground water**

### **Why in news?**

- Future generations face an environmental "time bomb" as the world's groundwater systems take decades to respond to the present day impact of climate change, scientists have warned.

### **About the issue:**

- As per the findings by an international team of researchers, **groundwater reserves are already under pressure as the global population explodes and crop production rises in lockstep.**
- But the extreme weather events such as drought and record rainfall both made worse by our heating planet could have another long-lasting impact on how quickly reserves replenish.
- Researchers found that only half of all groundwater supplies are likely to fully replenish or re-balance within the next 100 years potentially leading to shortages in drier areas.
- **This could be described as an environmental time bomb because any climate change impacts on recharge occurring now, will only fully impact the**

## **Leopard carcass**

### **Why in news?**

- The carcass of a six-feet-long male leopard was found floating in the **Rengali reservoir** under **Khamara forest range in Odisha's** Angul district on January 16, 2019.
- Forest officials retrieved the floating carcass from the water and suspect that the leopard choked on fishing nets in the deep waters of the river.

### **About the leopard:**

- Leopards are protected under **Schedule 1 of the Wildlife Protection Act 1972.**
- Over the past 10 years, around 150 leopards have been poached across Odisha.
- Leopards are targeted by poachers for their expensive hides and other body parts.
- The rise in poaching cases is also indicative of increasing demand in the international illegal trade market.
- The illicit international demand for big cat skins along with the trade in bones and other parts for use in traditional oriental medicine, continues to be the main reason

for the unrelenting poaching of these endangered cats.

## Tree waste to fuel

### Why in news?

- Chemical engineering scientist Christian Hulteberg, from Lund University, has used the black liquor residue from pulp and paper manufacturing to create a polymer called **lignin**.
- After purification and filtration, that is then turned into a gasoline mixture.
- In environmental terms, it has an **advantage over other biofuels such as ethanol**.
- A lot of the controversy with ethanol production has been the use of feedstock that you can actually eat.

### What is Ethanol?

- Ethanol is a clean fuel made from **biomass containing sugar** (crops like corn, sugarcane, barley and wheat), and is considered a better and cleaner fuel than gasoline because improves the octane number of the fuel that contains ethanol and lowers the emissions level.
- Ethanol can be mixed with regular gasoline, and the most common blend of these two fuels is known as E85, which means that this fuel contains 85% of ethanol and only 15% gasoline.
- The more ethanol is in the fuel, the more clean and powerful is the fuel.
- E5 and E7 are other common blends of ethanol that work well on engines that run on pure gasoline.
- E10 is a fuel mixture (known as **gasohol**) that contains 10% ethanol and 90% gasoline and works very well in all modern vehicles and even light-duty trucks without the need of any modification made to the engine or the fuel system.

### Pros of Ethanol Fuel:

- Ethanol is Produced from Cheap Raw Materials.

- Ethanol is a Biofuel that Can Lower the Level of Emissions Released by the Transportation Sector.
- **Ethanol Can be Produced From Any Potential Living Plant Organism.**

1. In the U.S., ethanol is produced using crops such as corn, wheat and barley, while in Brazil is produced from sugarcane.
2. However, ethanol can be obtained from any potential living plant organism, including here algae and even grass, which means that ethanol can be cheaply produced from **several types of biomass**.

### Cons of Ethanol Fuel:

- Ethanol is a cleaner fuel than fossil fuels, but is less effective than regular gasoline because an engine running on pure ethanol will consume more fuel than a similar engine running on gasoline (40% more).
- Having the ability to absorb water, ethanol becomes highly corrosive, which makes it hard to transport over long distances without using special tanks, which cost more.
- **Crops Used to Produce Ethanol Occupy a Large Surface of Land.**
- **Food or Fuel?**
  1. Only in the U.S., where corn production is the highest in the world, about 40% of the production goes towards ethanol production instead of being used as food.
  2. Some say that the use of corn for ethanol production has increased the price of food in the country, while others say that ethanol has nothing to do with the increased prices for food.
  3. However, technology has shown that corn-ethanol is inferior to cellulosic ethanol.
- Ethanol is a heavily subsidized fuel, but the financial effort required to make this alternative fuel more popular will worth only if ethanol will become the main fuel used by vehicles around the world.

## Culture

### Subhash Chandra Bose Aapda Prabandhan Puraskar

#### Why in news?

- Subhash Chandra Bose Aapda Prabandhan Puraskar, an annual award, has been instituted by the government.
- The award is to be announced every year on 23rd January on the birth anniversary of Netaji Subhash Chandra Bose.

#### About the award:

- All Indian Citizens and organizations, who have excelled in areas of Disaster Management; like Prevention, Mitigation, Preparedness, Rescue, Response, Relief, Rehabilitation, Research/ Innovations or Early Warning are eligible for the Subhash Chandra Bose Aapda Prabandhan Puraskar.
- For the year 2019, 8th Battalion of National Disaster Response Force (NDRF) located at Ghaziabad has been selected for its commendable work in Disaster Management.
- The Award recipient will receive a **certificate and a cash prize** of Rs. 51 lakh.
- The award has been instituted to acknowledge the contribution and selfless service of organizations and individuals to humanity in the aftermath of any disaster.

#### Subhash Chandra Bose:



- Subhas Chandra Bose is one of the most eminent freedom fighters of India.
- Born in Cuttack, then in Bengal Province into an affluent family. Educated in Calcutta acquiring a degree in philosophy.
- Selected for the Indian Civil Services (ICS) but refused to take up service since he did not want to serve the British government.

- Bose joined the Indian National Congress (INC) in 1921. He also started a newspaper called '**Swaraj**'.
- He was the President of the All India Youth Congress and also the Secretary of the Bengal State Congress. In 1924, he became the CEO of the Calcutta Municipal Corporation. In 1930, he became the Mayor of Calcutta.
- Bose authored the book '**The Indian Struggle**' which covers the Indian independence movement from 1920 to 1942. The book was banned by the British government.
- He **coined the term 'Jai Hind'**. His charisma and powerful personality inspired many people into the freedom struggle and continues to inspire Indians. He was called **Netaji**.

#### Additional info:

1. Bose died of third-degree burns which he suffered in a plane crash in Taiwan on 18 August 1945.
2. However, many in India refused to believe that he had died.
3. Many enquiry committees were tasked with finding out what happened on that day.
4. The **Figgess Report (1946)** and the **Shah Nawaz Committee (1956)** concluded that Bose died in the plane crash in Taiwan.
5. The **Khosla Commission (1970)** also concurred with the previous reports.
6. But the **Mukherjee Commission (2005)** said that Bose's death could not be proved. This report was rejected by the government.

### Subhash Chandra Bose museum

#### Why in news?

- Prime Minister Narendra Modi inaugurated Netaji Subhash Chandra Bose Museum, Yaad-e-Jallian Museum (museum on the Jallianwala Bagh and World War I), the Museum on 1857- India's first war of Independence, and Drishyakala-Museum on Indian Art within the Red Fort complex.

### Netaji Subhash Chandra Bose Museum

- The Subhash Chandra Bose museum at Red Fort was inaugurated to mark the Netaji's 122nd birth anniversary.
- This Museum on Subhash Chandra Bose and the Indian National Army showcases different artifacts related to Netaji and Indian National Army which includes a wooden chair and sword used by the Netaji, medals, badges and uniforms.
- The museum in the Red Fort complex is also important for the fact that INA trials were held within the Red Fort complex.

### Yaad-e-Jallian Museum:

- The Yaad-e-Jallian Museum provides an authentic account of Jallianwala Bagh massacre happened on April 13, 1919.
- The Yaad-e-Jallian Museum will also showcase the heroism, valour and sacrifices made by Indian soldiers during World War-1.

### Museum on 1857- India's first war of Independence:

- The Museum on 1857- India's first war of Independence portrays the historical narrative of 1857 war of independence, showcasing the valor and sacrifices made by Indians during the period.

### Drishyakala-Museum on Indian Art:

- The Drishyakala-Museum on Indian Art showcases Indian art works from 16th century till India's independence.

### Kinnar Akhara

#### Why in news?

- Kinnar Akhada, became the first transgender group to bathe at the confluence of the holy Ganges and the Yamuna rivers on the first day of the ancient festival, traditionally reserved for reclusive Hindu priests, almost all of whom are men.



#### About Kinnar Akhara:

- Kinnar Akhara, a group of transgender saints pursuing religious activities.

#### About Akharas:

- An akhara means a traditional Indian gymnasium associated with wrestling. It also means a place for exercising the mind, as there is no clear division between body and mind in Hindu philosophy.
- The akhara members, the babas, are aligned to various schools of Hinduism such as Shaivism and Vaishnavism. There are Sikh akharas too.
- The akharas are either astradharis (those who bear weapons) or shastradharis (those who bear scriptures).
- It is believed that Adi Shankaracharya established these akharas over 1,000 years ago to defend Hinduism.

#### About Kumbha Mela:

- It is a mass Hindu pilgrimage of faith in which Hindus gather to bathe in a sacred or holy river.
- The Kumbh Mela is held once every three years at four locations in India – Haridwar, Prayag, Nashik and Ujjain – which means each location hosts it roughly once in 12 years.
- The venue is decided based on planetary movements.
- It is believed that the event marks the time when the river waters gain the power of amrita, the nectar of immortality, churned by devas (celestial forces) and asuras (subterranean forces) from the ocean of milk.

## Miscellaneous

### Diffo Bridge

#### Why in news?

- Bridge over Diffo river on Roing-Korong-Paya road has been inaugurated in Arunachal Pradesh.
- The construction of the Bridge was undertaken by the Project Udayak of the Border Roads Organization.

#### About the project:

- It would provide *uninterrupted access between Dibang valley and Lohit valley region of Eastern Arunachal Pradesh*. It would provide an all-weather Road to the troops deployed on the China Border.
- *Project Udayank of the Border Roads Organization* was raised on June 1990 at Doomdooma Assam.
- The name of the project Udayank is synonymous to the **land of rising sun** which fits appropriately to the area it operates.
- It consists of two border road taskforces undertaking construction activities in the north-eastern region.

#### BRO:

- Border Roads Organization (BRO) develops and maintains road networks in India's border areas and friendly neighbouring countries.
- BRO has also undertaken the infrastructure development activities in neighbouring countries such as Afghanistan, Bhutan, Myanmar, and Sri Lanka.
- **During the peacetime, the BRO is vested with responsibilities to they are:**
  1. Develop & Maintain the Operational Road Infrastructure of General Staff (GS) in the Border Areas.
  2. Contribute to the Socio-Economic Development of the border states.
- **During Wartime, BRO is responsible for:**
  1. Developing & Maintaining Roads to Keep Line of Control through in Original Sectors and Re-deployed Sectors.
  2. Executing Additional Tasks as laid down by the Government Contributing to the War Effort. The Border Roads Organization works under the Ministry of Defence.

### Keerian -Gandial bridge

#### Why in news?

- Keerian – Gandial bridge, over river Ravi, was inaugurated on 22 Jan 2019.

#### About the bridge:

- The bridge over Ravi at Keerian – Gandial will benefit over 2,20,000 people living on the two sides **Kathua in Jammu, and Pathankot in Punjab**.
- It will reduce the distance between the two cities from 45 kms to 8.6 kms.
- The bridge will improve inter-state connectivity.

#### Ravi River:



- The Ravi has its source in **Kullu hills** near the **Rohtang Pass** in Himachal Pradesh.
- It drains the area between the **Pir Panjal** and the **Dhaola Dhar ranges**.
- After crossing Chamba, it takes a south-westerly turn and cuts a deep gorge in the Dhaola Dhar range.
- It enters Punjab Plains near **Madhopur** and later enters Pakistan below Amritsar.
- It debouches into the Chenab a little above **Rangpur in Pakistani Punjab**.

### Rashtriya Bal Puraskar

#### Why in news?

- The President of India, Ram Nath Kovind on January 22, 2019 conferred the **Pradhan Mantri Rashtriya Bal Puraskar 2019**.

#### About the award:

- The awards were presented to 26 shortlisted awardees including one joint award for National Child Award under the category of innovation, scholastic, sports, art and culture, social service and bravery.

- The **Union Ministry of Women and Child Development** introduced a revamped award scheme under the name of Pradhan Mantri National Children Awards or Pradhan Mantri Rashtriya Bal Puraskar.
- These awards are given in two main categories. The categories are:
- **Bal Shakti Puraskar** (erstwhile known as National Child Award):
  1. The Bal Shakti Puraskar is given in the fields of Innovation, Social Service, Scholastic, Sports, Art & Culture, and Bravery.
  2. The award carries a medal, a cash prize of Rs 100000, book vouchers worth Rs. 10,000, a certificate and a citation.
- **Bal Kalyan Puraskar**(erstwhile known as National Child Welfare Award):
  1. The Bal Kalyan Puraskar is given in the categories of Individual and Institution.
  2. The award for Individual category consists of a cash prize of Rs 100000, a medal, a citation and a certificate.
  3. The award for Institution category consists of a prize of Rs 500000 each, a medal, a citation and a certificate.
  4. The maximum number of awards would be 3 for National Child Welfare Award, Individual and Institution both.
- A Child who is an **Indian Citizen and residing in India can apply for National Child Award** by registering on the award portal ([www.nca-wcd.nic.in](http://www.nca-wcd.nic.in)), filling the requisite information and attaching the relevant documents.
- **Eligibility:**
  1. In order to draw wide response from public, any citizen of India can nominate any child who has achieved excellence in any of the fields.
  2. Individuals, who are citizen of India and have made an outstanding contribution for the cause of children for not less than 7 years and have a positive impact on their lives and Institutions who have done exceptional work in any field of Child Welfare for 10 years can apply for the Award.

## App for the visually impaired

### Why in news?

- In a bid to assist visually impaired people to easily determine denomination of currency notes, the Indian Institute of Technology at Ropar in Punjab has developed an Android App "**Roshni**", using **image processing and analytics**.

### About the Roshni app:

- This App utilizes an adaptable deep learning framework, which further uses the patterns and features embedded on the notes to differentiate and determine the currency denomination.
- **IPSA (Image processing, Security and Analytics)** lab prepared a rich dataset of more than 13, 000 images of currency notes under varied real-world conditions.
- The user has to bring the currency note in front of phone camera and the App would provide audio notification intimating the currency note denomination to the user.
- The **Seeing AI App by Microsoft** is the only other App that facilitates recognition of **both old and new Indian currency notes**, but it is an **iOS App** and not available for school for visually impaired recently and performed the App testing there.
- Earlier the visually impaired persons, differentiated the currencies based on the length and width of the note. But after demonetisation it became very difficult for them to identify the denomination, due to similarity in the sizes of new and old notes.
- Also, for those individuals who lost their vision due to old age or some other conditions, 'Roshni' will be very beneficial."

## Exercise Sea Vigil

### Why in news?

- Ten years after the 26/11 Mumbai terror attack, India conducted its largest coastal defence drill, Exercise Sea Vigil.
- It is the first coastal defence Exercise, conducted by the **Navy and Coast Guard**, in close coordination with State Governments and Union Territories.
- It was the largest such exercise the country had ever witnessed in recent times and saw participation by more than 100 ships, aircraft and patrol boats manned and operated by various security agencies.

### More about exercise:

- Aim: To comprehensively and holistically validate the efficacy of the measures taken since '26/11'.
- Exercise is planned in two phases, the Phase I commenced with the deployment of personnel and sea-going units of all stakeholders.
- This layered defence provided a near-unbroken 'Nigrani' or surveillance net along the entire coast of India and outlying islands.
- The Phase I also saw an intensive audit of all measures put in place since 26/11 to improve the measures of efficiency and effectiveness of coastal security.
- This 'Nireekshan' was undertaken by multi-agency teams deployed to check and audit important landing points including Fish Landing Centres and Vulnerable areas and important installations along the coast as well as in the hinterland.
- The entire coastal security apparatus was thereafter shifted to Phase II and this Phase saw attempts to penetrate and land dummy explosives by designated 'RED' forces comprising teams drawn from the Navy Coast Guard, Police and CISF.
- Many attacks were allowed to 'go-through' to test robustness of Police 'Nakabandi' which was found to be very effective throughout the exercise.

## Statehood days

### Why in news?

- The states of Tripura, Manipur and Meghalaya celebrated their 47th Statehood Day on 21st January and became full-fledged states on January 21, 1972.

### State Reorganization of North-East:

- At the time of Independence, India's North-East region composed of three kinds of entities mentioned below:
  1. Assam Province of British India.
  2. Princely states of Manipur and Tripura.
  3. North East Frontier Province (NEFA).



- Manipur and Tripura were granted the status Union Territories in 1949. On 1 December 1963 statehood was granted for Nagaland.
- Meghalaya was made an autonomous state within Assam via the Assam Reorganisation (Meghalaya) Act of 1969 as per the sixth schedule of the constitution.
- In 1972, Manipur, Meghalaya and Tripura were granted full statehood via the North East Reorganization Act 1972 and the Mizo Hills region of Assam and NEFA were converted into a Union Territory.
- As a result of the Mizo Accord of 1986, Mizoram emerged as a full-fledged state of India in 1987.
- Even the NEFA (Arunachal Pradesh) was granted full-fledged statehood in 1987.
- Meghalaya has organised a week-long programme on the theme, 'Celebrating Meghalaya-India', on the occasion of the 47th Statehood Day and the 70th Republic day.

## Himachal Pradesh Statehood Day

### Why in news?

- Himachal Pradesh Statehood Day is a public holiday in the Himachal Pradesh state in India.
- It is always celebrated on 25 January. It was on this day in 1971 that Himachal Pradesh became the 18th state of India.

### History of HP:

- Himachal Pradesh is state in North India. Bordering Tibet, it is noted for its Himalayan landscapes (Himachal Pradesh means 'snow-laden region') and is popular tourist destination for trekking and enjoying the natural beauty. It also has the fourth highest per capita income for Indian States and is the third fastest growing economy in India.

- Following independence from Britain in 1947, Himachal Pradesh was created as a province on 15 April 1948. This event is celebrated with a public holiday of its own - Himachal Day.
- In 1950 it became a sub state under the Indian constitution then becoming a union territory in 1956.
- On 18 December 1970 the State of Himachal Pradesh Act was passed by Parliament and the new state came into being on 25 January 1971 making it the 18th state of India. Y.S. Parmar became the state's first chief minister.
- Between its creation in 1948 and statehood in 1971, Himachal Pradesh also changed its boundaries several times, incorporating smaller districts in the region.

## Awards

### Why in news?

- Indian Vice President M.Venkaiah Naidu presented the second **Chhatra Vishwakarma Awards** to students and their mentors and **Sansad Adarsh Gram Yojana (SAGY)** awards to institutions at an event organized by the All India Council for Technical Education (AICTE) on January 21, 2019 at New Delhi.

### Chhatra Vishwakarma Awards:

- The Chhatra Vishwakarma Awards are inspired by the spirit of engineering and creation patronized by Lord Vishwakarma, the ruling deity of construction practices in India.
- The awards aim to motivate young individuals, inspire leaders and institutions and organizations to recognize and applaud the innovations and achievements of individuals as well as institutions.
- This year 2019, the AICTE in association with Engineering Council of India (ECI) and the Indian Society for Technical Education (ISTE) announced the 2nd Chhatra Vishwakarma Awards 2018 under the theme "Empowerment of Villages through Technologies".
- The AICTE invited applications from various institutions under the following categories:

- Water & Irrigation**
- Sanitation & Solid Liquid Waste Management**
- Rural infrastructure**
- Tourism**

Officers IAS Academy, Chennai

- Agriculture & Food**
- Education, Skill initiative & Start-ups**
- Rural Craft & Livelihood**
- Any other Rural Appropriate Technologies**
- The council received a total of 1067 applications from the teams of various institutions. After scrutiny, 118 teams with a total of 310 students including 191 male and 119 female students have been called for the National Convention at AICTE Headquarters, New Delhi.
- The awards are:

S.No.	Category	Winner
1.	Any other Rural Appropriate Technologies	Army Institute of Technology, Maharashtra
2.	Education, Skill Initiative & Startups	Gokaraju Rangaraju Institute of Engineering and Technology, Telangana
3.	Rural Craft & Livelihood, Rural Infrastructure, Tourism	Sri Venkateswara College of Engineering, Andhra Pradesh
4.	Agriculture & Food	Sri Krishna College of Technology, Tamil Nadu
5.	Water & Irrigation	Aditya Engineering College, Andhra Pradesh
6.	Sanitation & Solid Liquid Waste Management	Kalasalingam Academy of Research and Education, Tamil Nadu

### Sansad Adarsh Gram Yojana (SAGY) Awards:

- The awards were launched in October 2014 with the aim to translate the comprehensive vision of Mahatma Gandhi of an ideal Indian village.
- Under the scheme, the members of the Parliament adopted Gram Panchayats for their holistic progress.
- The AICTE also encouraged institutes located in the proximity of villages to support them under the scheme. These institutes have been working hard to develop the adopted villages.
- The SAGY award was constituted with an aim to motivate, recognise and honor such institutions under the theme "developed village-developed nation" to raise their performance in the specific domains leading to significant contribution for the growth and development of villages and country as well.
- Under the award, 103 nominations were received from AICTE approved institutions across the country. The entries were scrutinised at different stages and judged by a jury of eminent experts in the field. Out of the 24 shortlisted applications, the

following institutions were recommended for the Awards:

S.No.	Name of the Institution	Award/Rank
1	College of Technology and Engineering, Udaipur, Rajasthan	First
2	Seethi Sahib Memorial Polytechnic College, Tirur, Kerala	Second
3	Indian Institute of Food Processing Technology, Thanjavur, Tamil Nadu	Third

## Jeevan Raksha Padak Awards - 2018

### Why in news?

- The President of India has approved the conferment of Jeevan Raksha Padak Series of Awards - 2018 on 48 people, eight of them posthumously.

### About the awards:



- The Jeevan Raksha Padak series of awards are conferred for the meritorious act of human nature in saving the life of a person. They are given under three categories: Sarvottam Jeevan Raksha Padak, Uttam Jeevan Raksha Padak and Jeevan Raksha Padak. People of all walks of life are eligible for these awards.
- This year, the Sarvottam Jeevan Raksha Padak will be given to 8 people, Uttam Jeevan Raksha Padak to 15 and Jeevan Raksha Padak to 25 people. Among these, 8 awards will be conferred posthumously.
- The decoration of the award, which includes a medal and a certificate signed by the Union Home Minister and monetary allowance will be presented to the awardee in due course by the respective Union Ministries, organisations and state government to which the awardee belongs.

## Bharat Ratna awards

### Why in news?

- Former president **Pranab Mukherjee**, Bharatiya Jana Sangh leader **Nanaji Deshmukh** and singer **Bhupen Hazarika**

Officers IAS Academy, Chennai were conferred the country's highest civilian award Bharat Ratna .

### About Bharat Ratna award:

- Bharat Ratna - 'Jewel of India' is the highest civilian award of the country.
- It is conferred for exceptional Service to the nation in various fields such as Science arts, literature and in recognition of public service of the highest order.
- The award can be granted posthumously and since its establishment, seven awards were granted posthumously.

### History:

- The award was established by formal President of India Rajendra Prasad on 2nd January 1954.
- The concept of awarding this award posthumously was not there in the original statute declared in January 1954.
- Provision to award posthumously was finally added in January 1966 statute of this prestigious award.
- First Bharat Ratna was awarded to Sarvapalli Radhakrishnan, Sir C.V. Raman, and Chakravarti Rajagopalachari in 1954.
- Sachin Tendulkar is the first sportsperson and the youngest Bharat Ratna Award, recipient.

### Award:

- The medallion is cast in Bronze.
- The medallion is designed like the leaf of pipal tree with sunburst in the center and Bharat Ratna is engraved underneath it.
- On the backside, Indian emblem of India is embossed and Satyameva Jayate is inscribed in Devanagari script.
- The medallion is worn around the neck using white ribbon.
- The award does not carry any monetary endowment.

### Eligibility:

- The award was initially restricted to accomplishments in the literature, science, arts, and public services, but the government of India expanded the conditions to comprise "any field of human endeavor" in 2011.
- There is no written provision that Bharat Ratna should be awarded to Indian citizens only.

3. Recently Government of India has altered guidelines for eligibility of persons from sports field for the Bharat Ratna.
4. The recommendations for Bharat Ratna are made by the Prime Minister to the President.
5. The number of yearly awards is constrained to a maximum of three in a specific year.

# News in-depth

## General Studies-1

### Manipur shows the way

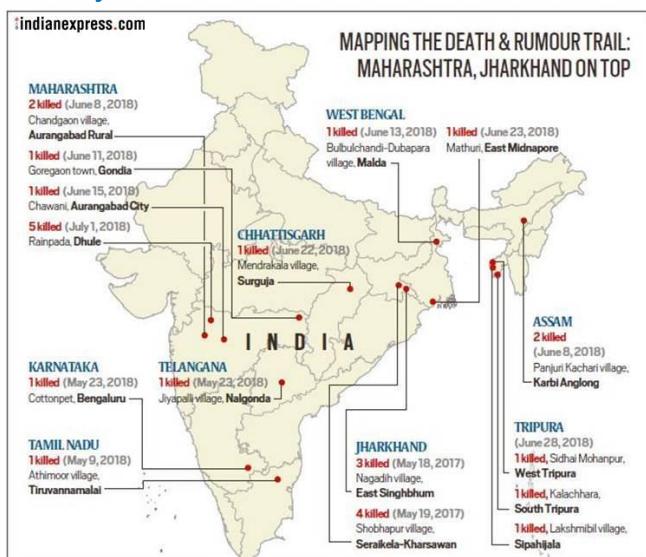
#### Why it is in News?

- Manipur became the first to pass a remarkable law against lynching in late 2018. It did this after a single horrific video-taped lynching of a Muslim youth with an MBA degree stirred the public conscience.

#### Mob Lynching:

- Mob Lynching has become a recurring phenomenon in different parts of the country recently. Mob Lynching means putting a **person to death by mob action** without **due process of law** for a **offence committed or a perceived offence by the mob to be committed by individual**. So far across India , 86 people have been killed in Mob Lynching in last 5 years according to a survey conducted by a NGO.

#### Different Mob Lynching Incidents across India recently:



#### Reasons for Mob Lynching:

- **Historical reasons** of hatred and animosity between the majority and minority community in pre-independent India, incidents of partition and scepticism of loyalty of minority communities to the

nation have led to increasing mob lynching incidents.

- India being a **culturally diverse country**, the religious practices of one group finds itself in odds with the other group, leading to mob lynching sometimes in some parts of the country . Eg Cow is considered as sacred in a religious group at the same time meat of cow is considered as a source of food and nutrition for certain religious groups and certain sections of society. This often leads to violence between cow vigilante groups vs people who depend on meat of the cow
- **Unemployed and people below poverty** are the majority in any mob lynching incident across the country, as Indian Express found in its study on Mob Lynchings. This shows poverty and unemployment are also one of the reasons for increasing Mob Lynching in India
- **Increasing rural-urban divide , and very less literacy rate in interior rural areas** is also considered as reasons for increasing Mob Lynching. "In the interior areas, there is less presence of authentic mainstream media and people being low in literacy level... and forwards on WhatsApp or [Facebook](#) is considered as truth. With the advent of easily available smartphones and social media, people can get — at a cheap price — access to photos and videos. Rumours go viral in seconds. The first response regarding rumours of child-lifting was that 'this is on Facebook' — as if what's on Facebook is the definitive truth," finds Indian Express study on Mob Lynching
- Lack of **clear and definite laws to penalise people** involving in Mob Lynching
- Lack of **active policing and failure in collection of actionable intelligence** to prevent Mob Lynching, as Police forces in States are understaffed, ill equipped and untrained to handle a Mob Lynching

### Steps taken by different stakeholders:

- Tech companies like Whatsapp and Facebook have taken various steps to reduce spread of fake news and rumours by limiting the number of people messages can be forwarded and introducing other reporting mechanism of fake news.
- The Judiciary has asked the Centre to bring in a legislation covering various aspects of Mob Lynching, and the Judiciary also gave a 11 points prescription, which are:
  - The state governments shall designate a senior police officer in each district for taking measures to prevent incidents of mob violence and lynching.
  - The state governments shall immediately identify districts, subdivisions and villages where instances of lynching and mob violence have been reported in the recent past.
  - The nodal officers shall bring to the notice of the DGP any inter-district co-ordination issues for devising a strategy to tackle lynching and mob violence related issues.
  - It shall be the duty of every police officer to cause a mob to disperse, which, in his opinion, has a tendency to cause violence in the guise of vigilantism or otherwise
  - Central and the state governments should broadcast on radio and television and other media platforms including the official websites that lynching and mob violence shall invite serious consequence .
  - Curb and stop dissemination of irresponsible and explosive messages, videos and other material on various social media platforms. Register FIR under relevant provisions of law against persons who disseminate such messages.
  - Ensure that there is no further harassment of the family members of the victims.
  - State governments shall prepare a lynching/mob violence victim compensation scheme.

- Cases of lynching and mob violence shall be specifically tried by designated court/fast track courts earmarked for that purpose in each district. The trial shall preferably be concluded within six months.
- \*To set a stern example in cases of mob violence and lynching, the trial court must ordinarily award maximum sentence upon conviction of the accused person.
- \*If it is found that a police officer or an officer of the district administration has failed to fulfill his duty, it will be considered as an act of deliberate negligence
- State Governments like Manipur has taken the initiative following Judiciary's directives and shown the way in **bringing a strict legislation**, in attempting to control hate crimes and ensure police action. At present there is no law that criminalises mob lynching. The **Indian Penal Code** has provisions for unlawful assembly, rioting, and murder but **nothing that takes cognisance of a group of people** coming together to kill (a lynch mob).

### Way Forward:

- To reduce the incidents of Mob Lynching across India, the it is paramount that all stake holders work in tandem , take necessary steps to prevent Mob Lynching at every level, even if one takes place by chance, the judiciary should take stern action against those who were involved in breach of law and restore faith in the Judicial system to protect the "pluralist social fabric " of India.

## The missing women in workforce data

### What it this article about?

- The article speaks about women's contribution to economy not being taken into account for various sample surveys and estimates. Hence number of workers among women are reported low.
- The Census estimates **male workers to be above 50 per cent of the male population** over several decades, the **estimates of the proportion of female workers in the female population are unrealistically low.**

- It was 14 per cent in 1971, 19.8 per cent in 1981, 22.3 per cent in 1991 and around 25 per cent in 2001 and 2011 for women.
- Census 2011 estimates the workforce participation rate for females to be 25.52 per cent for the country, 30.3 per cent for rural areas and 15.44 per cent for urban areas.
- According to data collected by the NSS, an estimated 54.3 per cent and 54.6 per cent of males were in the work force in both rural and urban areas in 2011-12. The corresponding percentages for females were 24.8 per cent and 14.7 per cent in rural and urban areas, respectively.
- The official statistics create the perception that the female work participation rate is very low in India — far lower than in most countries of the world. The fact is that women participate in the work force to a far greater extent than is measured by the data. However, a lot of the work they do is unrecognised, invisible, uncounted and either unremunerated or poorly remunerated.

#### Golgappa-Samosa example:

- When a male vendor sells *golgappas* or *samosas* or other snacks, he is able to do so because his wife wakes up early in the morning and spends six hours rolling out the *golgappas* or *samosas* and frying them or making all the other ingredients that get loaded onto the cart that the vendor takes to different localities to sell. The value of the *golgappas* or *samosas* gets counted in the GDP. This value includes the labour contributed by both husband and wife.
- However, the problem is that while he gets counted as a worker, his wife does not.
- The tragedy is that neither she herself, nor her husband, see her as a worker or consider her contribution as valuable.
- If her husband says she only does housework and she says "*kuch nahin karti*" (I do nothing), she will not get counted as a worker in the official statistics.
- This applies equally to women's contribution to agriculture, animal husbandry, collection and processing of non timber forest produce and other products that are "jointly" produced within the family.
- It is even reported that women even contribute to GDP as **farmers and**

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- cultivators in agriculture.** They are the main producers in the animal husbandry sector.
  - While some are unskilled agricultural and non-agricultural casual labour/coolie labour or work as head loaders and construction workers, others are skilled
  - They work as **domestic workers**. They also cook in hotels and clean gyms.
  - They deliver **government programmes** as **anganwadi workers** and helpers, teachers, workers who cook mid-day-meals in schools, village coordinators, SHG facilitators and members of income generating projects. They work at MGNREGA and other public worksites.

#### Conclusion:

- From the above discussion, it can be concluded that Census and NSS estimates of women workers are extremely low compared to what is reported through detailed interviews during micro studies and field work.
- Several publications show the gross inaccuracies in the official statistics. In a 1982 publication, **Devaki Jain and Malini Chand** showed that **20 out of 104 females** reported as non-workers in a West Bengal village in the Census, were actually winnowing, threshing, parboiling or working as domestic servants for 8-10 hours/day.
- In a 1992 publication, **Gail Omvedt** found **239 women workers in one area where the Census counted 38 and 444 women workers in another area where the Census listed nine.**
- Yet the problem of invisibility of women's work continues to persist as Government and other surveying agencies fail to recognise the problem.

## A tragedy that was long in the making

#### What this article is about?

- This article talks about the failure of the different stakeholders in handling of the rescue operation of the workers trapped in mines in Meghalaya and different fault lines in the rescue operation
- First, the Meghalaya government has no idea what happens inside these rat-hole mines, which are barely 2 ft wide, since mining is a private activity. But the Supreme Court has banned the activity in

2014 but it was still continuing without the knowledge of State Government.

- The district administration's assumption that the miners to be dead on the very day of the tragedy was another reason for not conducting rescue operations
- The distance of the mine was another reason why rescue operation was not started immediately.
- The trapped miners were being racially profiled in the minds of the people and the state. Of the 15 miners, only three were locals from the nearby village of Lumthari. The rest were Muslims from Garo Hills, Meghalaya, and Bodoland, Assam. Their socio-economic profile also worked against them.
- They were the poorest of the poor who took a huge risk to enter a mine and dig for coal without any safety gear.
- Delay in arrival of different experts and equipment's ranging from hydrologist to 100 HP water pumps ,the remotely operated underwater vehicle (ROV) from Chennai was another reason for delay in rescue operations
- All these delays happened because there was no one person or agency to coordinate the rescue mission.
- The fault-lines are clear. Those who care **for the environment and for a future for their children and grandchildren have been clamouring for an end to the practice of rat-hole mining and reckless limestone mining.**
- On the other hand, the mining elite are using every trick in the book to run their business without any hurdles like "**insisting that since Meghalaya is a State under the Sixth Schedule of the Constitution, national mining laws should be exempted here"**
- The ball lies in the Central government and the highest court of the land whether to allow rat hole mining to carry on in one part of the country or not, when strict laws are applied in rest of the country?

## Moving away from 1%

### What this article is about?

- The article speaks about lesser financial allocation to health sector and reducing public health expenditure for consecutive years. The article argues in favour of increasing budget allocation to health

Officers IAS Academy, Chennai sector in line with the National Health Policy 2017 to achieve health related Sustainable Development Goals.

- India's health achievements are very modest in comparison to both large and populous countries such as China, Indonesia or Brazil and small countries in neighbourhood like Sri Lanka, Bangladesh, Bhutan.
- If we look at the other developed and transitional economies over many years, two important trends can be discerned: **as countries become richer, they tend to invest more on health, and the share of health spending that is paid out of the pocket declines.** Economists have sought to explain this phenomena as "**health financing transition**".
- The point to be noted is that similar to these transitions, the health financing transition is **not bound to happen**, though it is widespread.
- Different Countries differ in terms of **timing to start the transition, vary in speed with which they transition through it**, and, sometimes, may **even experience reversals**. Economic, political and technological factors move countries through this health financing transition.
- In times of increasing cost of health services, the author of the article is in favour of **Pre-paid financing mechanisms**, such as **general tax revenue or social health insurance (not for profit)**, **collect taxes or premium contributions from people based on their income**, but **allow them to use health care based on their need** and not on the basis of how much they would be expected to pay in to the pooled fund.
- Countries(including the developing ones) which have adopted either of the above financing mechanisms **have done well in reducing out-of-pocket expenditure** with a goal to achieve Universal Health Care (UHC) for their respective populations in the coming years.
- For example, according to the World Health Organisation's recent estimates, out-of-pocket expenditure contributed only 20% to total health expenditure in Bhutan in 2015 whereas general government expenditure on health accounted for 72%, which is about 2.6% of its GDP. Similarly,

public expenditure represents 2%-4% of GDP among the developing countries with significant UHC coverage, examples being Ghana, Thailand, Sri Lanka, China and South Africa.

- We find India has not invested in health sufficiently, though its fiscal capacity to raise general revenues increased substantially from **5% of GDP in 1950-51 to 17% in 2016-17**
- India's public spending on health continues to hover around **1% of GDP** for many decades, accounting for less than **30% of total health expenditure**.
- It is also found that neither the Central nor the State governments have undertaken any significant policy intervention, except the National Health Mission, to redress the issue of widening socioeconomic inequalities in health.
- The NHM, with a budget of less than 0.2% of GDP, is far too less to make a major impact. And worryingly, the budgetary provision for the NHM has decreased by 2% in 2018-19 from the previous year.
- The Union government launched the Pradhan Mantri Jan Arogya Yojana with much fan-fare but only ₹2,000 crore was allocated to this so called 'game-changer' initiative.

- As a percentage of GDP, total government spending (Centre and State) was a mere 0.98% in 2014-15 and 1.02% in 2015-16.
- The author assuming that the trend did not change in the last couple of years, India's public expenditure on health would be around 1.1% even in 2017-18. This 'sticky public health spending rate' of 1%, which does not increase despite robust economic growth for years, is partly due to a decline in the Centre's expenditure, which fell from 0.40% of GDP in 2013-14 to 0.30% of GDP in 2016-17 (As per 2018-19 budget allocation, 0.33% of GDP)

#### **Conclusion:**

- There is a need for a substantial increase in the allocation for health in the forthcoming Union Budget to reverse this sluggish public health spending. However, the rise in government health spending also depends on health spending by States as they account for more than two-thirds of total spending.
- Hence, both the Centre and States must increase their health spending efforts, which would reduce the burden of out-of-pocket expenditure and improve the health status of the population.

## General Studies-2

### Manipur's Anti Mob Lynching Law:

#### Significant Features of the Law:

1. **Comprehensive in definition:** Its definition of lynching is comprehensive, covering many forms of hate crimes. These are "any act or series of acts of violence or aiding, abetting such act/acts thereof, whether spontaneous or planned, by a mob on the grounds of religion, race, caste, sex, place of birth, language, dietary practices, sexual orientation, political affiliation, ethnicity or any other related grounds ...."
2. **Follows Supreme Court's guidelines:** The Manipur law closely follows the Supreme Court's prescriptions, creating a nodal officer to control such crimes in every State, special courts and enhanced punishments.
3. **Protection of the Victim and witness:** Manipur's Anti-Lynching law laid down the duty and responsibility of the State Government to make arrangements for the protection of victims and witnesses against any kind of intimidation, coercion, inducement, violence etc.
4. **Onus of Responsibility on Public Officials:** It prescribes the duty of the State officials to prevent a hostile environment against people of the community, who have been lynched.
5. **Removes hitherto protection granted to public officials:** The Manipur law means that now no prior sanction is required to register crimes against public officials who fail in their duties to prevent hate crimes such as lynching.
6. **Scheme for Rehabilitation:** The law requires the state government to formulate a scheme for relief camps and rehabilitation in case of displacement of victims, and death compensation.

#### Concerns in the bill:

1. **Exclusion of solitary hate crimes in definition:** The law, however, excludes from its provisions solitary hate crimes. For the law to apply instead it requires that these hate crimes are undertaken by mobs (defined as a group of two or more individuals, assembled with a common intention of lynching), thereby excluding from its provisions solitary hate crimes. **Some experts are of the view that**, this restriction of numbers is arbitrary, since

the essence of what distinguishes these kinds of crimes is not the numbers of attackers but the motivation of hate behind the crimes; therefore, provisions of this law should apply to all hate crimes, not just lynching, regardless of the numbers of persons who participate.

2. **No gender sensitive reparation :** This law does not include gender-sensitive reparation on an atonement model, requiring the state to ensure that the victim of hate violence is assisted to achieve material conditions that are better than what they were before the violence, and that women, the elderly and children are supported regularly with monthly pensions over time.

#### Conclusion:

- Despite concerns over some drawbacks on the legislation, Manipur government has broken new ground, being the first government to frame a law against Mob Lynching. If followed by the Union and other State governments, such a sterling law could substantially prevent hate attacks, ensure public officials are faithful to their constitutional responsibilities and victims, and that their families and communities are assured of protection and justice.

## Article 370

### Why it is in news?

Article 370 is in news following a PIL filed in Supreme Court recently challenging the constitutionality of Article 370

#### Article 370:

Article 370 of the Indian Constitution is a 'temporary provision' which grants special autonomous status to Jammu & Kashmir.

- Under Part XXI of the Constitution of India, which deals with "Temporary, Transitional and Special provisions", the state of Jammu & Kashmir has been accorded special status under Article 370.
- All the provisions of the Constitution which are applicable to other states are not applicable to J&K. For example, till 1965, J&K had a Sadr-e-Riyasat for governor and prime minister in place of chief minister.

#### Provisions of Article 370:

- According to this article, **except for defence, foreign affairs, finance and communications, Parliament** needs the state government's concurrence for applying all other laws.
- **Thus the state's residents live under a separate set of laws, including those related to citizenship, ownership of property, and fundamental rights, as compared to other Indians.**
- As a result of this provision, **Indian citizens from other states cannot purchase land or property in Jammu & Kashmir.**
- Under Article 370, the Centre has no power to declare financial emergency under Article 360 in the state.
- It can declare emergency in the state only in case of war or external aggression. The Union government can therefore not declare emergency on grounds of internal disturbance or imminent danger unless it is made at the request or with the concurrence of the state government.

#### **Context in which Article 370 was created:**

- Article 370 owes its birth to the unusual circumstances under which Jammu and Kashmir joined India in the late 1940s. The Hindu king of Kashmir, Hari Singh, refused to merge the state either with India or Pakistan after partition.
- He wanted to retain sovereignty, unlike the majority of the 500-plus princely states who decided to go either with India or Pakistan after partition. Pakistan wanted to have claim over Kashmir on the ground that it was a Muslim majority state, thereby justifying the two nation theory.
- However, the popular political movement under the leadership of Sheikh Abdullah was dead opposed to any merger with its western neighbor. Instead, Abdullah favored merging with secular and democratic India.
- Amidst all these claims and counterclaims, tribes from Pakistan's North West Frontier Province (NWFP) raided Kashmir in October 1947 and the Hindu king, taken aback by this sudden aggression from across the border, approached New Delhi for help.
- An Instrument of Accession was signed between Kashmir and India on the condition that the state would enjoy a "**special status**" and it was understood

Officers IAS Academy, Chennai that the agreement would in no way affect the sovereignty of the state's princely status. **New Delhi** accepted the terms and conditions and **Article 370** was added to the Constitution, giving Kashmir a **special status**.

#### **Should Article 370 continue as a temporary provision or scrapped?**

There are 2 diametrically opposite opinions on this question. People who are in favour of Article 370 to be scrapped argue on the following grounds:

- **Temporary Provision:** People in favour of removal of Article 370 state that it was added in constitution of India only as a Temporary Provision in Chapter 21 not as permanent one.
- **Does not allow Integration with India:** People who support repealing of Article 370 consider that Article 370 prevents Jammu & Kashmir from integration with rest of India, as **it does not allow Indian Citizens from rest of the states to buy property in the State and it also doesn't accept investments and business opportunities from rest of India, therefore preventing development of the State too.**
- **Added through a Presidential Order:** People who support repealing Article 370 consider Article 370 and Article 35A was added in an unconstitutional manner through Presidential Order rather through normal Parliamentary Legislative Process.
- **Discriminates women of J&K:** In accordance with autonomy given to the state of J&K under Article 370 and Article 35A, the state discriminates women marrying men from outside of India and their children by not granting them property rights which is actually supposed to be their natural inheritance rights
- **Erodes Parliamentary Jurisdiction:** People who support repealing Article 370 consider it circumvents the highest sovereign body of the country "The Parliament", as its laws are not applicable without the consent of the State Legislature

#### **People who are against removal of Article 370 argue on the following grounds:**

- **Conditions in which J&K became part of Indian Union:** People who are against repealing of Article 370 consider **special circumstances** under which J&K became part of India should not be forgotten. They argue that Article 370 was a concession

it would be pragmatic as of now to take effective measures to win back the trust of the J&K people rather than opening a pandora's box by debating on Article 370.

## Justice Delayed is markets stymied

### Overview

- In India, since the 1991 economic reforms, the country has improved tremendously in almost all economic indicators, and is now one of the fastest growing nations in the world.
- Various economic policies of the government have enabled the economy in a right direction.
- These include tax reforms leading to the introduction of the Goods and Services Tax, reforms making India more competitive in the 'Ease of Doing Business' index, and implementation of the Insolvency and Bankruptcy Code.
- But the dispute redressal mechanism which is taken care by the judiciary is a major hindrance to Indian economy.

#### Need for Efficient Judiciary

The judiciary is said to be important in Indian economy because,

- Clear and transparent information is very important for businesses to flourish. It also undermines the need to follow corrupt practices while doing business.

- Efficient dispute settlements which builds trust in the market and invites more players to take part in it.
- When contracts are enforced in a time-bound manner and powered by an effective judiciary it creates a level playing field for all players big or small.

#### Absence of Judicial intervention

- The absence of judiciary in redressal mechanism results in corruption and crony capitalism.
- The low focus on the judiciary obviously implies that non-compliance of contracts is not at all costly in India.
- The official dispute settlement mechanism does not deliver justice in a time-bound manner.
- Consequently, players are willing to bypass the system by paying rents to government officials.
- Crony capitalism is one in which businesses thrive as a result of nexus between a business class and the political class.

that they got for joining Article 370 and it cannot be taken back

- **Alienate people of J&K:** It is even seen by experts that any movement on the status quo of Article 370 will alienate the people of J&K and affect their loyalty to the Indian State.
- **Security Challenges:** People who are against removal of the Article 370 even argue that removal of Article 370 will come with a cost that will be heavy for the Indian State to pay, as **radicalisation and separatist tendencies are high in J&K**, it will destroy peace in the region and can thwart development of the nation
- **Lose of a strategic advantage:** If Article 370 is revoked, it puts India in a quandary, it is the question of national security, they would not only risk losing a state which holds great strategic importance, and is rich in natural resources. It would put **India at a major disadvantage if Kashmir is lost**. The national capital would be exposed, and **militarily India would become very vulnerable to the likes of China and Pakistan**, as Kashmir comes with its own strategic advantage of geography , acting as a wedge for India State dividing Pakistan on one side and China in the other side.

### Conclusion:

- Even though there have been arguments for and against the removal of Article 370, some experts opine that "Article 370 is the bridge that connects India with Kashmir. Any attempt to annul the all-important constitutional provision would mean cutting the umbilical cord that connects pluralistic India with the only Muslim majority state in the nation".
- At a time when the situation in the Kashmir valley is volatile, the attempt should be to assuage the frayed tempers and win back the trust of the population who six decades ago hooked their destiny with secular India. New Delhi should try to win back that trust rather than scrap the very instrument which connects the valley with the heartland.
- As respected statesman Vajpayee once said " Jammu & Kashmir issues can be resolved only if we are guided by three principles of Insaniyat (Humanism), Jamhooriyat (Democracy) and Kashmriyat (Kashmir's age-old legacy of Hindu-Muslim amity)" .So

- This is done using state power to crush genuine competition in handing out permits, government grants, special tax breaks, or other forms of state intervention.

#### Facts

- The Economic Survey of 2017-18 had to set aside an entire chapter on the need for 'Timely Justice'.
- This chapter noted that the current working capacity of the High Courts and the Supreme Court is only 63.6%.
- Huge numbers of pending cases: 1.8 lakh in six of the major tribunals, and close to 3.5 million in the High Courts.
- For economic cases, the average duration of pendency is about 4.3 years for the five major High Courts.
- In 2017, India spent about Rs. 0.24 per person on the judiciary; the U.S. spent Rs. 12.

#### Way Forward

- It is important to strengthen the redressal mechanism systems in order to move up in ease of doing business.
- The judiciary must play the pivotal role by enforcing contracts in the case of disputes through minimal costs.
- Thus, in India, a strong judiciary is required for economic growth and development, and most importantly it is required for generating trust in our markets and businesses globally.

## The danger of reciprocity: on the independence of the Supreme Court Context

- Independence, impartiality and fearlessness of judges are not private rights of judges but citizen's rights. Ultimately judicial legitimacy/ power rests on people's confidence in courts.
- We have yet another controversy surrounding the Supreme Court, with the collegium revisiting decisions made at an earlier meeting and recommending the elevation of two junior judges to the Supreme Court.
- No one has any doubts about the competence or integrity of Justice Sanjiv Khanna and Justice Dinesh Maheshwari, but the manner in which it was carried out puts the spotlight once again on the controversial collegium system of judicial appointments.

- This seriously undermines the independence of judges and raises unnecessary doubts about the credibility of the highest court as the government is not only the biggest litigator but also the greatest threat to the abuse of power.
- Judicial review as a concept is supposed to control the government and keep it in check.

#### Learnings from the past

- Take the case of Justice A.N. Ray, who was appointed Chief Justice of India (CJI) in 1973 superseding three senior judges, or Justice M.H. Beg, who was appointed CJI superseding Justice H.R. Khanna in 1977.
- Both Justice Ray and Justice Beg were excellent judges, but favoured the government.
- They were considered not forward-looking judges but judges who looked forward to the office of the CJI.
- In the bank nationalisation case (1970), while as many as 10 judges went against the government, Justice Ray approved the government's action.
- Similarly, Justice Beg, in the Indira Gandhi election case, held that while democracy is the basic structure, free and fair election is not.
- The National Judicial Appointments Commission (NJAC) was struck down by the Supreme Court because it would have compromised the independence of the CJI and given a role to the government in the appointment of judges.
- Unlike in the U.S. where judges are appointed by the President and are known to be leaning towards the Democrats or Republicans, Indian judges are not supposed to have any political affiliation.
- But is it possible to completely insulate judges from governmental influence?
- The answer is no as George Orwell pointed out in 1984, the government is everywhere, and judges as fellow human beings do get influenced by it.
- The judiciary asserts its position only when the government is weak.
- This collegium system was asserted when we had weak Central governments in the 1990s.

#### Power and influence

- 'Power' and 'influence' are fundamental concepts in society.

- 'Influence' is sometimes considered to be an aspect of 'power'. Indira Gandhi was influential because she was powerful.
- Prime Minister Narendra Modi is, similarly, not only powerful but hugely influential.
- In his NJAC judgment (2015), Justice J.S. Khehar discussed the issue of reciprocity at length in striking down the commission.
- He referred to Laura E. Little's work on American judges who felt obliged to the President for nominating them and Senators who helped them in the confirmation process.
- Justice Khehar therefore preferred exclusion of the political executive from the appointment of judges as a feeling of gratitude towards the government impacts the independence of the judiciary.
- It was for this very reason that even B.R. Ambedkar wanted to insulate the judiciary from political pressures.

#### **Conclusion:**

- The prospect of a 15-judge bench overturning Kesavananda Bharati . v. State of Kerala (1973), which outlined the basic structure doctrine of the Constitution, does not look too remote in the near future if the government continues to exert pressure on the collegium and if the collegium, due to reciprocity, does not effectively assert its power and independence.
- Most governments prefer pliable judges but many of our judges remain wedded to their oath and decide cases without fear or favour.
- True reciprocity affects humans but since our judges are addressed as 'Lords', let them not have any feeling of gratitude towards anyone.

## **The ambiguity of reservations for the poor**

#### **Context**

- The 103rd Constitution Amendment Act introducing special measures and reservations for 'economically weaker sections' (EWS) has been perceived as being obviously unconstitutional.
- The view that a constitutional challenge to the amendment will take us into unclear constitutional territories.
- The strongest constitutional challenge might not be to the amendment itself but to

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- the manner in which governments implement it.
  - There is no foregone conclusion to a potential challenge and we would do well to start identifying the core constitutional questions that arise.

#### **Special measures**

- Article 15 stands amended enabling the state to take special measures (not limited to reservations) in favour of EWS generally with an explicit sub-article on admissions to educational institutions with maximum 10% reservations.
- The amendment to Article 16 allows 10% reservations (and not special measures) for EWS in public employment and does so in a manner that is different from reservations for Scheduled Caste/Scheduled Tribes and Other Backward Classes.
- The amendment leaves the definition of 'economically weaker sections' to be determined by the state on the basis of 'family income' and other economic indicators.
- This amendment is the exclusion of SC/STs, OBCs and other beneficiary groups under Articles 15(4), 15(5) and 16(4) as beneficiaries of the 10% EWS reservation.
- Background
- A good point to start the constitutional examination is the Supreme Court's view on reservations based purely on economic criteria.
- Eight of the nine judges in Indra Sawhney (November 1992) held that the Narasimha Rao government's executive order (and not a constitutional amendment) providing for 10% reservations based purely on economic criteria was unconstitutional.
- Their reasons included the position that income/property holdings cannot be the basis for exclusion from government jobs, and that the Constitution was primarily concerned with addressing social backwardness.

#### **Basic structure doctrine**

- The decision in Indra Sawhney involved testing an executive order against existing constitutional provisions.
- In the current situation, we are concerned with a constitutional amendment brought into force using the constituent power of Parliament.
- The fact that we are not concerned with legislative or executive power means that

- the amendment will be tested against the 'basic structure' and not the constitutional provisions existing before the amendment.
- I do not think it is a sufficient answer to say that 'backwardness' in the Constitution can only mean 'social and educational backwardness'. Citing the Constituent Assembly debates is not going to take the discussion much further either.
- It is difficult to see an argument that measures purely on economic criteria are *per se* violative of the 'basic structure'.
- We can have our views on whether such EWS reservations will alleviate poverty (and they most certainly will not), but that is not really the nature of 'basic structure' enquiry.
- Providing a justification for these measures as furthering the spirit of substantive equality within the Indian Constitution is not very difficult.

### Challenges for the government

- A challenge to the amendment may lie in the context of Article 16 by virtue of shifting the manner in which reservations can be provided in public employment.
- Under Article 16(4), reservations for backward classes (SC/STs, OBCs) are dependent on beneficiary groups not being 'adequately represented' but that has been omitted in the newly inserted Article 16(6) for EWS.
- The amendment through Article 16(6) ends up making it easier for the state to provide reservations in public employment for EWS than the requirements to provide reservations for 'backward classes' under Article 16(4).
- In a sense that is potentially a normative minefield for the Supreme Court.
- On the one hand, it is confronted with the reality that 'backward classes' like SC/STs and OBCs are disadvantaged along multiple axes and on the other, it is now far more difficult for the state to provide reservations to these groups compared to the EWS.
- The response might well be that 'representation' is not the aim of EWS reservation and questions of 'adequacy' are relevant only in the context of representation claims like those of the backward classes under Article 16(4).

### Questions and challenges

- The amendment, breaching the 50% ceiling on reservations has been cited as its greatest weakness.
- It is hard to see the merit of that argument because the amendment by itself does not push the reservations beyond 50%.
- While it might be a ground to challenge the subsequent legislative/executive actions, the amendment itself is secure from this challenge.
- But even beyond this narrow technical response, the 50% ceiling argument is far from clear.
- In *Indra Sawhney*, the majority of judges held that the 50% ceiling must be the general rule and a higher proportion may be possible in 'extraordinary situations'.
- Fundamentally this argument stems from an unresolved normative tension in *Indra Sawhney*.
- While committing to the constitutional position that reservations are not an 'exception' but a 'facet' of equality, the majority in *Indra Sawhney* also invokes the idea of balancing the equality of opportunity of backward classes 'against' the right to equality of everyone else.
- When governments implement the EWS reservations and push quotas beyond 50%, the Supreme Court will be forced to confront this normative tension.
- If reservations further equality, what then are the justifications to limit it to 50% when the identified beneficiaries constitute significantly more than 50%?
- The answer to that question might lie in *Indra Sawhney*'s position that the constitutional imagination is not one of 'proportional representation' but one of 'adequate representation'.
- However, as discussed above, if abandoning the 'adequacy' requirement *per se* is upheld for EWS reservations, the basis for a 50% ceiling becomes unclear.

### Way forward

- While the constitutional amendment by itself might survive the 'basic structure' test, the hardest test for governments will be the manner in which they give effect to the amendment.
- The definition of 'economically weaker sections' will be a major hurdle because the political temptation will be to go as broad as possible and include large sections of citizens.

- But broader the definition, greater will be the constitutional risk.
- For example, if beneficiaries are defined as all those with family income of less than ₹8 lakh per annum, it must necessarily fail constitutional scrutiny.
- To justify that an individual 'below poverty line' and another with a family income of ₹8 lakh per annum belong to the same group for purposes of affirmative action will involve constitutional jugglery at an unprecedented level.
- The history of our constitutional jurisprudence has prepared us well for such surprises.

## India-South Africa relations

### Historical Background

- India's relations with South Africa date back several centuries.
- Mahatma Gandhi had commenced his political-legal career in South Africa, experimenting with civil disobedience in the 1890s and 1900s, to improve the quality of living of the Indians living there.
- India was at the forefront of the international community in its support to the antiapartheid movement.
- It was the first country to sever trade relations with the apartheid Government in 1946.
- Bilateral relations had grown strong since the end of apartheid in South Africa in 1994.

### Bilateral ties

- Former south African leader Nelson Mandela was awarded the Mahatma Gandhi Peace Prize and Bharat Ratna by the Indian government.
- The ties are being further strengthened through groupings such as BRICS, IBSA etc.
- With the help of the Indian Council for Cultural Relations (ICCR), an intensive programme of cultural exchanges is organised throughout South Africa including scholarships for South African nationals.
- Both the countries have great potential for trade growth between them including vehicles and components transport equipment, drugs and pharmaceuticals, engineering goods, footwear, dyes and intermediates, chemicals, textiles, rice etc.

### Red Fort Declaration

- The year 2017 marks the 20 years of signing of the Red Fort Declaration for Strategic Partnership between India and South Africa.
- The Declaration was signed in March 1997 by the Prime Minister of India Deva Gowda and

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President of South Africa Nelson Mandela in New Delhi.

- The comprehensive Strategic Partnership between these two nations was established through the Red Fort Declaration and reaffirmed in the Tshwane Declaration in 2006.

### Migration

- The major part of the Indian origin community went to South Africa from 1860 onwards as farm labour and sugar mill workers.
- The South African Indian origin community numbers around 1.5 million and constitutes about 3% of South Africa's total population.
- Indian migrants are driven to South Africa because of cultural relatedness and the presence of networks from the home country.
- The migrants have been critical drivers of businesses and employment generation in south Africa.
- The influx of migrant groups has resulted in the exchange of ideas, goods and cultures from street level to national level.
- But on the negative side, these migrant traders are said to be attacked by the host people, as they think these migrants take away their opportunities.

### Recent Developments

- South African President Cyril Ramaphosa was been invited as the chief guest for India's Republic Day in 2019.
- President Ramaphosa's visit assumes significance as India celebrates the 150th birth anniversary of Gandhi.
- During the visit India and South Africa signed on a three-year strategic partnership agreement to boost relations.
- The agreement will cover defence and security, blue economy cooperation and sustainable development.
- Last year, External Affairs Minister Sushma Swaraj's visit to South Africa to witness 25 years of diplomatic relations between the two countries, the 100th birth anniversary of Nelson Mandela, and 125 years of the Pietermaritzburg train incident.

### Conclusion

- India should move beyond speaking about Gandhi and Indian diaspora in south Africa.
- New age India and South Africa needs to recognize the potential of migratory flows between the countries.
- India must also take appropriate steps to initiate measures to safeguard and uphold labour standards

## General Studies 3

### RBI: on the horns of a dilemma

#### Introduction

- The multi-month low retail and wholesale inflation prints for December pose an interesting challenge for policymakers and the central bank. Inflation in Consumer Price Index (CPI), at 2.19% in December, is at an 18-month low, while the Wholesale Price Index (WPI), at 3.8%, is at an eight-month low.

#### Demand to reduce rates

- Amid slowing inflation numbers and sluggish economic growth, the clamour for a rate cut has gained momentum with the industry bodies, which met the RBI governor, suggesting a 50 basis point (bps) interest rate cut along with similar reduction in the cash reserve ratio requirements of banks.
- In the October policy announcement, the bank changed its policy stance to “calibrated tightening” from “neutral”. In its last policy review meeting in December, the RBI decided to keep the key interest rate unchanged at 6.5%.
- A neutral stance would mean there is a scope for interest rates to move either way, as opposed to calibrated tightening which means rates can only go up. If the RBI decides to lower the interest rate in the forthcoming monetary policy committee (MPC) meet, a change in stance to ‘neutral’ will only be natural.

#### Inflation conundrum

- Even if the RBI is guided by headline inflation numbers for policy-making purposes, the divergence in major components of inflation creates the dilemma of whether to lower the rate or not.
- In a speech at the Vibrant Gujarat Summit, the RBI Governor acknowledged that the divergences and volatility among the components becomes a challenge for assessment of inflation. Some of the major components like inflation in food, fuel, and inflation excluding food and fuel, have shown wide divergences.
- Though food inflation has turned negative since October 2018 and fuel inflation has been highly volatile, inflation, excluding

food and fuel, remains sticky at close to 6%.

#### Expansionary policy?

- What adds to the dilemma is the upcoming Budget on February 1.
- There is the expectation of a major announcement from the government for the rural economy due to the stress faced by the farm sector. If that happens, then RBI would like to watch for implications on inflation as well as on fiscal deficit.
- There has already been a debate as to whether the government should stick to the fiscal deficit target of 3.3% of GDP when the economy actually needs a stimulus to boost growth.

#### Conclusion

- Prominent policymakers, including principal economic adviser Sanjeev Sanyal, have called for the RBI to take a relook at the interest rate structure. It will be interesting to watch how the RBI under the new Governor reacts to these calls.

### The gap within

#### Introduction

- India, as the world's fastest-growing major economy, may well be catching up with the richer economies in terms of absolute size. But economic convergence within the country remains a distant dream as poorer States continue to lag behind the richer ones in economic growth.

#### States of growth 2.0

- In its latest report “States of growth 2.0”, rating agency Crisil found that the inter-State disparities have widened in recent years even as India grows in size and influence on the global stage.
- Many low-income states have experienced isolated years of strong economic growth above the national average. Bihar, in fact, was the fastest-growing State this year among the 17 non-special category States evaluated by the report.
- But they have still failed to bridge their widening gap with the richer States since they have simply not been able to maintain a healthy growth rate over a sustained period of time. Richer States like Gujarat, for instance, have been able to achieve

sustained economic growth and increase their gap over other States.

### Growing divergence

- The report found that there was a slight, albeit weak, convergence in the per capita income levels of the poorer and richer States between fiscal years 2008 and 2013, but the trend was reversed in the subsequent years.
- Between fiscal years 2013 and 2018, there has been a significant divergence rather than convergence in the economic fortunes of the poorer and richer States. This was the result of richer States continuing to show strong growth while the poorer States fell behind.
- Only two of the eight low-income States in 2013 had growth rates above the national average over the next five years. On the other hand, six out of the nine high-income States recorded rates higher than the national average during 2013-18.

### What explains the divergence in the economic fortunes of States?

- The report suggests that, at least during fiscal year 2018, government spending may be what boosted gross domestic product growth in the top-performing States, particularly in Bihar and Andhra Pradesh whose double-digit growth rates have come along with a burgeoning fiscal deficit.
- The impact of greater spending was that 10 of the 17 States breached the 3% fiscal deficit limit set by the Fiscal Responsibility and Budget Management Act.
- Many other big-spending States, however, have not managed to achieve growth above the national average. Punjab and Kerala, which are at the bottom of the growth table, are ranked as profligates by the report.

### Way Forward

- This suggests that the size of public spending is probably not what differentiates the richer States from the poorer ones. Other variables like the strength of State-level institutions, as gauged by their ability to uphold the rule of law and create a free, competitive marketplace for businesses to thrive, and the quality of public spending could be crucial determinants of the long-run growth prospects of States.

## Shape of the slowdown

### Introduction

- The Chinese growth juggernaut is slowing down. The world's second-largest economy has reported that its exports for December fell by 4.4%, the sharpest fall in two years amidst rising trade tensions with the United States.
- Growing signs of weakness in China — which has generated nearly a third of global growth in recent years — are fueling anxiety about risks to the world economy.

### Status of the slowdown

- Chinese fourth-quarter GDP grew at the slowest pace since the global financial crisis, easing to 6.4%. That pulled full-year growth down to 6.6%, the slowest annual pace since 1990.
- China's trade surplus with the U.S. has increased to \$323 billion, its highest level since 2016 and up 17% from a year ago. This is likely to put added pressure on Chinese exports to the U.S.
- Besides, China's factory activity contracted to a two-year low by the end of December while car sales in 2018 dropped for the first time since 1990, pointing to faltering demand from Chinese consumers.
- Given its implications for global growth, markets across the world have naturally been worried about the fate of the Chinese economy.
- Responding to fears of a serious slowdown in the economy, the People's Bank of China has injected cash worth \$83 billion into the economy through open market operations in order to boost bank lending and overall economic growth. It is believed that the Chinese government may be prepping for a stimulus worth trillions of yuans to step up spending in the economy.

### What is the issue?

- China has been struggling to transition from its earlier growth model led by cheap exports and huge capital investments into a more domestic consumption-led economy. In particular, the government and the central bank have in recent years tried to wean the economy off cheap debt that fuelled its impressive growth run.
- But even as it tries to steer the economy towards more consumption-led growth, the state has been wary of allowing economic sectors like real estate that were

earlier boosted by the availability of cheap credit to go bust.

### Conclusion

- A true restructuring of its export- and state-led economic model will not be possible until China allows the liquidation of uneconomical projects that were begun only because of the availability of ample amounts of cheap credit.
- This will be the first step towards building a more market-driven economy. But it is not clear whether China will stop feeding its economy with cheap credit.

## China's compromise

### Introduction

- The 'Made in China 2025' industrial policy, unveiled in 2015, aims to transform China from a low-wage copycat manufacturing economy to a high-value generator.
- But Beijing's aspiration for global dominance in sectors including aerospace and aviation, robotics and artificial intelligence, 5G communications and self-driven cars has been dubbed a threat to the world order.

### IPR violations?

- There have been concerns for a while now that Chinese joint ventures, in violation of World Trade Organisation rules, coerce investors to share proprietary intellectual property (IP) in return for access to lucrative domestic markets.
- For instance, a 2017 law required foreign automobile manufacturers to disclose sensitive technology regarding new energy vehicles, causing an uproar among investors.
- U.S. Trade Representative Robert Lighthizer's 2017 probe targeted precisely those sectors of Beijing's 2025 policy that it believed would impact national security. The investigation was triggered under the infamous Section 301 of the 1974 U.S. Trade Act, which authorises unilateral retaliation against the unfair trade practices of other nations.
- As a consequence, the total amount of tariffs, effective and proposed, against China stood at \$517 billion in 2018. These are in addition to the punitive levies slapped in early 2018 against global steel and aluminium imports.
- In coordinated actions, the U.S. Justice and Commerce Departments have pursued

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Chinese state-owned firms and intelligence agents for economic espionage in the aerospace, aircraft engine and semiconductor technology arenas.

### Mounting protests

- The row over the loss of new energy vehicles technology by automobile firms, in return for access to the Chinese markets, is one of many areas where the EU and the U.S. found common cause.
- Along with Japan, they came together to counter the structural factors they believe fuel Beijing's forced IP transfers and other market distortions. But such joint efforts are unlikely to fructify, as the U.S. prefers unilateralism in pursuit of its 'America First' agenda.
- The flip side of disregarding multilateral rules is resorting to arbitrary action to serve political ends. The Section 301 tariffs, for example, are said to have been applied to ancillary industries in the supply chain.
- Similarly, import exemptions on Chinese goods have been allowed where Beijing is the sole supplier and denied if there are other exporters.

### Conclusion

- The U.S. and China will have to find greater common ground for the smooth flow of two-way trade. China's new Bill promising to end forced technology transfers will hopefully be a step in this direction.

## Fabrication and falsification

### About MGNREGA

- The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is an employment guarantee act. It was introduced in 2005 through the National Rural Employment Guarantee Act, 2005.
- The main aim is to provide guaranteed 100 days of wage employment in form of unskilled manual work per year to each rural household.

### Key Features

- Demand driven scheme: Worker to be hired when he demands and not when the Government wants it.
- Gram Panchayat is mandated to provide employment with 15 days of work application, failing which worker is entitled to unemployment allowance.
- Minimum one-third of the workers should be women.

- Wages to be paid according to the Minimum Wages Act 1948 for agricultural labourers in the State.
- Social Audit to be done by Gram Sabha.
- Wages are electronically transferred to the worker's bank/ post office accounts through National Electronic Fund Management System (NeFMS).
- Geo-tagging all assets created under MGNREGA.

#### Achievements

- MGNREGA has been a powerful instrument for empowerment of poor women through its effect on livelihood security and social protection.
- Reduced distressed rural to urban migration and also seasonal migration by providing work closer to home and decent working conditions.
- Has helped in the upliftment of SCs and STs through creation of livelihood opportunities. The percentage of Scheduled Caste workers has consistently been about 20% and Scheduled Tribe workers has been about 17%.
- Sustainable assets have been created linked to conservation of natural resources and has helped in overall development of Gram Panchayats.
- Payment of wages through bank accounts/ post office has led to large financial inclusion of the poor.
- The average daily wage rate of farm workers has grown sharply after MGNREGA.

#### Issues

- Insufficient budget allocation, though allocated 55,000 crores, the actual value of budget allocation of 2018-19 is much lower than that of 2010-11.
- Stagnation of wage rate due to delinking MGNREGA wage rates from Minimum Wages Act, 1948. MGNREGA wages are lower than minimum wages in most states. This could push marginalized section to take up vulnerable and hazardous jobs.
- Other issues being Non-payment of unemployment allowance.
- Fabrication of job cards, Infrequent social audits, Ineffective grievance redressal, Insufficient involvement of Panchayati Raj institutions.

#### Way forward

- The major measures to be taken to improve MGNREGA are

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- Proper and timely allocation of funds
- Ensuring minimum wages for workers
- Effective monitoring of projects
- Proper job card verification
- Ensuring efficient grievance redressal mechanism

## Examining farm loan waivers

#### Introduction

- Till now, at least 11 States have announced schemes to waive outstanding farm loans. The pitch for waivers among States has added to the pressure on the Central government for a nationwide farm loan waiver.

#### Divided opinion

- One section of economists argue that loan waivers represent poor policy for a variety of reasons.
  - First, loan waivers have "reputational consequences"; that is, they adversely affect the repayment discipline of farmers, leading to a rise in defaults in future.
  - Second, earlier debt waiver schemes have not led to increases in investment or productivity in agriculture.
  - Third, after the implementation of debt waiver schemes, a farmer's access to formal sector lenders declines, leading to a rise in his dependence on informal sector lenders.

#### Are loan waivers inherently bad?

- There have only been two nationwide loan waiver programmes in India after Independence: in 1990 and 2008. The accompanying image gives data on agricultural NPAs of banks before and after the 2008 waiver, and throws up two conclusions.
- First, farmers are most disciplined in their repayment behaviour. In September 2018, agricultural NPAs (about 8%) were far lower than in industry (about 21%). Furthermore, agricultural NPAs were on a continuous decline between 2001 and 2008.
- Second, there is no evidence to argue that the 2008 waiver led to a rise in default rates among farmers. The lowest of all

NPAs after 2001 was recorded in March 2009 (2.1%), which was just after the implementation of the 2008 scheme.

- The rise of agricultural NPAs, from 2% to 5% post 2009, is no evidence for indiscipline in farmer repayment behaviour. D. Subbarao, the former RBI Governor, had pointed out that the rise in agricultural NPAs between 2009 and 2011 was due to the general economic slowdown after 2009 and the introduction of new norms in the system-wide identification of NPAs.
- Agricultural NPAs began to rise again after 2015. There is enough evidence to suggest that this rise was not the result of any moral hazard; it was real, policy-induced and a direct consequence of acute agrarian distress that spread across rural India after 2015.
- The second argument — that loan waivers do not promote investment or raise productivity — is a bit absurd because nowhere has investment or productivity figured as the official objectives of these schemes.
- The third argument — that loan waivers shrink access to formal credit sector for farmers — is only partly true. But the culprits here are banks and not farmers. After every waiver, banks become conservative in issuing fresh loans to beneficiaries, as they are perceived to be less creditworthy.
- For instance, a Comptroller and Auditor General (CAG) report on the waiver in 2008 found that 34.3% of the beneficiaries were not issued debt relief certificates after the waiver, which meant that they could not avail of a fresh loan the following year. As a result, the scheme's objective of expanding the issue of fresh loans to farmers was not fully achieved.

#### Lacunas in waivers

- Firms have always received debt waivers, though they are tactfully termed as "loan restructuring" or "one-time settlements". Just as for firms, farms also need a reduction of debt burden, followed by fresh infusion of credit, when their economic cycle is on a downturn. The demand for loan waivers in India is absolutely logical when viewed from such a standpoint.

- On the other hand, to consider loan waivers as a panacea for the agrarian distress would also be wrong. To begin with, access to India's rural banks is skewed in favour of large farmers. While public banks actively service the credit needs of large farmers, a majority of small and marginal farmers are not proportionately included. The latter are forced to rely on informal sources, particularly moneylenders, for much of their credit needs. As a result, the benefits of loan waivers accrue disproportionately to large farmers while only marginally benefiting the small and marginal farmers.

#### Kerala's model

- The solution lies in carefully designing waiver schemes that ensure universal coverage for small, marginal and medium-sized farmers while covering both the formal and informal sources of debt.
- The Kerala Farmers' Debt Relief Commission Act, 2006 is an excellent model in this regard. This scheme defines debt as "any sum borrowed by a farmer from the creditor", with the creditor defined as "any person engaged in money lending, whether under a licence or not". The commission's mandate included the right to waive, reschedule or reduce any debt on a need-basis after a detailed hearing of both the parties.
- Legislations such as Kerala's are blueprints to design comprehensive, inclusive and less-leaky loan waiver schemes in other States.

#### Way Forward

- While loan waiver schemes are like a band-aid on a wound, it is the larger agrarian distress that demands urgent policy attention.
- Unless there are steps to raise productivity, reduce costs of cultivation by providing quality inputs at subsidised rates, provide remunerative prices following the recommendations of the Swaminathan Commission, ensure assured procurement of output, expand access to institutional credit, enhance public investment for infrastructural development, institute effective crop insurance systems and establish affordable scientific storage facilities and agro-processing industries for value addition, farmers will continue to be bonded to low

income equilibrium and repeated debt traps.

## Season's worst: on the influenza outbreak

### Introduction:

- Several states have been put on high alert following a spike in cases of swine flu.
- 49 swine flu deaths and 1,694 cases have been reported in just one fortnight from January 1-13,2019 in the country, with highest cases occurring in Rajasthan at 31.
- Other instances being reported from Delhi, Gujarat, Punjab, Haryana, Uttar Pradesh, Andhra Pradesh, Tamil Nadu and Telangana.
- All State governments have been asked by Union health ministry to create awareness about the spread, testing and prevention of swine flu.

### About Swine Flu:

- H1N1 influenza (or swine flu) is a **highly contagious acute respiratory disease** of pigs caused by type A influenza virus.
- Swine flu viruses do not normally infect humans but sporadic human infections have occurred in people with direct exposure to pigs (e.g., children near pigs at a fair or workers in the swine industry) but there have been cases of human-to-human spread of swine flu.
- Children below 5 years and adults above 65, patients with chronic pulmonary condition, neurological, neuromuscular or metabolic disorders, obese adults and pregnant women are in the high risk group.
- Its symptoms include fever, body ache, loss of appetite, sore throat, vomiting etc.
- Most people with flu, including swine flu, require only symptom relief. Medications do not cure the illness, but they may shorten the duration, make symptoms less severe.

### The challenge that influenza poses:

- Seasonal influenza poses a significant public health challenge for India every year.
- There have been peaks in the country over the past six years, with the number of cases recorded by the Integrated Disease Surveillance Programme soaring to 42,592 and the death toll touching 2,990 in 2015.
- Though there is **Quadrivalent vaccine**(the vaccine to fight against a known set of

Officers IAS Academy, Chennai viruses, such as Influenza A H1N1, H3N2 and Influenza B), there is lack of awareness and manpower shortage in implementing it.

- The mass healthcare programmes also has not adopted this vaccine.
- Non-availability of sufficient doses of quadrivalent vaccine as well as profiteering on the demand have not been addressed.

### Way forward:

- If a vaccine has proven efficacy in reducing the burden of seasonal influenza, it must be made part of the public health system.
- An umbrella scheme such as Ayushman Bharat can easily provide it to everyone using public and private institutions.
- Campaigns to educate the public through mass media ahead of the season, especially on respiratory etiquette and risk reduction, can help cut transmission.
- At the same time, upgrading existing vaccines requires a consistent effort to track viral mutations that take place periodically, and communicate the information to researchers through open access databases.
- Seasonal influenza will, according to the WHO, continue to resurface. India must prepare for it with a comprehensive programme that covers all the States.

## 18 Indian institutions to study nitrogen pollution

### Introduction:

- A major *international research programme is being carried out to tackle the challenge that nitrogen pollution poses for environment, food security, human health and the economy in South Asia.*
- *The research programme will be carried out by South Asian Nitrogen Hub.*

### About SANH:

- The South Asian Nitrogen Hub, a partnership led by the UK's Centre for Ecology & Hydrology and comprising around 50 organisations from across the UK and South Asia, will be established with funding from UK Research and Innovation (UKRI) under its Global Challenges Research Fund (GCRF).
- The Hub is one of 12 GCRF hubs announced by the UKRI to address intractable challenges in sustainable development.

- The interdisciplinary hubs will work across 85 countries with governments, international agencies, partners and NGOs.
- India is a major partner with 18 Indian institutions in this project.
- **India is the only country in South Asia that has completed its nitrogen assessment over a year ago and is already co-leading the South Asian nitrogen assessment with CEH, UK, for the UN Environment.**

#### **Importance of nitrogen:**

- Nitrogen, which is a **vital macronutrient for most plants**, is the most abundant element in the atmosphere.
- A little over 78% of dry air on Earth is nitrogen. But **atmospheric nitrogen, or di-nitrogen, is unreactive and cannot be utilized by plants directly.**
- Until the beginning of the 20th century, farmers depended on a natural process called **nitrogen fixation** for the conversion of atmospheric nitrogen into reactive nitrogen in the soil: nitrogen-fixing bacteria like rhizobia live symbiotically with leguminous plants, providing nitrogen to the plant and soil in the form of reactive compounds like ammonia and nitrate.
- **But the natural nitrogen cycle was inadequate to feed the growing population.** Scientists Fritz Haber and Carl Bosch solved this problem by producing ammonia by combining atmospheric nitrogen with hydrogen gas at high temperature and pressure known as the **Haber-Bosch process**.
- The Green Revolution, which was instrumental in establishing food security in the developing countries in the 1960s, was driven by artificial nitrogen-fixation.
- Today, about half of the world's population depends on this process for its nutrition.

#### *Nitrogen turned into pollutant from nutrient:*

- Nitrogen is an inert gas that's necessary for life. But we're changing it into forms that are harmful, overloading the environment with it, and throwing the natural nitrogen cycle out of whack.
- **Nitrogen compounds running off farmland have led to water pollution problems around the world, while nitrogen emissions from industry, agriculture and vehicles make a big contribution to air pollution.**

- **Over 80% of the nitrogen in soil is not utilised by humans.** While over four-fifths of the nitrogen is used to feed livestock, only about six per cent reaches humans in case of non-vegetarian diet, as compared to the 20% that reaches the plate of a vegetarian.
- **Nitrogen becomes a pollutant when it escapes into the environment and reacts with other organic compounds.** It is either released into the atmosphere, gets dissolved in water sources such as rivers, lakes or groundwater, or remains in the soil. While it might lead to favourable growth of species that can utilise this nutrient, nitrogen as a pollutant is often detrimental to the environment and health.
- According to the World Health Organization, **nitrate-contaminated drinking water can cause reduced blood function, cancer and endemic goiters.** Surplus inputs of nitrogen compounds have been found to cause soil acidification. The lowering pH, as a result of the acidification, can lead to nutrient disorders and increased toxicity in plants. It may also affect natural soil decomposition.

#### *Impact on the environment:*

- **It creates of harmful algal blooms and dead zones** in our waterways and oceans.
- The algae produce toxins which are harmful to human and aquatic organisms (and indirectly affects fisheries and biodiversity in coastal areas).
- **Contamination of drinking water:** 10 million people in Europe are potentially exposed to drinking water with nitrate concentrations above recommended levels. This can have an adverse effect on human health.
- **Food Security:** Excessive nitrogen fertilizer application contributes to soil nutrient depletion. As the world needs to feed an ever-growing population loss of arable land is major global problem.
- **The release of Nitrous Oxide is essentially a greenhouse gas** which is harmful to the environment.

#### **How to manage this problem?**

- As the problem of nitrogen pollution starts to gain global attention, there have been innovations aimed at improving its efficiency by optimizing usage.
- A simpler method of reducing nitrogen application is precision farming where

- small quantities of nitrogen are administered routinely instead of large doses applied uniformly over the field.
- Similarly, tablets and coated forms of nitrogen, when applied at the root level, release nutrients slowly.
- Bangladesh has managed to increase the efficiency of nutrition uptake by plants by applying fertilizers through tablets.
- A similar attempt is being made with neem-coated urea in India.
- Supplemented with organic fertilizers and combined with optimal timing of application, sowing and watering, these methods have shown marked improvement over traditional efficiencies of nitrogen.

#### **Conclusion:**

- Developed regions such as the US and Europe have published detailed reports about nitrogen usage and pollution. But India is nowhere close to aggregating something similar of its own.
- Nitrogen pollution is an issue of improper management rather than inability. The costs of abating nitrogen pollution would be much less than the benefits to health and environment.

## **NGT seeks a report on solid waste management**

#### **Introduction:**

- Concerned over the lack of action pertaining to the compliance of solid waste management across the country, the National Green Tribunal (NGT) has summoned the Chief Secretaries of all States and Union Territories from March 1 onwards.
- A Bench headed by Justice Adarsh Kumar Goel has directed the Chief Secretaries to be present before the tribunal with status reports of action taken and the subsequent measures to be adopted. "It is high time stern measures are taken not only by those in charge of administering law themselves but also by educating and involving public at large," the Bench said.

#### **What is solid waste?**

- Construction and demolition waste:** wastes generated in construction of new buildings, renovation and demolition work.
- Plastic waste:** includes polythene bags, plastic bottles etc

- Biomedical waste:** wastes involved in diagnosis, treatment and immunization such as human and animal anatomical waste, treatment apparatus such as needles and syringes and cytotoxic drugs.
- Hazardous waste:** wastes that cause immediate danger to exposed individuals or environment.
- E-waste:** includes discarded computer monitors, motherboards, cathode ray tubes (CRTs), printed circuit board (PCB), mobile phones and chargers, compact discs, headphones etc.

#### **Solid Waste Management:**

- It is a term that is used to refer to the process of collecting and treating solid wastes. It also includes solutions for recycling items that do not belong to garbage or trash.

#### **Issues and Challenges in India's SWM:**

- With rapid urbanization, there is substantial increase in solid waste generation which has strained the Solid Waste Management System
- Most Urban local bodies in India struggle to provide efficient waste management services due to financial problems, lack of infrastructure and technology
- Though solid waste management rules mandate source segregation of wastes, it has largely not been followed.
- Due to improper segregation of waste, much of recyclability of waste is lost.
- Most of the municipal authorities deposit solid waste at open dump sites without any leachates treatment.
- These sites emanate foul smell and is breeding grounds for pests and insects causing disease. Liquid seeping out of waste pollutes groundwater and poses a serious threat to health and environment.
- Further, these landfill sites are also responsible for air pollution.
- Most of the funds for solid waste management is allotted to collection and transportation, with very less left for processing or resource recovery and disposal. Also many waste-to-energy plants are non-operational.
- The waste management sector in India is constituted primarily of the informal workers who come from the urban poor.
- The rag pickers, who are instrumental in waste recycling, are highly vulnerable to

- health damages owing to poor work conditions.
- Apathy on the part of management and also poor community participation is a major constraint in solid waste management in India.

#### Steps to be taken:

- The key to efficient waste management is to ensure proper segregation of waste at source and to ensure that the waste goes through different streams of recycling and resource recovery.
- Waste to energy is a key component of SWM. Installation of waste-to-compost and bio-methanation plants would reduce the load of landfill sites
- There is a need to encourage research and development so as to reinvent waste management system in India. The focus should be on recycling and recovering from waste and not landfill. Further, it is important to encourage recycling of e-waste so that the problem of e-waste
- Public- Private Partnership models for waste management should be encouraged.

Union Ministry of Urban Development has recently launched its new publicity campaign under the Swachh Bharat Mission aimed at encouraging people to convert kitchen waste into compost for scientific processing of municipal solid. Named as 'Compost Banao, Compost Apnao'

## This is not the future we want

#### Introduction:

- NITI Aayog released the 'Strategy for New India @ 75' document in 2018.
- This high-sounding and aspirational strategy aims to achieve a 'New India' by 2022, when the country celebrates its 75th year of Independence.
- The strategy has many progressive objectives. It follows the **UN Sustainable Development Goals**.
- Inclusion, sustainability, participation, gender equality** and other buzzwords find mention. A cursory reading would evoke widespread appreciation.

#### India @ 75, focusing on ecological and related livelihood concerns:

- There are **positive directions** vis-à-vis the environment, such as a **major focus** on:
- Renewable energy,
- Organic farming (with the **zero budget natural farming** model developed out for national application),
- Increasing forest cover, and

- Reducing pollution and waste.
- A chapter titled '**Sustainable environment**' states: "The **objective** is to maintain a **clean, green and healthy environment** with peoples' participation to support **higher and inclusive economic growth** through sustainable utilization of available natural resources."
- It focuses on air pollution, solid waste management, water pollution, and forestry.*

#### Issues that need to be addressed:

- However, it is puzzling why these above mentioned four issues are singled out from amongst the much larger number of environmental issues India faces.
- Some other issues do find mention elsewhere, such as arresting land degradation and soil erosion, and water conservation.
- But many are missing, such as the urgent need to conserve a range of non-forest ecosystems.
- Since colonial times, forests have remained predominant in the minds of decision-makers, as indicated by the fact that India still has only a Forest Department and no dedicated entity for grassland, marine and coastal, wetland, mountain, and desert conservation.
- The increasing presence of toxic chemicals around us finds no mention.
- Most importantly, the absence of an integrated, comprehensive view on how ecological issues can be integrated into all sectors indicates that this is still not core to the mindset of our planners.

#### Current scenario of Economic growth is unsustainable:

- There is total absence of an understanding in the document that the current form and goal of economic growth is inherently unsustainable.
- For more than three decades, governments have been promising that with environmental safeguards, growth can be made sustainable.
- There is no indication that this is anywhere near achievable, much less achieved.
- In 2008, the Confederation of Indian Industry indicated that India was already using twice of what its natural resources could sustain, and that more than half its bio capacity had already been eroded.

#### Concerns in the document:

**(a) Proposal of doubling of the extent of mining**

- One of the biggest ecological and social disasters in India is mining, especially the large-scale open-cast type.
- NITI Aayog ignores this when it proposes a doubling of the extent of mining.
- The only concession is the suggestion to bring in “cutting-edge” technology to “limit environmental damage”.

**(b) Tourism**

- Another major sector with horrendous environmental impacts is tourism, as witnessed by virtually all our groaning hill stations and the ruin that areas like Ladakh, Kutch and the island regions are facing.
- Yet, NITI Aayog recommends doubling the number of domestic tourist visits to over 3,200 million from 1,614 million in 2016.

**(c) Mega river valley projects**

- The document prompts completion of a host of mega river valley projects that have proved to be ecological nightmares.
- The place includes Pancheshwar in the fragile Himalaya, the Ken-Betwa link in Madhya Pradesh, and dozens in the Northeast.
- They are going to choke up rivers and pushed ahead despite strong local opposition.

**(d) Farming**

- While mentioning of organic farming, there is no clear direction to phase out chemical fertilizers and pesticides.
- The objective of sustainable farming undermines “Phase out old varieties of seeds and replace them with hybrid and improved seeds”.
- This is the kind of Green Revolution approach that has caused huge loss of agricultural biodiversity and resilience amongst small farmers.
- No focus on dry land farming though most farmers are engaged in this.

- There is positive mention of organic farming models for replication, but nothing on the amazing work of dry land farmers showing productive, sustainable, bio diverse agriculture with millets and women as the fulcrum.

**(d) Single-window clearance of infrastructure projects**

- One of the most alarming features of the document is its stress on rapid, single-window clearance of infrastructure and other projects.
- Any decent ecological assessment of a project needs a year of study, so the 180 days limit it suggests will mean short-cuts.
- This rush compromises on crucial processes of social assessment and participatory decision-making.
- There is nothing on the need to seek consent from local communities, though this is mandated under the Forest Rights Act, 2006, and the Panchayat (Extension to Scheduled Areas) Act, 1996.

**Way forward:**

- Governments in the last few years have a dismal record of safeguarding the environment and the livelihoods of Adivasis and other communities.
- They have found ways to bypass constitutional and policy safeguards these vulnerable sections are supposed to enjoy.
- Without a strong, unambiguous commitment to upholding these protections, and putting communities at the centre of decision-making, India @ 75 is going to be an even more unequal, unjust, and conflict-ridden society than India @ 50.
- This is not the future we want. Instead, we can learn from the many alternative initiatives for food, water, energy, housing, education and health existing across India, which show the way to more just and sustainable livelihoods and ways of living.

# **Innovation**

## **Contributing to knowledge-based revolution**

### **Introduction**

- With over 1.3 billion + people, 1.4 million + schools, 10500 + engineering related institutions, 150 + million youth of India entering the workforce, we need to ensure that our youth can also realize their true potential through the creation of a vibrant ecosystem of innovation and entrepreneurship in this country.
- Towards this end a strategic national flagship initiative Atal Innovation Mission (AIM) has been set up under the auspices of the NITI Aayog.
- AIM's focus is to create and promote a world class innovation and entrepreneurship ecosystem throughout the length and breadth of our country and to provide such an innovation ecosystem that will also transform our job seekers to job creators of the future.

### **About Atal tinkering labs**

- The word tinkering is often associated with a garage where you use hundreds of tools in a garage to repair or fix a vehicle or even experiment with new possibilities.
- Practical knowledge, access to tinkering with latest tools and technologies ignites the imagination of children as they learn to apply abstract concepts learnt in the classroom to real world solutions.
- AIM has already launched the implementation of 5441+ Atal tinkering labs across 715 districts of the country.

### **Atal Incubators**

- To support the burgeoning number of startups in the country AIM has already launched 101 incubators to be operational by end of 2019. These incubators will provide the necessary ecosystem of access to technology labs, hiring, training, mentoring, finance, venture capital and corporate networks.

### **Atal challenges**

- 24 Atal New India challenges such as the Atal tinkering challenges at a school level, the Atal new India challenges at industry levels, the Atal small business innovation

and research challenges at a national level will be stimulating product innovations in areas such as drinking water and sanitation, urban housing and development, climate smart Agriculture, rail safety and transportation which can have great benefit for the country.

### **Key to collaborations**

- Corporates and SMEs can adopt ATLs and coach the students into problem solving, ideation, prototyping, triggering small innovations.
- Global partnerships, NGOs and multinational companies can collaborate on almost all these initiatives.
- AIM has therefore launched Mentors of change-Mentor India Network across the country and plans to extend it worldwide with over 10000 mentors already registered.

### **Conclusion**

- India has a unique opportunity to contribute in the knowledge based revolution that is sweeping the world today. That is why AIM initiatives are so important and need to be embraced by all. The children and youth of our country deserve it.

## **Innovation-oriented initiatives in higher education**

### **Introduction**

- India for its 1.25 billion people offers higher or tertiary level education through nearly 800 universities (central, state, private, deemed and all other categories) who are mostly governed by the University grants commission (UGC) and nearly 100 institutes of national importance (INIs) which are created through special acts of parliament or state assemblies.
- Successful pursuit in science, engineering and technology yields discovery (law, element or compound, phenomenon), Invention (principle, drug, machine), and Innovation (a new and economical product or process) which is a must to address the need of the society.e.g high strength material, greater thermal/electrical conductivity, affordable health care, sustainable energy resources, and remedial measures for carbon footprint etc.

### **Uchhatar Avishkar Yojana (UAY)**

- The UAY was launched to promote industry-specific need-based research to keep up the competitiveness of the Indian industry in the global market.
- IITs are encouraged to work with the industry to identify areas where innovation is required and come up with solutions up to the commercialization level.

### Innovation in HEIs-IMPRINT Impacting Research Innovation and Technology

- IMPRINT INDIA is a Pan-IIT and IISc joint initiative to develop a roadmap for research to solve major engineering and technology challenges in ten technology domains relevant to India.
- 10 domains which could substantially impact the living standards of the rural areas: (1) Health care technology, (2) Energy security, (3) Rural urban housing design, (4) Nano technology, (5) Water/river system, (6) Advanced materials, (7) Computer science and ICT, (8) Manufacturing technology, (9) Advanced security and (10) Environment/climate change.
- It is implemented by Department of Higher Education, Ministry of Human Resource Development.

### Conclusion

- In the present era of knowledge based society, innovation has become synonymous with evolution and progress in life. Education is the only way to effectively train the population not only to benefit from the exploits and fruits of Innovation but also to actively participate and contribute to a better, safer and healthier planet.

## Improving Governance in Public systems

### Introduction

- Innovations in public systems enhance service delivery, increase efficiency and ensure cost reduction, improve citizen satisfaction, promote transparency and accountability and leverages the use of technology.

### Types of innovations

- **Service innovations**-intend to introduce a new service, product or improvement in the quality of an existing service or product.
- **Common service centers (CSCs)** are the access points for delivery of essential public utility services.

- **Administrative Innovations** target to change the hierarchical structures and administrative routines in Government.
- **Electronic national agricultural market (eNAM)** is a pan India electronic trading portal funded by central government and implemented by small farmers' agribusiness consortium (SFAC).
- **National policy on biofuels (2018)**
  - In order to promote biofuels in the country, a National Policy on Biofuels was made by Ministry of New and Renewable Energy during the year 2009.
  - The Policy categorizes biofuels as "Basic Biofuels" viz. First Generation (1G) bioethanol & biodiesel and "Advanced Biofuels"- Second Generation (2G) ethanol, Municipal Solid Waste (MSW) to drop-in fuels, Third Generation (3G) biofuels, bio-CNG etc. to enable extension of appropriate financial and fiscal incentives under each category.
  - The Policy expands the scope of raw material by allowing use of Sugarcane Juice, Sugar containing materials, damaged food grains like wheat, broken rice, Rotten Potatoes, unfit for human consumption for ethanol production.
  - The Policy encourages setting up of supply chain mechanisms for biodiesel production from non-edible oilseeds, Used Cooking Oil, short gestation crops.

- **India Innovation growth program** is a public, private partnership of the department of science and technology, GOI and Lockheed Martin corporation which throws open a chance to the public to suggest innovative solutions to major societal problems.

- **All these can be achieved by**
  - Understanding opportunities and problems
  - Generating and sharing useful ideas
  - Collaborating with like-minded stakeholders.

### Innovative practices

- **Ecological sanitation (ECOSAN)**
  - The utilization of plastic waste to improve the properties of

- bituminous mix offers a very promising alternative with its bulk and eco-friendly usage.
- The plastic roads ensure enhanced load carrying strength, water resistance, negligible maintenance cost and reduction of bitumen consumption by 10%.
- **Urban greening activities by Kochi metro rail limited.**
  - KMRL as a part of the environmental impact assessment report has to compensate for the trees removed during the process of project implementation by planting trees in the ratio of 1:10.
- **Mother tongue based multilingual education (MTB-MLE)**
  - It is an approach to address the educational challenges faced by the indigenous population.
  - Here the children start learning in their mother tongue in early grades with gradual transition to a regional language and an international language.

## Conclusion

- The Chartered Institute of Procurement & Supply (CIPS), a national body established by the Government of India in 2010, with a mandate to promote Innovations in public systems, is working with central ministries, state governments, union territories and not for profit organizations to actively promote and disseminate practices for enhanced service delivery, increased efficiency and cost reduction.

## Transforming Public Transport in India

### Introduction

- With rapid growth of population the urban space in India for creation of the necessary infrastructure is shrinking every year.
- An average of 60,000 vehicles is sold every day in India but the growth of population widens the gap between demand and supply of public transport needs.
- Metro rail, one of the popular mass transit modes is a form of public transport that has become a priority of urban administrations to ease the urban commutation.
- It is non-pollutant energy and is most preferable in densely populated urban spaces.

### History of trains

- The emerging issues of early urbanization in Britain led to the construction of underground train network in the late 19th century.
- The success of earliest Mass Rapid Transit (MRT) systems such as London tube and New York Metro paved the way for similar systems across the world.

### The progress in India

- In India 10 cities already have operational metro networks and as of today, 524 kilometres of metro network is already operational in India and 620 kilometres of network is under construction.
- When Delhi metro began its operations in 2002, the global MRT sector already had advanced technology in place.
- Delhi metro was the first to introduce contactless tokens for single journey in 2002.
- The trains used in Delhi metro in its phase 3 expansions are equipped with unattended train operation mode, which enables the possibility of operating trains without drivers.
- The Communications-based train control (CBTC) system enables headway improvement to about 90 seconds which means it facilitates higher frequency of train operations in busy hours.
- The installations of automatic screen doors on platforms help maintain better crowd management.
- LED based lighting is used inside the trains and the dynamic route maps have been changed to LCD technology for better understanding.
- The noise levels inside the trains have been reduced further from present limit of 68dB to 65 dB.
- According to a study conducted by central road research institute around 3,90,971 vehicles were taken off the roads after metro started operating in Delhi which helped reduce around 5,53,203 tonnes of CO<sub>2</sub> from environment every year. DMRC became the first railway project in the world to win carbon credits.

### Conclusion

- Indian metros other than Delhi metro are still in preliminary stage. In future we are going to see more successful metro projects like Delhi metro.

## Improving competitiveness in SMEs

## Introduction

- Small and medium enterprises contribute to economic growth, employment, reduction of poverty; enhance competition and productivity growth as well.
- Our SMEs remain competitive both nationally and globally.
- The ministry of MSME apart from providing them financial subsidy and incentives to buy machinery, file trademarks and get expert advice ,runs various schemes to support the technological and other innovations in SMEs.

## Initiatives

- Allocation of funds in the current FY Union budget for setting up ultra-modern technology centres, developing 71 clusters (including coir) through Scheme of Fund for Regeneration of Traditional Industries (SFURTI) and promotion of Khadi Udyog.
- Reduction in tax rates to 25% has made the capital availability.
- The Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) provides financial assistance to these industries without any third party guarantee or collateral in the ratio of 50/75/80/85 % of the amount given.

## Conclusion

- A recent survey done by American express in collaboration with Oxford economics - India's small and medium businesses are using their advantages such as size, agility and innovation as their top three strategies for driving revenue growth in 2018.
- India has succeeded in attaining 57th rank in 2018 Global innovation Index.

## Innovations in financial sector: Adding more meaning to money

### Introduction

- Success or failure of an innovation depends upon the use of technology and this can be said more specifically in the context of innovations in the financial sector in India.
- Starting from Pradhan mantri Jan Dhan Yojana to Pradhan mantri MUDRA Yojana all are being implemented with the help of information technology making them emphatic for the Government and the masses thereby complementing each other.

### Some recent innovations in financial sectors are

### ▪ **Pradhan Mantri Jan Dhan Yojana (PMJDY)**

- It is a financial inclusion program of Government of India that aims to expand and make affordable access to financial services such as bank accounts, remittances, credit, insurance and pensions.
- **Swabhimaan**, a financial inclusion campaign which aims to bring banking services to large rural areas made it more practical.
- The scheme also prescribes plastic currency in the form of **RuPay card** for all such accounts.
- So far the Government has managed to save over Rs 90000 crore through **Direct Benefit Transfer (DBT)** in transferring subsidies directly to the people through their bank accounts.
- Another key feature of PMJDY is the ease of opening bank accounts so that persons who do not have any of the officially 'valid documents' can open '**Small accounts**' with banks.

### ▪ **Insurance and pension schemes for social security**

- **Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY):**
- PMJJBY is a government backed insurance scheme that offers life cover for death of the insured.
- The scheme will be offered through LIC and other Life Insurance companies and banks that are willing to offer the scheme on similar terms.
- Indian residents between the age of 18 and 50 years with a bank account are eligible for the scheme.
- In case the insured owns multiple savings bank accounts with different banks, they can join the scheme through a single savings bank account of their choice.
- **Pradhan Mantri Suraksha Bima Yojana (PMSBY):**
- PMSBY is a government backed scheme.
- It is an Accident Insurance Scheme that offers accidental death and disability cover in case of death or disability due to an accident.

- The scheme is offered through public sector insurance companies and general insurance companies.
- The scheme is available for individuals between the age of 18 and 70 years with bank accounts and the premium for the scheme will be deducted from the savings account of the insured.
- **Pension scheme:**
- Atal Pension Yojana is a pension scheme aimed at the unorganized sector.
- This scheme replaced the previous Swavalamban Yojana which wasn't accepted well by the people.
- Private sector employees working with such an organization that does not provide them pension benefit can apply for the scheme.
- There is an option of getting a fixed pension of Rs 1000, Rs 2000, Rs 3000, Rs 4000, or Rs 5000 on attaining an age of 60 which will be determined based on the individual's age and the contribution amount.
- As per the investment pattern the collected amount under the scheme is to be managed by the Pension Funds Regulatory Authority of India ("PFRDA").
- **MUDRA:**
- MUDRA is a refinance for lending to micro businesses/units under the aegis of the Pradhan Mantri MUDRA Yojana.
- The products would be covered under three categories that are as follows:
- Shishu : covering loans up to Rs. 50,000/-
- Kishor : covering loans above Rs. 50,000/- and up to Rs. 5 Lakh
- Tarun : covering loans above Rs. 5 Lakh and up to Rs. 10 Lakh
- It is to be noted that at least 60% of loans shall be disbursed under Shishu category and remaining for Kishor and Tarun categories.
- All commercial banks (Private or Public), RRB, Cooperative Bank or other Micro Finance Institutions are eligible for refinance under PM Mudra Yojana.

▪ **Stand up India:**

- This scheme aims at promoting entrepreneurship among women and scheduled castes and tribes.
- The scheme is anchored by Department of Financial Services (DFS), Ministry of Finance, Government of India.
- It facilitates bank loans between Rs 10 lakh and Rs 1 Crore to at least one Scheduled Caste (SC) or Scheduled Tribe (ST) borrower and at least one woman borrower per bank branch for setting up a Greenfield enterprise (A project is one which is not constrained by prior work.e.g. of greenfield projects are new factories, or airports which are built from scratch)
- This enterprise may be in manufacturing, services or the trading sector. In case of non-individual enterprises at least 51% of the shareholding and controlling stake should be held by either an SC/ST or woman entrepreneur.

**Conclusion**

- These financial innovations have made life easier for a larger section of people
- And the best thing is that the changes are being incorporated based on field experience making these schemes more effective.