

# CURRENT AFFAIRS – FEBRUARY 2018

## POLITY, GOVERNANCE AND PUBLIC POLICY

### **Removal of High Court Justice**

#### **Context:**

- The parliamentary inquiry committee has concluded that Justice Shukla of the Allahabad High Court has committed judicial impropriety.
- This now mandates his removal through a motion in both houses of the parliament (which is not called impeachment).

#### **About the Case**

- Justice Shri Narayan Shukla had come under adverse notice before a Supreme Court Bench headed by Chief Justice of India Dipak Misra last year.
- The Bench had found that he had violated a restraining order from the apex court by allowing the GCRG Memorial Trust, Lucknow, to admit students.
- Notably, allegations against him came to light from an FIR by the CBI against another medical college that tried to illegally influence public servants.
- Consequently, CJI formed a three-member committee, comprising of three high court judges to enquire further about the impropriety in the case.
- As, this committee too came up with an adverse ruling, the resignation or voluntary retirement of Mr. Shukla was expected, which hasn't been tendered.
- This hence leaves no option but for him face the ignominy of a parliamentary action, for which the CJI too has given his approval.

#### **Impact of this Development**

- While this development has rocked the entire judicial institution considerably with doubts being cast on their very credibility, one can't shy away from acting.
- Hence, these need to be addressed expeditiously to restore faith, which the in-house proceeding seems to have done (considering that the case is obvious).
- The possibility the current removal motion getting passed in Parliament looks bright, as there seems to be a clear apolitical tone to the entire proceeding.
- This may have a sobering effect on those who desire that the institution be cleansed as well as those who feel there is an unwarranted onslaught on it.

#### **Removal of Judges in the Higher Judiciary**

- The process of removing a "HC or a SC judge" is too elaborate and somewhat cumbersome as it has considerable checks and balances.
- A motion is mooted in the parliament and an inquiry committee is constituted to establish charges, which once established is put to vote.
- The removal motion has to pass in both houses with a 2/3<sup>rd</sup> majority of those present and voting, which must also be greater than 50% of the total strength.
- Significantly, no judge of the higher judiciary has ever been removed till now by means of such a parliamentary proceeding.

### **Powers of Chief Justice**

**Context:** In India there are controversies over the power of chief justice in constitution of benches.

#### **Powers of Chief Justice**

- **SC** - The judges of the Supreme Court and high courts are appointed by the president after consultation with the chief justice of India.
- The chief justice of High court is appointed by the president after consultation with the chief justice of India and the governor of the state concerned.
- The consultation with the chief justice is obligatory in the case of appointment of a judge other than chief justice.
- Thus the advice tendered by the chief justice of India is binding on the president in the matters of appointment of the judges of the SC.
- **HC** - For appointment of other judges the chief justice of the concerned high court is also consulted.

#### **What are Benches?**

- In the US Supreme Court, there will be nine judges and all sit together and decide all the matters.
- Likewise in India high courts and the SC discharge their function through the benches.
- In India the members of the bench is usually appointed by the chief justice of the respective court, a chief justice can also present in the bench.
- The constitution of benches is an administrative matter and is a privilege of the chief justice as the administrative head of the court.
- Therefore in India Chief justice is the administrative head of the respective court, but not its judicial head.

- The justice delivered by CJ's benches and other benches have equal weight and are equally binding.
- Both in the high courts and the SC for deciding matters involving constitutional disputes, a bench of no less than five judges should be constituted and the said bench should consist the senior-most judges.

### Concerns about Constitution Benches

- **Power abuse** -The power to constitute the benches, also indirectly implies the power to shape justice and law.
- Few incidents claim that the power of CJ to constitute benches is liable to be abused.
- If a chief justice is so inclined, he may pack the benches by judges who will uphold a particular view.
- **Autocracy** -A chief justice of India (CJI) used to constitute benches to uphold his views expressed as a high court judge but overruled by the SC.
- Another CJI would instruct flexible colleagues to take particular views in the matter.
- By this the exercise of any power which has far reaching consequences has been left in the hands of one man, which has deleterious effects for democracy.

### Way Forward

- The power to constitute a bench must be shared with at least the next four senior-most judges, when political and sensitive cases are decided.
- Judges cannot be divided into senior and junior since all judges are equal, it must be understood that to sustain the confidence of the people in the judiciary, such a convention is warranted.
- Any judgment must appear to be the judgment of the court and not of one man or hand-picked men, which needs involvement of several judges.

### Gender Ratio Woes in India

**In The News:** Economic Survey 2017-18 has pointed out Meta preference and fertility stopping rule for skewed sex-ratio of the last child (SRLC).

#### Status of gender ratio in India

- The sex-ratio of the last child (SRLC) born in Indian families is excessively slanted.
- At national level, it is around 9.5 per cent worse than it should be, compared to other countries at similar levels of development.
- In Gujarat, Punjab and Rajasthan, the SRLC is 2,100 boys for every 1,000 girls, In Haryana, it is even worse at 2,300 boys: 1,000 girls.
- The male child preference is highest in Punjab and Haryana and lowest in Meghalaya.
- While India has shown improvement in several parameters related to women's empowerment, the preference for a son has not diminished.

#### Causes

- An average Indian family prefers to have two children, there are instances where families have more than five children if the last child is not a male.
- Indian families carry on having kids until there is a boy and then, they stop having kids.
- The Survey calls this as "meta preference" and a "fertility stopping rule" by making an inference that there are 21 million unwanted girls of age group 0-25 were born because their parents wanted a boy.
- More than 2 million women go missing across age groups every year either due to sex-selective abortion, disease, neglect, or inadequate nutrition, according to the National Family and Health Survey (NFHS).
- Reasons behind preferring a male child are found to be compulsion of a woman to move to her husband's house post marriage, inheritance of property, rituals performed by sons, and dowry, among others.
- More women are educated, employed and earning than a decade ago they still do not have control over their earnings and childbirth.

#### Suggestions from the government

- The government had introduced schemes Beti Bachao -Beti Padhao, Sukanya Samridhi Yojana, enhanced maternity leave and mandatory Crèches in workplaces for supporting female children and child births.
- Economic Survey recommended that the nation must confront the societal preference for male offspring.
- It has also called for a stronger commitment on the gender front similar to the government's push for Ease of Doing Business.
- Equal participation by women in the labour force could push up the gross domestic product by 27 per cent.
- It's axiomatic that women's empowerment, education and agency in terms of deployment of their income, travel, etc. can lead to a big leap forward.

### Supreme Court's Decision on Khap Panchayats

**In News:** Supreme Court has ruled that Khap panchayats has no right to interfere in any marriage.

#### Khap Panchayats

- Khap panchayat is the union of a few villages, mainly in north India though it exists in similar forms in the rest of the country.
- These village councils run by unelected elders turned in to a quasi-judicial body promotes conservative, anti-women values in the name of preserving Indian culture and tradition.
- Most cases are reported in northern states such as Uttar Pradesh and Haryana, where caste councils wield enormous power in village life.

- Khaps have not only continued to flourish, but also have found patronage from mainstream political leaders.
- Viewing communities as vote-banks and so-called khap leaders as the key actors which can swing the community's votes, political leaders have steered clear of them.
- Taking a cue from the political leadership, the police, bureaucrats and administrators have also not crossed paths with the khaps.

#### **Khap's Interference in the Freedom of youths**

- Indian society is unwilling to accept the choices made by young women when it comes to their marriage.
- Often the perpetrators are relatives seeking to punish young couples for bringing "shame" to the family.
- There were 291 honor killings in India between 2014 and 2016, as per data from the National Crime Records Bureau.
- The regressive marriage diktats and intimidation tactics like ostracism, social boycotts, etc. issued by the khaps denies adults basic freedoms guaranteed by the Constitution.
- In few villages the khaps had even banned mobile phones for women.

#### **Recent ruling of SC**

- Supreme Court directed the Khaps to stay away from marriages between consenting adults.
- The Supreme Court told the khaps that they had "no right to interfere" in fact, nobody had the right to interfere in any marriage.
- SC clarified to the Khaps that not to fancy themselves as conscience keepers of society, which is absolutely illegal.
- The SC also mentioned that solution for consanguineous marriages must be derived from counseling such couples rather than encouraging hostility against them.

## **ECONOMIC AFFAIRS**

### **Practical constrains of Payment Banks**

#### **Context:**

- Payment banks were introduced to by RBI to increase the accessibility and affordability of banking.
- But recent estimates reveal that payment banks are facing practical constrains in achieving their goals.

#### **Payment Banks**

- Payment banks were introduced to deepen access to formal financial services in unbanked and under-banked areas.
- It can't offer loans but can raise deposits of upto Rs. 1 lakh, and pay interest on these balances and can issue debit cards and ATM cards.
- It primarily aimed to help people to open a bank account almost at their doorsteps with the help of an agent.
- Payment banks can enable transfers and remittances through a mobile phone and can offer services such as automatic payments of bills, and purchases in cashless, cheque less transactions through a phone.
- Few example of payment banks in India are Airtel money, Paytm payments bank, Vodafone m-Pesa, etc.

#### **Practical constrains**

- **Lack of awareness** -The awareness about payment banking system is yet to reach the vulnerable, illiterate, low-income and rural population.
- **Different options** -Among those customers who knew about the product, especially in urban areas, there was little interest in using it, since several other options already existed to perform financial transactions.
- **Lack of training** -Agents who work for payment banks have limited training on the features of the product, terms and conditions and its benefits.
- **Heavy workload** -Payment bank agents are frustrated due to amount of time needed to on-board customers, conduct transactions on their behalf.
- **Less incentives** -The agents were not provided with adequate incentives to promote the product.
- The monetary commission provided per transaction was also too low.

#### **Way Forward**

- Payment banks need to intensify their efforts and try different approaches to create awareness about the product.
- Payment banks need to heavily invest in marketing, especially in rural areas, and compensate agents substantially.
- Payment banks need to explain the features and uses of the product to their agents such that they can effectively transfer this knowledge to the consumer.

### **Revival of Corporate Earnings**

**Context:** Corporate earnings has rebounded to an appreciable extent after a low customer base created by the demonetization and GST.

### Status of corporate earnings

- Recent analysis shows corporate earnings of Q3 (October-December 2017) of Indian economy has recovered.
- Sales have grown a commendable 12.8 per cent, while other income rose 28 per cent.
- Operating profits rose by 14.4 per cent and, net profits have grown by 24.7 per cent, and the revival is spread across several sectors.

### Goods and services industries

- Most automobile majors have reported an improved performance than expected.
- Fast-moving consumer goods companies, which represent low- consumption, have also seen improvement.
- Sales in capital goods sector where rose by 19 per cent which indicates some sort of revival in the investment climate.
- Off take in cement and steel is heavily driven by construction, which, in turn, is driven by infrastructure project activity.
- Export driven industries such as pharmaceuticals and software, continue to deliver results under par.
- The telecom sector remains under pressure due to the tussles between the competitors which is expected to recover soon.
- Thus overall corporate results show an encouraging trend particularly those dominated by public sector undertakings.

### MSP Formula of NCF

#### Context:

- Union budget 2018 has proposed a hike in Minimum Support Price (MSP) for Kharif crops.
- The government is yet to clarify whether the MSP formula is in lines with the recommendation National commission on Farmers.
- Farmers are not satisfied with the announcement as the MSP formula used by the government is blurred.

#### Recent announcements

- Minimum Support Price is the price at which government purchases crops from the farmers, whatever may be the market price of the crops.
- Union Budget 2018 announced to keep the Minimum Support Price (MSP) for all unannounced Kharif crops at least at 1.5 times of the production cost.
- As of now the hike has been announced only for Kharif crops, other crops such as paddy or millets are yet to get nod in this regard.
- Government has also assured that if income is less than the support price, that it will make efforts to buy the surplus produced by the farmers.

#### MSP formula recommended by NCF

- Union government constituted National Commission on Farmers in 2004, which was headed M.S. Swaminathan.
- The Commission for Agricultural Costs and Prices (CACP), gives three definitions of production costs: A2, A2+FL and C2.
- A2 costs - It basically cover all paid-out expenses, both in cash and in kind, incurred by farmers on seeds, fertilisers, chemicals, hired labour, fuel, irrigation, etc.
- A2+FL costs - It cover actual paid-out costs plus an imputed value of unpaid family labour.
- C2 costs - These costs are more comprehensive, accounting for the rentals and interest forgone on owned land and fixed capital assets respectively, on top of A2+FL.
- The M.S. Swaminathan Committee report had recommended a minimum support price of 50% profits above the cost of production classified as 'C2' by the CACP.

#### Government stand

- In 2014 the union government has promised to offer 50 per cent margin over cost C2 but this was never spelt out in detail.
- Recently Finance ministry has announced that the MSP will be in lines with its earlier announcement on Rabi crops.
- For rabi crop the government is using 50 per cent margin of Cost A2 or maybe cost A2+FL, by this the MSPs given by the government is still lower than cost C2.
- The ministry also claims that only the present administration offers 50% margin in cost A2+FL, but the fact is even in FY 2013-14, the MSPs for all rabi crops were way above 50 per cent over cost A2+FL.

#### Challenges

- The government senses it is impractical to give 50 per cent margin over cost C2 in all crops.
- The C2 is normally 35-40 per cent higher than cost A2+FL, this would have required massive increases in MSPs.
- For example, paddy MSP would have to go up by 46 per cent, cotton by 52 per cent and so on).
- It may also be mentioned that cost plus pricing of MSPs, be it cost A2+FL or C2, is fraught with dangers as it totally ignores the demand side.
- The terms of reference of CACP fails to consider demand-supply, cost of production, price trends in domestic and international markets, terms of trade, inter-crop price parity, etc before recommending the MSP.

### Announcements on farmer's welfare

- Budget provides for greater use of clean and renewable energy sources.
- There is an increased allocation for building warehouses and upgrading 22,000 ruralhaats (markets) into Grameen Agricultural markets.
- National Bamboo Mission to enhance the cultivation and consumption of bamboo products is to be restructured.
- Decision to integrate fisheries and animal husbandry with Kisan Credit Cards has also been taken.

### Digital India Flagship

**In The news:** Union government has proposed to double the expenditure on the Digital India programme.

#### Schemes under digital India

- The Digital India programme is a flagship programme under Ministry of Electronics and Information Technology.
- The vision of this program is to transform India into a digitally empowered society and knowledge economy.
- There are about more than 23 mission mode projects under the programme few are enlisted below
- **Digi Locker** - The service was launched to store crucial documents like Voter ID Card, Pan Card, BPL Card, Driving License, education certificates, etc. in the cloud.
- **MyGov.in** - The portal works as an online platform to engage citizens in governance through a "Discuss", "Do" and "Disseminate" approach.
- **E-Sign Framework** - This initiative would enable users to digitally sign a document online using Aadhaar authentication.
- **Swachh Bharat Mission mobile app** - The app will enable organizations and citizens to access information regarding the cleanliness drive and achieve the goals of the mission.
- **National Scholarship Portal** -From submitting the application, verification, sanction and disbursal to end beneficiary, everything related to government scholarships can be done on this single portal online.
- **E-Hospital** -Online Registration System under this initiative enables people to avail services like online registration, payment of fees and appointment, online diagnostic reports, checking on the availability of blood online, etc.
- **Digitize India Platform** -This initiative will involve digitization of data and records on a large scale in the country to make easy and quick access to them possible.
- **Bharat Net** -Under this initiative, a high-speed digital highway will connect 2, 50,000 gram panchayats of the country.
- This is the world's largest rural broadband project using optical fibre.
- **Wi-Fi Hotspots** -Development of high speed BSNL Wi-Fi hotspots throughout the country is yet another initiative to improve digital connectivity in the country.
- **Next Generation Network** -Launched by BSNL, this service will replace 30-year old telephone exchanges to manage all types of services like voice, data, multimedia and other types of communication services.
- **Electronics Development Fund** -The fund will be set up to support the manufacturing of electronics products that would help create new jobs and reduce import.
- **Centre of Excellence on Internet of Things (IoT)** -In partnership with NASSCOM, Centre of Excellence will be established for rapid adoption of IoT technology and encourage a new growth strategy.

#### Recent announcement

- Expenditure on programme doubled to Rs. 3,073 crore for the next financial year from Rs. 1,425.63 crore in 2017-18.
- Under Digital India the budget is allocated in the following order of priority
  1. Promotion of electronics manufacturing.
  2. Delivery of e-governance services.
  3. Government's digital literacy programme
  4. Development on manpower.
- The Government also proposed to set up 5 lakh Wi-Fi hotspots which will provide broadband access to 5 crore rural citizens.
- The Budget proposed an allocation of around Rs. 14,500 crore to strengthen telecom infrastructure projects, including BharatNet, during the upcoming fiscal.
- Of this, Rs. 4,500 has been allocated for building a dedicated optical fibre-based communications network for defence forces in lieu of airwaves vacated for civilian use.
- NITI Aayog would initiate a national programme to direct efforts in the area of artificial intelligence, including research and development of its applications.

### Tax Compliance Issues in India

#### Context:

- India has lesser per-capita tax revenue when compared with the leading democracies.
- Addressing the issues with tax compliance will increase the per-capita tax revenues.

#### Various Taxes Levied in INDIA

- **Direct Taxes** -Direct taxes are the one that fall directly on individuals and corporations, For example, income tax, corporate tax etc.
- **Income Tax**- It is imposed on an individual who falls under the different tax brackets based on their earning or revenue and they have to file an income tax return every year after which they will either need to pay the tax or be eligible for a tax refund.
- **Estate Tax**– Also known as Inheritance tax, it is raised on an estate or the total value of money and property that an individual has left behind after their death.
- **Wealth Tax**– Wealth tax is imposed on the value of the property that a person possesses.
- **Corporate Tax** - This is the tax paid by corporations on the incomes they earn.
- **Minimum Alternative Tax (MAT)** - The Minimum Alternative Tax is a minimum tax that a company must pay, even if it is under zero tax limits.
- **Indirect Taxes** -Indirect taxes are imposed on goods and services, they are paid by consumers when they buy goods and services.
- These include GST, excise duty, customs duty etc.

#### **Status of tax collection**

- Between 2000-01 and 2017-18, while India's GDP raised 7.7 times, central tax revenues rose 10.3 times, as a result of which tax-to-GDP rose from 8.7% to 11.6% and, this is expected to rise to 12.1% in FY19.
- During this period, personal income tax, as a ratio to GDP, are up from 1.5% to 2.6% and are projected to rise to 2.8%.
- With rising per capita incomes, the tax-to-GDP levels are rising quite well due to increasing formalization of the economy.
- Corporate taxation levels (as a share of GDP), have been falling for several years, in keeping with the slowing of corporate profitability.

#### **Lesser per capita tax compliance**

- Most of the Indian population lives in rural parts and they do agriculture as their occupation, and India does not tax income from agriculture.
- Over 60% of the population is out of the ambit of the tax system or the various other exemptions given for senior citizens.
- Apart from rural workers many wealthy landowners are out of tax ambit since they claim their income as earned from agriculture.
- By these facts nearly 85 percent of the economy is outside the tax net.

### **Global Stocks Fall**

**In The news:** US stocks suffered their worst falls in more than 6 years.

- This was after steep losses on Wall Street that slashed the Dow Jones Industrial Average (DJIA) by 4.6%.

#### **DJIA**

- The **Dow Jones Industrial Average** (DJIA) or simply Dow Jones is a stock market index.
- It is the price-weighted average of 30 significant stocks traded on the New York Stock Exchange and NASDAQ (an American stock exchange).
- The Dow Jones Industrial Average fell 4.6% overnight, recently.
- The developments in Wall Street found ramifications in Dalal Street.
- Wall Street in the New York City is generally associated with the financial markets of the US as a whole.
- Dalal Street in Mumbai houses the Bombay Stock Exchange and several related financial firms and institutions.

#### **Trigge Effect**

- The US Labour Department reported that **employment** had risen more than expected in January.
- This was with the biggest **wage gain** in more than eight-and-a-half years.
- The workers commanding **higher salaries** fuelled apprehensions of a **rise in inflation**.
- In turn, there was anticipation that the Federal Reserve may **raise interest rates** faster.
- The markets were worried that it may push **investors** to move to **US Treasury bonds**.
- This is because returns on Treasuries would look relatively more attractive than stocks at this juncture.
- The US 10-year **Treasury yield** also surged to a level that is the highest since January 2014.
- This was ultimately expected to **suck out liquidity** from the equity markets.
- All these triggered a fall in stocks, leading to a plunge in Dow Jones by 4.7%, its largest single-day point drop in history.

#### **Developments in India**

- Sensex scaled to new peaks almost on a daily basis in India until the presentation of the recent Budget.
- However, the post budget scenario started to take a turn.
- The Budget slapped a 10% **long-term capital gains (LTCG) tax** on equity gains of over Rs 1 lakh The budget also projected a higher **fiscal deficit**.
- Resultantly, investors dumped stocks across the board and the **Sensex fell**.
- This was also driven by the **undermined market sentiment** due to:

- rising bond yields in India and across the world
- the possibility of higher inflation
- fear of interest rate hikes (by RBI in India and by US FED as well)
- The fall in stock market was further **accelerated** by the recent plunge in Wall Street.

#### **implication**

- The interest rates hikes in the US could lead to **outflow of foreign portfolio investor funds** from emerging markets.
- This is a concern for India, as funds would move out of the country to be parked in US Treasury bonds.
- The continued inflow of retail money into Indian equities through Mutual Funds could act as a counterbalance to FPI outflows.
- However, the imposition of the **LTCG tax** may disrupt that inflow of retail money.
- **Retail investors** are concerned on **compliance issues**.
- These include keeping track of days of investment and calculation of capital gains for payment of tax.
- Resultantly, **new investors** coming into India may not reflect the positive trend as in the last 3 years.
- Besides, fund outflows could have ramifications on the **current account deficit** (CAD).
- This is because India has been balancing CAD through higher inflows.
- The possible outflows and a widening CAD may lead to more complications for **government finances**.
- Also, hundreds of companies that have lined up **Initial Public Offering market** will have to rework their plans.
- The **disinvestment** of public sector companies could also get hit.
- Evidently, in the last year, a number of PSUs had floated IPOs, raising thousands of crores for the government.

## **Union Budget**

### **Highlights of Union Budget 2018**

#### **Highlights:**

#### **Fiscal Prudence**

- Under the new GST regime, the last date for filing of GST returns remains the 20th of the succeeding month.
- This is expected to have a significantly impact balance sheets as indirect tax receipts will be only for 11 months (excluding the receipts for March).
- Also, Rs 21.57 lakh crores were transferred in the form of net GST to finance the shortfalls of states against the predicted Rs 21.47 lakh.
- Considering the upended government spending and the above mentioned fiscal constraints, the government wasn't able to meet its fiscal target of 3.2%.
- Notably, the 2018-19 targets has been set at 3.3% of GDP and the actual fiscal deficit for 2017-18 was calculated to be "Rs 5.95 lakh crore or 3.5% of GDP".

#### **Agriculture**

- The government's resolve to double farmers' income, and increase production was reasserted.
- In a major relief to farmers, minimum support price (MSP) for all upcoming Kharif crops has been raised to 1.5 times the cost of production.
- "Agricultural Market and Infra Fund" with a corpus of Rs 2,000 crore will be created for 22,000 gramin agricultural markets and 585 APMCs.
- Also, Rs 11 lakh crore credits for the farm sector have been proposed and allocation for Food Processing Ministry has been doubled.
- A restructured "National Bamboo Mission" with corpus of Rs 1,290 crore to boost bamboo cultivation has been provided for.
- Emphasis has been given to organic farming and export of agro commodities has been liberalized to meet India's agro exports potential of \$100 billion.
- kisan credit cards has been extended to animal husbandry and fisheries and Rs 10,000 crores has been allocated for these domains.
- A favorable taxation treatment for farmer producer's organizations has been intended and agricultural products will now be in futures markets.

- A special scheme to manage crop residue and contain winter smog in the northern plains around Delhi has also been proposed.

#### **Rural Welfare**

- Deposit free gas connections will be provided to 8 crore poor women under the PM Ujjwala Scheme.
- Rs 16,000 crore for PM Saubhagya Yojana was allocated for connecting 4 crore households with free electricity.
- Also, under Housing for All by 2022 and PM Awas Yojana (rural), 51 lakh affordable housing units constructed in rural and 50 lakh in urban areas.
- Allocation to National Livelihood Mission was set at Rs 5,750 crore and target for loans to women self-help group has been increased to Rs 75,000 crore.
- Extra and non-budgetary resources of Rs 14.34 lakh crore has been estimated for housing, infrastructure and livelihood in rural areas.
- Constructing at least 2 crore toilets under Swachh Bharat Mission has been targeted for 2018.

#### **Financial Schemes**

- 60 crore bank accounts under PM Jan Dhan Yojana is envisioned which is currently 16 crores.
- All the existing “Jan Dhan accounts”, are touted to be brought under micro insurance and pension plans of the government.
- Notably, “PM Jivan Jothi Bima Yojana” is currently benefiting about 5.22 crore families.
- It was stated that 1.26 crore bank accounts have already been opened under the “Sukanya Samridhi Scheme” for the financial security of the girl child.
- Rs 52,719 crore has been allocated for social inclusion of scheduled castes.

#### **Financial Markets**

- Government to encourage a strong environment for Venture Capitalists and angel investors.
- Meanwhile SEBI would make it mandatory for large corporations to meet a quarter of their debt needs from bond markets.
- The disinvestment target for FY2019 has been set for Rs 80,000 crore and for the current fiscal has been set at Rs 1 lakh crore.
- The National Insurance Co, Oriental Insurance Co and United Assurance Co will be merged into one entity which will then be listed.
- It has been stated that bank recapitalisation may set the path for public banks to lend an extra Rs 5 lakh crore.

#### **Long term Capital Gains Tax**

- While the government is nudging people to invest in the financial market, the introduction of this tax seems contradictory.
- This is a tax on capital gains made by investors, who sell stocks after holding it for over a year (which is in addition to the Securities Transaction tax).
- While this was previously untaxed, the government perhaps feels that stock investments and mutual funds investors can afford to pay the 10% tax.
- The calculation is that equity investors are better off than the rest and hence can be capitalised to enhancing budgetary revenues.
- While this might dampen market sentiment, it is expected to be only transient.

#### **Bond Market**

- There is a proposal for the SEBI to mandate companies to raise a quarter of their funds from the bond market.
- This can significantly impact company borrowings and will speed up the development of the bond market and ease the dependence on banks.
- For banks, this would give room for greater diversification of their lending portfolio as they will be considerably freed from lending to big corporate.

#### **Industry**

- There seems have been a mass formalisation of MSME industry after GST and demonetisation.
- Rs 3,794 crore capital support and subsidy for the sector has been allocated.
- Under Mudra Yojana, a credit target of Rs 3 lakh crore has been envisioned for 2018, while it was noted that Rs 4.6 lakh crore was sanctioned till now.
- Consumers get relief due to central excise cut on unbranded petrol and diesel by Rs.2 to Rs.6.33 and Rs.4.48 per liter respectively.

#### **Railways**

- Targeted for capital expenditure for Railways is set at Rs 1,48,528 crore and a “special railway university” is envisioned at Vadodara, Gujarat.
- All trains will soon be equipped with CCTVs and WiFi, and to cut travel times and delays, cutting 4,267 unmanned railway crossings have been targeted.
- In a bid to overhaul the railway stations’ infrastructure, all station that have a footfall of 25,000 passengers will now have escalators.



- Allocations for Mumbai rail network were pegged at Rs 11,000 crore and for Bengaluru Metro was Rs 17,000 crore was allocated.

#### **Taxation**

- No change in personal income tax rates for salaried class.
- Jaitley said in his speech that there has been a 12.6% growth in direct taxes in 2017-18 and 18.7% growth in indirect taxes in 2017-18.
- As many as 85.51 lakh new taxpayers filed their tax returns in 2017-18, as against 66.26 lakhs new registration in 2016-17.
- The total filers now stands at 8.27 crore by end of 2017 and IT collections saw an increase of Rs.90,000 crores over the previous year.
- Liberalisation of presumptive income scheme for small businesses with income below Rs 2 crores and professionals earning below 50 lakh is stated.
- Corporate tax reduced has been reduced from 30% to 25% for companies with turnover up to Rs 250 crore, this is expected to boost MSME sector.
- Long-term capital gains are proposed to be taxed at 10% on investments over Rs 1 lakh and Short term capital gains tax to remain unchanged at 15%.
- For senior citizens, exemption of interest income on bank deposits has been raised to Rs 50,000 for senior citizens.
- Bank FD and post offices deposits tax exemption of upto Rs. 10,000 was given.
- The budget proposes 10% tax on distributed income by equity-oriented mutual funds as well as 100% deductions for cooperative societies.

#### **Infrastructure**

- There is a requirement of Rs 50 lakh crore for the infrastructure sector.
- A new tunnel at Sera Pass is to be constructed and 10 prominent tourist sites will be upgraded as iconic tourist destinations.
- Bharatmala project aims to connect India's eastern and western ends with a 35,000 km highway and roads network.
- An outlay was announced to the tune of Rs 5.35 lakh crore under phase 1.
- For toll payments on highways, the government will introduce a new system called "pay as you use".

#### **Trade**

- Customs duty on mobile phones, TVs has been hiked from 15% to 20% for providing a fillip to Make in India initiative.
- Government also proposes 10% social welfare surcharge on imports.

#### **Defence**

- The total outlay for defence in budget 2018 is Rs 2,95 lakh crore, according to PTI, up from Rs 2.74 lakh crore last year.
- It was stated that thus far, emphasis was given on modernisation and enhancement of operational capabilities of the armed forces.
- The intention has been to boost local manufacturing in defence sector but to meet the immediate needs, foreign procurements are made.
- A new industry-friendly defence production policy 2018 for giving a boost to domestic production for private and public sector has also been promised.

#### **Technology**

- Rs 3,073 crore was allocated for "Digital India scheme".
- To give access of broadband services to 5 crore rural citizens, an allocation of Rs 10,000 crore was proposed.
- This will see the installation of more than 5 lakh WiFi hotspots across India.
- Government will now explore the usage of Block chain technology but it will also take steps to prohibit circulation of crypto currencies.

#### **Aviation**

- Government plans to expand airport capacity by five times and aims to take the trip count to 1 billion per year.
- An initial investment of Rs 60 has been set aside for this.
- Under UDAN scheme, 64 airports will be connected across the country to boost low cost flying.

#### **for businesses**

- Despite pressures due to corporate tax cuts in EU and the US, the hoped comprehensive tax cuts across the spectrum for businesses didn't happen
- Rather, tax was cut from the present 30% to 25% for companies that net less than 250 crores annual turnover (mostly MSMEs).
- Lending under MUDRA scheme for promotion of MSME enterprises has been target at Rs.3 lakh crores for the 2018-19 fiscal.

#### **For Employees**

- Government pledges contribution of 12% in wages of new employees in all sectors for the upcoming 3 years under EPF scheme.

- Women contribution to EPF slashed for initial three years to 8%.
- **Reduced PF contribution** - The mandatory provident fund contribution norm of 12% has been relaxed for women in their first three years of work to 8%.
- **Fixed-Term Employment** - There has been a push to expand this system to footwear, leather and other compatible sectors.
- This will ensure clearly contracted provisions and statutory benefits like allowances, working hours etc... for employees akin to permanent works.
- But this will also facilitate easy hire and fire flexibility for corporates, which has found favour with business but opposition from trade unions.
- **Capital Spending** - As the government has intended a higher infrastructure spending, thus could bring more jobs, with more entrepreneurs pouring in.

#### **schemes for the poor**

- There are schemes to provide free power connections to 4 crore homes and extend free gas connections to further 3 crore homes under Ujjwala scheme.
- Notably, these are only free for establishment of connections and the subsequent services aren't free.
- Further, under the Swachh Bharat Mission, 2 crore toilets are to be built over the current fiscal.
- The goal to enable every Indian own a house by 2022 is also in focus through both the rural and urban components of the PM Awas Yojana.
- **Ayushman Bharat** - The scheme is a health sector initiative to provide for a 5 lakh/annum insurance cover for over 10 crore poor families.
- This translates to around 50 crore beneficiaries for secondary and tertiary medical care and is touted as the world's largest public healthcare initiative.

#### **for the elderly**

- For senior citizens, tax exemption on interest earned on deposits with banks and post offices has been raised from Rs 10,000 to Rs 50,000.
- There will be no tax deducted at source on their fixed and recurring deposit.
- Also, Income-tax limit for deduction on health insurance premiums has been enhanced from Rs 30,000 to Rs 50,000.
- The limit for deduction on medical expenditure for certain critical illnesses has been raised from Rs 60,000 to Rs 80,000 for senior citizens.

#### **Miscellaneous**

- **Insurance Sector Consolidation** - A proposal to merge three public sector insurers "United India Insurance, Oriental Insurance, and National Insurance" has been mooted.
- This would lead to an enhanced scale for operation, which will better equip them to face the challenges of a growing market.
- It is also in alignment with the government's plan to consolidate in sectors such as oil and gas, and banking.
- There is not much **For Salaried Classes** - except for the re-introduction of the standard deduction of Rs. 40,000.
- This is instead of the current exemption on medical reimbursements and transport allowance and will benefit the middle income groups.
- The food subsidy has been increased for the from Rs 1.4 lakh crore in 2017-18 to Rs 1.69 lakh crore in 2018-19.
- To commemorate the 150th birth anniversary of Mahatma Gandhi, Rs 150 crore has been set aside.
- Also, it has been proposed that the emoluments of MPs may be increased based on index to inflation.

## **Union Budget: Education Sector**

### **Budgetary Provisions**

- Union budget has allocated Rs85,010 crores for the sector for 2018-19.
- This was less than 4% increase from the previous year's estimate, which was probably because the government didn't have enough fiscal room.
- The budget has intended to focus on education holistically without segmentation from pre-nursery to Class XII.
- This would imply that the government is viewing an integrationist approach by merger of several school schemes in the near future.
- 3% education cess will be replaced with a 4% education and health cess, which is expected to enhance revenue by about Rs.11,000 crores.

### **Ekalavya Schools**

- The union budget has proposed for the comprehensive expansion of the "Ekalavya Residential School" to every tribal majority block in the country.
- Asserting it's committed to provide the best quality education to the tribal children in their own environment, the budget envisions an ambitious mission.

- By 2022, it has been targeted that every block with more than 50% ST population and at least 20,000 tribal persons, will have an Ekalavya school.
- Ekalavya schools will have special facilities for preserving local art and culture, besides sports and skill development initiatives.

#### **RISE scheme**

- **Revitalising Infrastructure and Systems in Education (RISE) scheme**, was launched to revitalize the infrastructure of higher educational institutions.
- RISE scheme will be financed via a restructured “Higher Education Financing Agency (HEFA) that has been constituted as a non-bank finance company.
- HEFA was created to infuse fiscal discipline among government higher educational institutions by giving loans rather than budgetary grants.
- Its purpose is to lend low-cost funds to government higher educational institutions, and will rise Rs1 trillion for the purpose.
- While HEFA was granted a budgetary allocation of Rs250 crores in the current budget, for FY19, an allocation of Rs2,750 crores is envisioned.
- Significantly, the mechanism by which HEFA raises funds and the capacity of institutions to repay loans (taken from HEFA) needs to be closely watched.

#### **fund distribution across the sector**

- Of the total Ed-fund, school education has Rs50,000 crores, and the rest Rs35,010 crores has gone to the higher education sector.
- In the school sector, SSA has been allocated a budget of Rs26,128 crores up from Rs23,500 crores in the previous budget.
- Similarly, “Rastriya Madhyamik Shiksha Abhiyan” (RMSA) will be provided with Rs4,213 crores, up by Rs300 crores from the previous budget.
- The flagship school meal programme of Mid-day-Meal will get Rs10,500 crores in FY19, an increase of Rs500 crores from the previous budget.
- Notably, allocation for both central school chains of Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas has gone down.
- In the higher education space, the total budgetary allocation has been reduced for IITs and IIMs considerably.
- Despite its digital education push, Budget 2018 has cut fund allocation for e-learning from Rs518 crores to Rs456 crores.
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### **An Analysis to the Budget**

#### **special Features**

- This year’s Budget is the last full Budget of the Narendra Modi government.
- While electoral compulsions were expected to nudge the budget towards populism, fiscal prudence (limited borrowing) was also expected weigh high.
- The following changes were initiated in for the 1<sup>st</sup> time in the 2017 budget and have been retained in the current budget as well:
  - **Advancement**
  - Till 2016, budget was usually introduced in late February.
  - This was creating a delay in kick-starting programs on a full scale as they’ll have to operate on a temporary purse till all appropriation bills are approved.
  - As full clearance takes up at least till end April, this engulfs almost 2 months into the financial year and forces a spending scramble in the end.
  - Hence, since 2017 the budget was advanced to ensure that spending on schemes and projects kicked in early in the year to avoid these issues.
  - **Other Changes**
  - Railway budget was merged with the main budget as there has been a steady decline in its significance in value terms.
  - Also, the plan and non-plan distinction was abolished as it held no meaning when the planning commission itself was abolished.
  - The country is now diversifying from a centrally planned structure to a consensus driven policy making through NITI Aayog.

#### **economy during Modi era**

- Currently, almost 10 years after the global financial crisis, the global economy seems to be in good shape.
- But the Indian economy is expected to post a growth of only 6.5% in 2017-18, which is the lowest growth rate since the government came to power in 2014.
- This slowdown was despite low oil prices which usually boosts growth.
- But the optimism is that India’s growth is expected to be in the mid-7% range for the 2018-19 fiscal as global growth is picking up.

#### **Raise and deployment of resources**

### Disinvestment

- The fiscal year ending on March 2018 has already seen the mobilisation of an impressive Rs 1 lakh crore through disinvestment.
- A target to raise Rs 80,000 crore in 2018-19 through the sale of shares in government companies either partially or fully has been envisioned.
- There was exceptional buoyancy in direct tax revenues (18.7% growth in FY18) but there were shortfalls in GST and dividend receipts.

### Fiscal Constrains

- It was certainly hoped that the government would meet its target on fiscal deficit, which is the excess of revenue over expenditure.
- But the shortfalls in the proceeds, have forced the Finance Minister to ease off on fiscal consolidation as mandated by the FRBM Act.

### Spending

- The focus will be on infrastructure — mainly 9,000 km of national highways, and connecting interior and backward areas by rail.
- Significantly, PSUs will be bankrolling a significant proportion of the Rs. 5.97-lakh crore outlay for FY19, and the budget allotment will be 1.5 lakh crores.
- There is also spending on urban infrastructure like smart cities, water supply, and expansion of airport capacities.

### risks involved in a Fiscal slippage

- While the fiscal deficit target for 2017-18 was set at 3.2%, the government closed the fiscal at 3.5%, despite increased tax collections.
- Also, the target for the upcoming 2018-19 fiscal has been revised upwards from the initially targeted 3% to 3.3%.
- These aspects indicate higher borrowings on the government's part, which translate into higher bond rates and yields for bond investors.
- Consequently, this increases the interest rates for the general public and corporates, thereby causing a downward pressure on private investments.
- The other problem with deviating from targets is that it could pose a credibility risk for the government, which can prove costly from the investment lens.

## Farm Sector

### Marketing

- Establishing farmer markets to free farmers from the tyranny of Agricultural Produce Market Committees (APMCs) has been mooted.
- But merely Rs. 2,000-crore has been allocated for this, which is inadequate.

### MSP enhancement

- 'National Commission of Farmers' headed by scientist M.S.Swaminathan had provided an MSP formula in its 2007 report.
- BJP had promised to implement this during the 2014 election campaign, and the budget speech has merely reiterated this promise without the strategy.
- While the proposal has been made to enhance MSP for all crops to 1.5 times the production cost, no explicit fund allocation has been made.
- The scheme would require either direct government procurement or compensation for a distress sale at the market price below the MSP.

### Precedent

- Madhya Pradesh implemented a scheme called "Bhavantar Bhugtan Yojana" for the previous Kharif crop.
- Here, farmers were assured an MSP for their produce and if market prices fell below this, they were compensated the difference after the sale.
- But the scheme faced severe flank due to the multiple nefarious designs that came to the fore, which largely benefited traders who suppressed market prices.
- Mr. Jaitley has said that NITI Aayog, in consultation with the central and state governments, will devise a mechanism to address these issues.

### Terminologies Used in Budget

#### STT

- STT -Securities Transaction Tax is levied on every purchase or sale of securities that are listed on the Indian stock exchanges.
- This would include shares, derivatives or equity-oriented mutual funds units.
- STT is deducted at source at the time of the transaction itself.
- In India equity investors are required to pay a securities transaction tax of just 0.10 per cent of the trade value.

#### LTCG

- Long term capital gains taxes are levied on profits on sale of shares after a holding period of at least a year.

- In India LTCG is tax-exempt on the sale of listed securities, since 2005, It is aimed at encouraging long-term equity investments.
- 2018-2019 budget has introduced a tax of 10% on long-term capital gains

**Fiscal Deficit**

- When the government's non-borrowed receipts fall short of its entire expenditure, it has to borrow money from the public to meet the shortfall.
- The excess of total expenditure over total non-borrowed receipts is called the fiscal deficit.

**Revenue Deficit**

- The difference between revenue expenditure and revenue receipt is known as revenue deficit.
- It shows the shortfall of government's current receipts over current expenditure.

**Fiscal policy**

- It is the government actions with respect to aggregate levels of revenue and spending.
- Fiscal policy is implemented through the budget and is the primary means by which the government can influence the economy.

**Capital Budget**

- The Capital Budget consists of capital receipts and payments.
- It includes investments in shares, loans and advances granted by the central Government to State Governments, Government companies, corporations and other parties.

**Revenue Budget**

- The revenue budget consists of revenue receipts and revenue expenditures of the Government.
  - Revenue receipts are divided into tax and non-tax revenue.
1. Tax revenues constitute taxes like income tax, corporate tax, excise, customs, service and other duties that the Government levies.
  2. The non-tax revenue sources include interest on loans, dividend on investments.

**Ayushman Bharat Programme**

**In News:** The Government has announced two major initiatives in health sector, as part of newly announced Ayushman Bharat programme.

**Provisions**

- The programme is aimed at making interventions to address health holistically, in primary, secondary and tertiary care systems.
- The initiatives under the programme are:
  - Health and Wellness Centre
  - National Health Protection Scheme

**Health and Wellness Centre**

- National Health Policy, 2017 envisioned Health and Wellness Centers as the foundation of India's health system.
- Under this, 1.5 lakh centers will bring health care system closer to the homes of people.
- The centers will provide comprehensive health care, including for non-communicable diseases and maternal and child health services.
- These will also provide free essential drugs and diagnostic services.
- Contribution of private sector through CSR and philanthropic institutions in adopting these centers is also envisaged.

**National Health Protection Scheme**

- This will cover over 10 crore poor and vulnerable families.
- This would translate to around 50 crore beneficiaries.
- The scheme provides coverage of upto Rs. 5 lakh per family per year for secondary and tertiary care hospitalization.
- This is said to be the world's largest government funded health care programme.
- **Besides**, 24 new Government Medical Colleges and Hospitals will be set up, by up-grading existing district hospitals in the country.
- This would ensure that there is at least 1 Medical College for every 3 Parliamentary Constituencies.
- Also, at least 1 Government Medical College in each State of the country.
- This is to further enhance accessibility of quality medical education and health care.

**significance**

- Lakhs of families, at present, borrow or sell assets to receive inpatient treatment.
- The concern of the consequent impoverishment of poor and vulnerable families is a continuing one.
- Under the existing Rashtriya Swasthya Bima Yojana (RSBY), poor families get an annual coverage of Rs. 30,000.
- Several State governments have implemented or supplemented health protection schemes that provide varying coverage.
- The present initiatives will supplement these in taking health care to a larger mass.

- Higher health insurance cover is also seen as leading to a higher life expectancy.
- The scheme could potentially ensure enhanced productivity and wellbeing, averting wage loss and impoverishment.

### Shortfalls

- Rashtriya Swasthya Bima Yojana (RSBY) was a precursor of the National Health Protection Scheme (NHPS).
- It provided limited coverage of Rs.30,000, usually for secondary care.
- The NHPS addresses the concerns in RSBY relating to:
  - out-of-pocket expenditure (OOPE)
  - catastrophic health expenditure
  - health payment-induced poverty
- NHPS has sharply raised the health care coverage.
- However, the shortfall of **not covering outpatient care** in RSBY continues in NHPS as well.
- Notably, outpatient care accounts for the largest fraction of OOPE.
- They include medical procedures, surgeries, therapies, classes, diagnostic tests, etc. without the need for patient's overnight stay.
- The NHPS also remains **disconnected from primary health care** services.
- The transformation of sub-centers to health and wellness centers under the NHPS is welcome.
- However, the reduced allocation for the existing National Health Mission and sidelining of its urban component raises concerns.
- It signals a neglect of primary health care.

### Significance of Primary Health Care

- Primary health services need to be strong enough to **reduce the need for advanced care**.
- Less attention for primary care could lead to an **overloaded NHPS**.
- This in turn could disproportionately **drain resources** from the health budget.
- This could lead to further neglect of primary care and public hospitals.
- Notably, even now these are not adequately equipped to compete with corporate hospitals in the *strategic purchasing* arena.
- This shortfall in health care policy is potential of ruining the **public sector as a health care provider**.

### financial implications

- Unlike a private insurance where an individual/employer pays the premium, in NHPS the government pays most of the money.
- A large number of people subscribe to an insurance scheme.
- However, only a small fraction of them will be hospitalised in any given year.
- Given these, the NHPS is expected to be a financially viable option.
- However, it will need more than the presently allocated Rs.2,000 crore.
- Around Rs.5,000-6,000 crore is required to sustain it in the first year and Rs.10,000-12,000 crore annually as it scales up.
- It will draw additional resources from the Health and Education Cess.
- It will also depend on funding from States to boost the Central allocation.

### role of States

- The State governments have the main responsibility of **health service delivery**.
- The NHPS needs a buy-in from the States, which have to contribute **40% of the funding**.
- The **National Health Policy (NHP)** asks the States to raise their allocation for health to over 8% of the total State budget by 2020.
- The NHP proposes the centre to raise public health expenditure to 2.5% of GDP by 2025.
- The Central Budget has not signaled a movement towards this goal.
- Given this, the states taking actions on the NHP goal is highly uncertain.
- Notably, the goal requires many of the States to nearly double their health spending.
- Even with the low cost coverage of the RSBY, several States opted out.
- Some decided to fund their own State-specific health insurance programmes, with distinctive political branding.
- Given this, the states merging their programs with the NHPS seem doubtful.
- The choice of whether to administer NHPS through a trust or an insurance company will be left to individual States.

### Way Forward

- Primary health services and public hospitals should be proactively strengthened.
- **Capacity building** - The NHPS will pay for the hospitalization costs of its beneficiaries.
- This will be done through '**strategic purchasing**'.
- It refers to allocation of pooled financial resources to public and private hospitals who are healthcare providers.
- This calls for a well-defined **list of conditions** including:
  - adoption of standard clinical guidelines for diagnostic tests
  - treatments suitable for different disorders

- setting and monitoring of cost and quality standards
- measuring health outcomes and cost-effectiveness
- Both Central and State health agencies or their intermediaries will have to develop their respective capacities.
- This is essential for competent purchasing of services from a diverse group of providers.
- Otherwise, there is a possibility for the hospitals to undertake unnecessary tests and treatments to tap the generous coverage.
- **Federal** - In a federal polity, an all-India alignment around the NHPS requires a high level of cooperative federalism.
- This is a prerequisite to make the scheme viable and ensure portability of coverage as people cross State borders.

## **Long Term Capital Gains Tax**

**in news:** Stock markets have reacted adversely to the proposed Long-Term Capital Gains Tax (LTCG) on securities.  
**LTCG**

- Any profit from the sale of a capital asset is deemed as 'capital gains'.
- A capital asset is officially defined as any kind of property held by an assessee, excluding goods held as stock-in-trade, agricultural land and personal effects.
- If an asset is held for less than 36 months, any gain arising from selling it is treated as a short-term capital gain (STCG).
- If an asset is held for 36 months or more, any gain arising from selling it is treated as a 'long-term' capital gain (LTCG).
- Shares and equity mutual funds alone enjoy a special dispensation which is, holding period of 12 months or more qualifies as 'long-term' in this case.

### **current scenario**

- Prior to the budget, long-term capital gains arising from the transfer of long-term capital assets, which are held as equity shares is exempt from taxation.
- However, transactions in such long-term capital assets are liable to securities transaction tax (STT).
- This regime is seen as inherently biased against manufacturing and has encouraged diversion of investment to financial assets.
- It has also led to significant erosion in the tax base, which has been further compounded by abusive use of tax arbitrage due to ambiguities in exemptions.

### **new proposal**

- The withdrawal of the exemption to LTCG from April 1, has been proposed in the budget.
- Hence, the long-term capital gains arising from transfer of long-term capital assets like such as shares or share-oriented products, exceeding Rs. 1 lakh will be taxed at a concessional rate of 10%.
- The short-term capital gains tax at 15% will continue for transfer of shares within 1 year.
- **The Application** - The new tax is applied if the assets are held for a minimum period of 1 year from the date of acquisition.
- Long-term capital gains will be computed by deducting the **cost of acquisition** from the full value of consideration on transfer of the capital asset.
- The proposed tax applies to the following types of equity capital:
  1. Equity Shares in a company listed on a recognised stock exchange
  2. Unit of an equity oriented fund
  3. Unit of a business trust

### **Grandfathering' Clause**

- It is the exemption granted to existing investors or gains made by them before the new tax law comes into force.
- The government said that gains from shares or equity mutual funds made till January 31, will be grandfathered/exempted. There will be no LTCG tax on notional profit in shares till then.

### **concerns**

- **Inflation Indexing** - Inflation indexation is a technique to adjust the the cost of acquisition to present level of inflation.
- This will convert the profit earned by transaction of long term capital assets in real terms and safeguards the purchasing power of the public.
- But in the current proposal, Inflation indexation of the cost of acquisition would not be available for computing LTCG tax.
- This has been provided in the proposal and has been subsequently clarified.
- **Continuation of STT** - The STT is made to continue.
- STT is paid at the time of transaction.
- But it is to be noted that the STT was introduced as an alternative to LTCG tax on equities.
- So retaining STT is a bigger shock for investors.
- Logically there should only be on tax.

## **Budget: Customs Duty**

**In News:** The recent budget proposed an increase in customs duty on a range of products, particularly in the labour-intensive sectors.

### **Rationale**

- **GST** - Addressing GST and the associated hurdles in the manufacturing sector is one of the reasons for the tariff move.
- **Imports** - More importantly, it is to discourage imports, mostly from China and other Asian countries.
- Some items in tariffs increases are certainly due to the threat of flooding of cheap Chinese goods, affecting India's small industries.
- This includes mobile phones (15 to 20%), adapters and phone chargers (nil to 10%), silk fabrics (10 to 20%), etc.
- **Job Loss** - The move is also an effort to address the crisis over jobs lost due to Free Trade Agreement-related imports over time.
- The draft industrial policy 2017 finds mention in this context.
- The policy observes that a "duty structure that favours import of final products can act as disincentives for domestic manufacturers".

### **Implication:**

- The tariff measure is expected to boost local manufacturing and incentivize domestic value addition.
- The move, in particular, will facilitate and take forward the Make in India programme.
- This, in turn, is expected to promote creation of more jobs in the country.
- The job opportunities in turn will benefit the youth and contribute towards the overall growth of the economy.

### **Possible Challenges**

- India could be dragged to WTO over the recent tariff increases.
- The imposition of higher duties on electronics goods, including phones, goes against WTO's Information Technology Agreement.
- Under this 1996 agreement, India is required to eliminate tariffs on some electronics goods and IT products, including mobile phones.
- However, India maintains that IT and telecom technologies have evolved with new applications and equipment.
- These were neither existent nor even conceived at the time of signing the ITA-I in December 1996.
- Also, India is not undertaking any fresh commitments under ITA-2 agreement that came into force more than two years ago.

### **Way Forward**

- India's recent move seems to be reflecting the protectionist climate prevailing world over.
- Investment in physical and social infrastructure would be better options than protectionism.
- The way out is to promote industry through setting up industrial zones which will reduce the logistics costs.

## **Fiscal Deficit Constrains for India**

### **Context:**

- India's fiscal deficit is growing much than expected due to Lower revenue realization and the rise in expenditure.
- Measures needs to be taken to achieve the fiscal deficit target of 3.3% of the GDP for 2018-19 FY.

### **Government's Measures**

- Union government had inherited a fiscal deficit of 4.4 % of GDP in FY14 and it was steadily brought it down to 3.5 % in 2017.
- Sharp fall in oil prices and rapid economic growth helped the government to reduce the fiscal deficit between years 2014-2017.
- In budget 2018-19 the fiscal deficit target has been set at 3.3% and the target of 3% has been postponed to FY 2020-21.

### **Challenges**

- India's fiscal deficit till the end of November 2017 has already breached the target and touched 112 per cent of the budget estimate for 2017-18 due to higher expenditure.
- The present situation is more difficult as growth faltered in FY17 and the first half of FY18 and oil prices started rising.
- There is a revenue shortfall on account of lower tax collection under the GST and MSMEs are yet to picking up.
- The government has a plan to raise additional market borrowings of Rs 50,000 crore through dated government securities, as a whole this may have much consequences on the fiscal targets.

### **Consequences**

- Higher government expenditure will push up demand and generate more money in the economy which may lead to higher inflation.
- The government in order to repay its debt would likely to levy more taxes in the future.



- Higher fiscal deficit also leaves little room for interest rate cuts which would affect private investments from taking off.
- Borrowing costs may remain high for consumers and industry/companies which might stall economic growth

#### Way Forward

- Fiscal consolidation is important from the point of view of the credibility of policy-making.
- Though there is an improvement in the tax to GDP ratio after the anti-tax evasion steps, gains from tax revenues was lost on account of non-tax revenues.
- Framing a proper asset monetisation plan will help a lot in generating non-tax revenues as the government is among the largest owners of property and immovable assets in the world.
- Thus the non-tax revenue needs to be boosted by a structured long term plan which will help in outlining the course of action and help provide predictability to the earnings from non-tax revenues.
- The government needs to have a strong hold on its divestment and non-tax revenue targets to achieve the fiscal deficit target of 3.3%.

#### Revenue receipts

- Revenue receipts are divided into tax and non-tax revenue.
1. Tax revenues constitute taxes like income tax, corporate tax, excise, customs, service and other duties that the Government levies.
  2. The non-tax revenue sources include interest on loans, dividend on investments.

#### Sources of non-tax revenue receipts

- These are not generated by taxing the public, it will be generated from profit making public enterprises (PSUs).
- Interest which the Government earns on the money lent by it to external or internal borrowers.
- Thus this revenue receipts may be in foreign currency as well as Indian Rupees.
- The money which the government receives out of its fiscal services such as stamp printing, currency printing, medal printing etc.
- Money which the Government earns from its "General Services" such as power distribution, irrigation, banking services, insurance, and community services etc. which make the part of the Government business.
- Money which the government accrues as fees, fines, penalties etc. also comes under non tax receipts of the government.

## INTERNATIONAL AFFAIRS

### India's stand on regional co-operations

#### Context:

- India's regionalism efforts remain largely un-coordinated to towards involving into economic co-operations.
- India needs to involve in such co-operations to take proactive stance in trade agreements.

#### Indian regional co-operations

- **RCEP** -Regional Comprehensive Economic Partnership is a proposed free trade agreement between the ten member states of the ASEAN and the six states with which ASEAN has existing free trade agreements.
- **BIMSTEC** - Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation is an international organisation involving a group of countries in South Asia and South East Asia.
- BIMSTEC nations are Bangladesh, India, Myanmar, Sri Lanka, Thailand, Bhutan and Nepal.
- **SAARC** -South Asian Association for Regional Cooperation is an organisations of South Asian countries.
- **BRICS** - It is an Organisation of large economies of NICs (Newly industrialized country) namely Brazil, Russia, China, India, South Africa.
- Apart from these co-operations India also invested a lot of negotiating energy in FTAs with industrialised economies like Japan and the European Union (EU).

#### India's present stand on economic co-operations

- India's agreements follow the old model of trade negotiating strategy, i.e. focus on tariffs and try to keep the sectors that are most sensitive out of the tariff reduction schedule.
- India is not taking any deeper engagement on technical standards and related barriers of trade facilitation, or on the regulatory aspects.

- Issues that define effective market access related to integrated global economy are not being a part of India's agreements.
- Recently India shied away from the Trans-Pacific Partnership (TPP) feeling it could not meet its global standards.
- It is also unwilling and totally ill-prepared to join the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)
- India also making a slow progress in the Regional Comprehensive Economic Partnership (RCEP).
- India and Singapore are deadlocked in RCEP on the issue of liberalising the movement of natural persons.

#### India need to concentrate

- India need to realize the consensus approach to trade negotiations are over, and the world is moving towards Plurilaterals agreements involving more different nations.
- Recently US taken a stand to get back to TPP, India need to make use of this opportunity to get into an economic partnership which involves 40% of global trade.
- Apart from participating various multilateral co-operations India must keep its strong hold on its policies and agreements by being an active participant in such co-operations.
- India to be major global player of trade, need to eliminate tariffs and other barriers to trade and investment.
- India need to move swiftly on trade in services, competition policy, trade facilitation, investment policy, etc.
- Indian to promote trade must open its borders to economic migrants and goods and services from its regional nations.

<p>TPP</p>	<ul style="list-style-type: none"> <li>• In 2005 the Trans-Pacific Strategic Economic Partnership comprising four countries - Brunei, Chile, New Zealand and Singapore - was signed.</li> <li>• That pact was then expanded and became US-led during the Obama administration.</li> <li>• In 2017, US withdraw from the TPP which made it not enter into force.</li> </ul>
<p>CPTPP</p>	<ul style="list-style-type: none"> <li>• It is abbreviated as Comprehensive and Progressive Agreement for Trans-Pacific Partnership.</li> <li>• The CPTPP will incorporate the original TPP agreement, with suspension of a limited number of provisions by maintaining the high standard of the agreement.</li> <li>• CPTPP comprising the 11 original members of TPP, excluding the US.</li> <li>• The nations are Japan, Australia, New Zealand, Brunei, Singapore, Malaysia, Canada, Peru, Chile, Mexico, and Vietnam.</li> <li>• CPTPP will be signed in Chile in March 2018.</li> </ul>

### Constitutional Crisis in Maldives

#### In News:

- The Maldivian Supreme Court has cancelled the imprisonment of the deposed former president and 8 other opposition leaders.
- While this opens up the avenue for them to contest the upcoming elections, the government has been resorting to repressive tactics.

#### Contour of the current Maldivian Polity

- In the 2013 election, the incumbent President Abdulla Yameen defeated Mohammad Nasheed who was deposed from presidency in 2012 by a coup.
- While the results of the election are still contested, Yameen has ruled the island since then with an authoritarian streak.
- Meanwhile, Nasheed was sentenced in 2015 to 13 years in prison for charges of terrorism, and has remained in exile all these years to avoid arrest.
- Recently, the Supreme Court cancelled his imprisonment and that of eight other political leaders, which the current ruling dispensation hasn't liked.
- The order also reinstated 12 parliamentarians who were disqualified last year also asked the government to convene the parliament (Majlis).
- As Yameen hasn't complied with the order thus far, this pits his government directly against the judiciary, polity and sections of the bureaucracy.

#### Violations by the government

- The government has openly refusal to cancel the imprisonment of the nine leaders, most of whom formed the core of the previous Nasheed Government.
- The President has also refused to allow the Majlis to meet, which has led to the resignation of its Secretary General.
- Contrarily, the government sent in the army to stop lawmakers from entering the premises, besides arresting two parliamentarians at the airport.
- Several officials, including two police chiefs and the prison chief have resigned or been sacked, as they've tended to comply with the court directives.
- The Attorney General has now termed the court directives as "illegal orders" which can't be adhered to by the executive.

- Maldives is clearly in the midst of a constitutional crisis due to stifling of the opposition, with less than a year away for the next general election.

#### **International reactions**

- India has joined the U.S., the European Union and several other countries in calling for Mr. Yameen to carry out the Supreme Court's order.
- But notably, India's clout over the ruling Maldivian dispensation has been on the wane ever since the Nasheed was deposed.
- Compounding this is the reality that SAARC has become dysfunctional and Maldives has quit the "British Commonwealth".
- It will require concerted action from the international community to persuade Mr. Yameen to steer the Maldives out of this crisis amicably without coercion.
- Ensuring the fairness of the upcoming elections, with an equal playing field for the opposition and other dissenting parties is the only way out.

#### **Fallouts**

- The recently political storm started by the Supreme Court's surprise verdict to release some opposition leaders has been spiralling out of control.
- The government has been openly refusing to comply and has started repressive action against opposing voices.
- **Emergency** - President Abdulla's Yameen declared a state of emergency in Maldives, which is the 2<sup>nd</sup> such declaration since he came to power in 2013.
- The 1<sup>st</sup> was in 2015, when an alleged attempt on Yameen's life seemed to have warranted such a declaration.
- The president has clarified that while certain rights will be restricted, general movements, services and businesses will not be affected.
- **Gayoom's Arrest** - Former President Moumoon Abdul Gayoom, who reigned for 30 years till democracy was established in 2008, was also arrested.
- Notably, 80 year old Gayoom is the half-brother of Yameen and of late, he has openly sided with the dissenting opposition for toppling the government.
- Also, troops stormed the Supreme Court premises and taken procession.
- **Parliament Suspended** - The President is required to inform the Parliament about the declaration of emergency within two days.
- But to circumvent this, Yameen has suspended the parliament indefinitely.
- Notably, as the Supreme Court had also restored 12 MPs who had defected from Mr. Yameen's party, the majority is effectively with the opposition.
- This thereby increases the vulnerability of the president to be subjected to impeachment in the 85-member parliament.

#### **options for India**

- **Histroic Prespective** - India has committed itself to the principle of "non-intervention" in the internal affairs of other countries.
- It is also strongly against external strings in its domestic politics and has regularly criticised western powers for interventions in developing countries.
- But despite this, India has made multiple interventions in its neighbourhood when pressing concerns have called for such action.
- The Bangladesh liberation of 1971, Sri Lankan intervention in the late 1980s, and more recently, in shaping the Nepali constitution are some examples.
- **Maldivian Case** - When the former president Nasheed was ousted from office in a coup in 2012, India had backed him strongly.
- But the subsequent rise of Nasheed's nemesis and the current president Yameen, India was forced to recalibrate its stands.
- This was partly due to Yameen's strong Islamic diplomacy with the Arab world and his ties with China which is backed by high-profile infrastructure projects.
- **Current Situation** - Yameen is currently looking towards China to secure his position, despite mounting international pressure.
- Hence, India has the option to either remain neutral or put its weight delicately behind the opposition to rally for a regime change.
- While the former is the safer option, an intervention can be beneficial but would inherently invite the ire of China and holds with it the risk of failure.
- India needs to make its move after weighing all the stakes involved.

### **ENVIRONMENTAL AFFAIRS**

#### **Restructured National Bamboo Mission**

**Context:**The proposed “Restructured National Bamboo Mission”, can capitalise on the immense bamboo potential for the north-eastern states.

### **Bamboo Industry in India**

- Bamboo is a multi-utility grass and more than 300 ethnic groups in the northeast have traditionally been using it as food, housing and other needs.
- It is essentially a type of grass, but was classified as a tree in India for over 90 years till recently.
- This prevented the northeast, which grows 67% of India’s bamboo, from exploiting it commercially until recently.
- While forest bamboo was out of bounce, till recently, the lack of policy support also didn’t allowed commercial use of non-forest bamboo.
- Notably, China is the only country with a richer bamboo genetic resource than the north-east and exports a significant amount of bamboo.

### **Present scenario**

- Bamboo’s commercial journey began when it was struck off the list of trees by amending the Indian Forest Act last year.
- The recent budget has allocated of Rs. 1,290 crores for a restructured National Bamboo Mission (NBM).
- This has raised hopes for a range of bamboo-based industries — from food processing to construction and the holistic development of bamboo industry.
- But the restructured NBM needs to be more focussed on value-chain management and value-addition of bamboo at the community level.
- Such an approach is what will bring more income to the bamboo farmers and bamboo processors.

### **Controversies**

- Flowering of bamboo happens every 50-55 years, and this leads to dramatic increase in the population of rats that destroy crops and triggers famines.
- Notably, once such famine (Matuam famine) in 1966 led to the creation of the Mizo National Front and a subsequent violent uprising.
- There have also been instances of bamboo cartels shedding blood while competing for limited commercial opportunities.
- But Arunachal Pradesh and Manipur governments have signed agreements for supplying bamboo to the upcoming bio-refinery at Numaligarh.
- Such initiatives will offer a permanent source of revenue generation to bamboo growers and enhance commercial options for producers and marketers.

## **Addressing Solid Waste Management Constrains in India**

- **Context:**India is facing a serious solid waste management problem due to unregulated landfills and incineration.
- Recycling, composting and Bio-methanation will address the solid waste management constrains.

### **Solid waste management in India**

- **Landfills** - In India Landfills are neither scientifically engineered nor scientifically closed, they serve as open dumpsites.
- The discarded plastics in the mixed waste are a major contributor to dumpsite fires.
- Disposal of mixed waste including biodegradable matter in this landfills under anaerobic conditions generate methane and leachate.
- Methane and leachate causes global warming and unhealthy living conditions respectively.
- **Incineration** - Incineration of solid waste generate (GHGs) is not carried under out with state of the art features.
- This generates carbon dioxide, methane, and small amounts of nitrous oxide leading to global warming.
- **Collection and segregation** - The biodegradable waste is being mixed with other waste at the point where waste is generated.
- This increases the volume that has to be transported as the waste is hauled all the way to the landfill sites.
- The increased fuel usage in transportation results in more emissions.

### **alternative measures**

- **Composting** - The volume of waste sent to the landfill sites can be reduced if biodegradable waste is processed locally through aerobic decomposition with the help of microbes or earthworms (vermicomposting) to produce compost or organic fertiliser.
- Compost helps store carbon back in the soil, improves moisture retention in the soil usage, it also reduces the need for chemical fertilisers.
- **Bio-Methanation** - An alternative to composting for biodegradable waste is bio methanation or anaerobic decomposition.
- Bio methanation generates biogas which is a substitute for fossil fuel and produces slurry which is an excellent organic fertiliser, both helping to mitigate global warming.
- Local processing also means that bio methanation saves on transportation.
- **Recycling** - Recycling of waste reduces GHG emissions because the energy required to manufacture a product using virgin materials is higher than when using recycled materials.

- Recycling requires up to 50 per cent less energy compared to production of paper based on wood pulp, and it also saves trees from being cut.
- **Controlled Incineration** - Waste-to-Energy technologies can be implemented with the help of controlled incineration or gasification from segregated waste.
- Already established Indian incineration plants can install appropriate filters in incineration plants.

## BIO/ HEALTH ISSUES

### **Poultry Driven Anti-Microbial Resistance**

- **Context:** Last-hope antibiotics like “colistin” are being used indiscriminately by the Indian poultry industry to enhance chicken weight.
- This is leading to increased drug resistance and is presently completely legal as regulations are very lax in this domain.

#### **Colistin**

- Medicines and antibiotics are given to the birds to protect them from diseases or to make them gain weight faster, to enhance productivity.
- One drug typically given this way is “Colistin”, which is used to treat patients critically ill with infections that have become resistant to multiple drugs.
- As such drugs are critical to humans, WHO has called restricting their use for animal treatment and demanded a ban on using them as growth promoters.
- Their continued use in farming as growth enhancers increases the chances of development of bacterial resistance and will render them useless to patients.
- **The Market** - Yet, about 2800 tonnes of veterinary colistin were shipped to countries, including - Vietnam, India, South Korea and Russia, in 2016.
- The total is likely to be higher as the product may be shipped under its brand name rather than being labelled outright as colistin.
- Notably, India imports more than 150 tonnes of colistin along with some local production, but U.K. uses less than a tonne a year of colistin in agriculture.
- **Lax Regulations** - In India, at least five animal pharmaceutical companies are openly advertising products containing colistin as growth promoters.
- Companies selling them argue that their products are therapeutic in nature although mild doses can be used at a preventive level (which increases weight).
- While most sellers claim that they don't encourage indiscriminate use, branded colistin is easily procurable in India, without even a prescription.
- This is completely legal as there is no regulation like in Europe, where colistin can be accessed only on a prescribed by a vet for the treatment of sick animals.

#### **What is the science behind?**

- A colistin-resistant gene was discovered in Chinese pigs in 2015.
- This gene (*mcr-1*) was found to be transferable within and between bacterial species, which implies that microbes could just acquire from elsewhere.
- This is a lot easier and faster way to develop resistance than developing resistance individually, which will complicate disease combat efforts.
- **The spread** - Colistin-resistance is contaminating the meat, spreading on the chicken farms, in the surrounding air, to the farm workers and flies etc...
- Significantly, *mcr* variants have already been detected in bacteria from animals and humans in more than 30 countries, spanning four continents.
- These revelations have created worldwide panic in the medical community as many multi-drug resistant strands have become very prominent lately.
- **The consequence** - Drug resistance is a big threat to global health, food security, and development and makes multiple drugs ineffective.
- It renders medical practitioners with no treatment options.
- Currently, the problem is thought to kill 0.7 million people annually worldwide, which is expected to rise to 10 million by 2050 if no action is taken.
- Also, common procedures like joint replacements, Caesarean sections, organ transplants and chemotherapy could also become too risky to carry out.
- **The Solution** - Colistin should be thought of and treated as an environmental toxin and its export world over as chicken feed, needs to be curtailed.

- Notably, some have even vouched for a worldwide ban on not just colistin but all antibiotics as growth promoters.

#### Indian scenario

- **Drug Resistance** - India is the epicentre of the global drug resistance crisis, due to a combination of factors conducive for superbug development.
- Unregulated sale of drugs for both human and animal use, unsanitary practices, burgeoning population, and improper drains are a few to name.
- Significantly, some of the pharmaceutical companies have also been found to be following substandard sewage treatment practices for their drug excretes.
- **Poultry Sector** - As it is religiously neutral, chicken meat is the favoured non-veg dish in India and the local poultry industry is booming.
- Produced has doubled between 2003 and 2013 and majority of poultry is now produced by commercial farms, that are contracted to major companies.
- Meat from supermarkets in the country has been found to contained residues of six antibiotics, suggesting they were being used liberally on farms.
- Experts predict the rising demand for protein will enhance demand for chicken, which will consequently also see enhanced antibiotics in the food.
- Notably, the main problem is with the mass medicating of livestock with antibiotics as preventives, which the WHO has already sought to ban.

#### way forward

- Using antibiotics as growth promoters has already been banned in the EU and U.S. in 2017 and India too needs to follow suit immediately.
- “National Action Plan on Anti-Microbial Resistance” in 2017, did ban the using antibiotics as growth promoters, but no follow up regulatory action has come.
- Notably, it has been observed that Indian farmers use antibiotics as a substitute for maintaining nutritious and hygienic growth environments.
- While the reason for such attitudes is the perception that such an approach is cheaper than the cost of maintenance, which is actually not correct.
- Apart from mere regulations, as consumer pressure and awareness holds key to drive in a large scale change in, the masses need to be made aware.

### Suspicious over HPV vaccine

**Context:** Globally there are reliability debates over the efficiency of HPV vaccine.

- India has planned introduced the vaccine in its universal immunization program, despite small risks of the vaccine.

#### HPV

- Human papillomaviruses (HPVs) which can be easily spread through direct sexual contact, from the skin and mucous membranes of infected people to the skin and mucous membranes of their partners.
- HPV infection is so common, most people get HPV infections shortly after becoming sexually active for the first time.
- Low-risk HPVs can cause skin warts on or around the genitals and anus and recurrent respiratory problems.
- High-risk HPVs, which can cause cancer Cervical cancer, Anal cancer, Oropharyngeal cancers (cancers of the middle part of the throat)
- Most high-risk HPV infections occur without any symptoms, go away within 1 to 2 years, and do not cause cancer.
- Persistent infections with high-risk HPV types can lead to cell changes that, if untreated, may progress to cancer.
- HPV vaccination can reduce the risk of infection by the HPV types targeted by the vaccine.

#### issues with the HPV vaccine

- There are suspicions over the HPV vaccine that they may be causing a trio of rare illnesses such as
  1. Postural Orthostatic Tachycardia Syndrome (POTS) - It is an abnormal increase in heart rate when a patient stands up.
  2. Complex Regional Pain Syndrome (CRPS) - It is unexplained, severe pain in a limb.
  3. Chronic Fatigue Syndrome (CFS) - It is debilitating tiredness that leaves patients unable to function normally.
- All three are poorly understood conditions and often go undiagnosed.
- POTS and CFS sufferers may have other symptoms like nausea, sleep disturbances, and chronic pain.
- It is important to note that these are only suspicions, there is no evidence that these illnesses are caused by the vaccine.
- On the other hand, even if POTS and CRPS are shown to be caused by the vaccine, the incidence in vaccine recipients is likely to be very low.

#### India's Stand over the vaccine

- India has the largest burden of cervical cancer in the world and about 70,000 women die of it each year.
- Around 70% of these cases are caused by infections from HPV strains, which the vaccines prevent.

- So India is introducing HPV vaccines in its Universal Immunisation Programme (UIP), by which millions of girls in India aged between 9 and 14 years will get the vaccines for free.
- Given the rarity of these side effects and high burden of disease, India has taken the decision to go ahead with the vaccine.
- India senses that there is a small risk of the vaccine being linked to the syndromes, but the benefits outweigh the risks.

### **Antibiotic Abuse**

**In News:** A London based survey has found out that nearly 64% of fixed-dose combination antibiotics in the Indian market didn't have approval.

#### **antibiotics**

- An antibiotic is given for the treatment of an infection caused by bacteria. It is not effective against viruses.
- Antibiotics are powerful medicines that fight certain bacteria either by stopping them from reproducing or destroying them.
- There is concern worldwide that antibiotics are being overused which is contributing towards the growing number of bacterial infections that are becoming resistant to antibacterial medications.

#### **findings of the survey**

- An analysis of the Indian antibiotics market was conducted by researchers at the Queen Mary University in London.
- The study analyses regulatory records pertaining to fixed-dose combinations (FDCs) and single-drug formulations (SDF) antibiotics sold in India between 2007 and 2012.
- It finds that 64% of the 118 FDCs available under 3,307 brand names made by 476 companies and 7% of 86 SDFs analysed did not have approval from the drug-quality regulator.
- In a study of 88,600 infants in Delhi it was found that 14% of the babies admitted to the ICU within 72 hours of birth had infections that were hospital acquired, and therefore had highly drug-resistant strains of pathogen.

#### **concerns of antibiotic abuse in India**

- Many unapproved antibiotics are also over-prescribed in India, in a scenario where drug quality is already suspect, unapproved drugs mean a worsening of resistance implications.
- The resistance to antibiotics kills around 700,000 globally, by 2050, the figure could reach 10 million, of which 2 million will be Indians.
- India has one of the highest antibiotics consumption figure globally which means resistance to antibiotics doubles down as a threat for the country.
- The problem of questionable drugs standards is compounded by the scale of drug/antibiotic abuse in India.

#### **Way Forward**

- In India the Central Drugs Standard Control Organization is the regulatory body, selling of unapproved drugs is illegal, and yet, Indian companies continued to be in flagrant violation the policy.
- Rampant self-medication in India need to be treated by matching the prescriptions to volumes of antibiotics sold.
- Government should also consider countering the drugs which are commonly abused antibiotics in the market.
- Cracking down the sales of unapproved antibiotics will take them out of circulation and of prescriptions

## **MISCELLANEOUS**

### **PyeongChang Winter Games**

#### **In News:**

- Winter Olympics will begin shortly at PyeongChang in South Korea.
- The official Russian Ban and the North Korea – South Korea Bonhomie are two of the most significant aspects to look out for it the event.

#### **Russian Doping Scandal**

- The alleged state sponsored doping, first surfaced in the aftermath of the 2014 Winter Olympics in Sochi, Russia, in which Russia finished as the table topper.
- Consequently, International Olympic Association (IOC) banned Russia from officially participating in international events in 2015.

- In the current games too, the ban was retained, as investigations are pointing to a confirmed “systemic manipulation of the anti-doping rules”.
- However, clean Russian athletes have been allowed to compete as neutrals under the “Olympic Athletes from Russia” (OAR) banner at PyeongChang .
- **Disagreements** – OAR route for Russian athletes hasn’t gone down well with many countries despite the IOC assurances that they’ll be vetted carefully.
- Notably, OAR squad is expected to consist of more than 150 members and will form one of the largest contingents at the Games.
- Hence, although there will be no place for the Russian flag and anthem, the mere size of the squad makes the ‘ban’ look like a mockery.
- Further, Russian athletes might even be allowed to march under their own flag at the closing ceremony if they comply to all IOC conditions during the games.
- This episode has in fact fueled the notion that IOC is incapable of effectively punishing a sporting superpower like Russia.
- **Court Ruling** - Recently, the “Court of Arbitration for Sport” overturned lifetime bans on 28 Russian athletes which was imposed by the IOC.
- IOC had banned them after concluding investigations against their role in the 2014 Sochi episode, and has expressed its displeasure on the recent verdict.
- Several countries have also expressed frustration at the decision, noting that it “may have a serious impact on the future fight against doping”.

#### **Shaping Detente in the Korean Peninsula**

- PyeongChang is expected to help in easing tensions between the North and South Korea through people to people contact.
- Notably, the two nations will march together at the opening ceremony under a flag representing a unified Korea and also field a joint Ice Hockey team.
- There are questions over how the two sets of players will get along to form a winning proportion, but the political significance far outweighs the trophy.
- This will provide the historic opportunity for the people of both countries to cheer their side together, which can contribute to building strong bonds.
- North Korea has agreed to field 22 athletes in all and is expected to send hundreds of delegates and cheerleaders across the border.

### **IN-SHORT**

#### **Medaram Jatara**

- Medaram Jatara is a festival of tribal origin in Telangana.
- It is a festival of honouring the goddesses Sarakka celebrated in the state of Telangana.
- The festival is held every two years at in Medaram Village in the heart of the thick forests of Jayashankar Bhupalpally district.
- The festival honors tribal folk goddess Sammakka and Saralamma.
- It has become a major pilgrimage in the recent decade and is believed to attract the largest number of devotees in the country after Kumbha Mela.

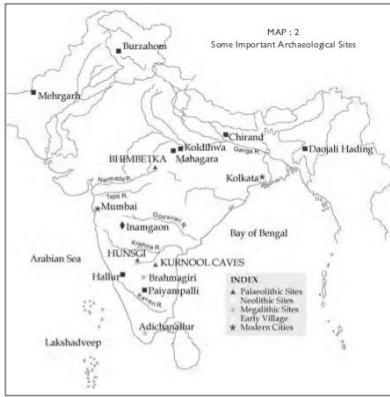
#### **Indus script**

- Scientists at The Institute of Mathematical Sciences have figured out a way to computationally estimate whether a language is written from left to right or otherwise.
- As a part of the study, they found that the Indus script was written from right to left.
- However in some long seals the Boustrophedon method of writing was adopted.
- Boustrophedon writing is the way of writing in the reverse direction in alternate line.

#### **Paleolithic sites**

- The study of over 7,200 stone artefacts collected from the archaeological site at **Attirampakkam in the Kortallayar river basin (Tamilnadu)** throws light over the transition period from lower to middle Paleolithic period
- The Paleolithic/Old stone age period extends from 2.6 million years ago to 10000 BC
- The period is divided into Lower, Middle and Upper phases





### Res extra commercium

- It is Latin phrase meaning ‘outside commerce’.
- The doctrine dates back to the Roman period.
- If applied, the doctrine gives authorities more leeway to impose restrictions.
- e.g The Supreme Court’s application of the doctrine to alcohol in the 1970s paved the way for at least two Indian states to ban it completely and allowed courts to take a stricter stance while regulating liquor.
- The Indian government is now pushing the Supreme Court to use this doctrine to the tobacco industry’s legal right to trade.
- With an aim to curb tobacco consumption, the government has recently raised tobacco taxes, started smoking cessation campaigns and introduced laws requiring covering most of the package in health warnings.
- But a court in Karnataka recently quashed the labelling rules holding them as “unreasonable” and as violative of the right to trade.
- So the government is pushing the courts to use the doctrine to deter tobacco companies from challenging tough new regulations.

### Khelo India Program

- First Khelo India school games were declared open at New Delhi.
- The program focuses on the entire sport ecosystem in country
- It includes infrastructure, community sports, talent identification, coaching for excellence, competition structure and sports economy.
- Salient features of the program are,
  1. Pan Indian Sports Scholarship scheme
  2. long-term athlete development pathway would be made available to gifted and talented youngsters
  3. promote 20 universities across the country as hubs of sporting excellence.

### Quantum Dots

- Quantum dots can lead to a new generation of high definition technology.
- It will pave the way for brighter, lighter and more energy efficient TVs and smart devices.
- The Science Advances journal says, when quantum dots are clustered together they are more fluorescent, providing a wide variety of colours.
- Quantum dots are tiny particles or nanocrystals of a semiconducting material with diameters in the range of 2-10 nanometres.
- Quantum dots display unique electronic properties, intermediate between those of bulk semiconductors and discrete molecules.

### ‘Adopt A Heritage’ project

- During the closing ceremony of Bharat Parv, under “Adopt a Heritage: ApniDharohar, ApniPehchaan” letter of intent was given to agencies.
- Private sector companies, Public sector companies and individuals will act as ‘Monument Mitras’ for the development of tourist amenities
- Project is a key initiative of Ministry of Tourism in close collaboration with Ministry of Culture and Archeological Survey of India (ASI)

### Global Democracy Index

- India has slipped to 42nd place on an annual Global Democracy Index.
- India has moved down from 32nd place last year and remains classified among “flawed democracies”
- The index is compiled by the UK based Economic Intelligence Unit(EIU)
- The index ranks on the basis of five categories: electoral process and pluralism, civil liberties, the functioning of government, political participation and political culture.

### Indian Renewable Energy Development Agency Limited (IREDA)

- IREDA and Rewa Ultra Mega Solar Limited signed an agreement for financing the shared infrastructure of two large Solar Parks in Madhya Pradesh

- IREDA is a Mini Ratna Enterprise under the administrative control of Ministry of New and Renewable Energy (MNRE).
- engaged in promoting, developing and extending financial assistance for setting up projects relating to new and renewable sources of energy
- The motto of the organisation is : “ENERGY FOR EVER”

#### **Technical Education Quality Improvement Project (TEQIP-III)**

- MHRD started the Technical Education Quality Improvement Project (TEQIP-III) for improving the quality of engineering graduates
- The focus is on the most-backward states like Jharkhand, Chhattisgarh, Bihar, North-East, Rajasthan, MP etc.
- The measures include:
  1. Institution based: accreditation of the courses through NBA, governance reforms, improving the processes, digital initiatives, securing autonomy for the colleges.
  2. Student based: improving the quality of teaching, teacher training, equipping the class rooms, revision of syllabus, etc.,

#### **Shigmo Festival**

- Shigmo is the traditional spring festival celebrated by farmers in rural Goa.
- It is an annual float parade held in major cities of the state.
- The Goan folk art such as **GhodeModni, Goff, and Fugdi** are performed.
- It was traditionally celebrated as the homecoming of the warriors who had left their homes and families at the end of Dusshera to fight invaders.

#### **World Wetlands Day**

- February 2<sup>nd</sup> of every year is celebrated as world wetlands day, marking the adoption of Ramsar Convention on Wetlands
- The MoEF&CC in collaboration with Department of Forests, Assam government is organizing the national-level celebration of World Wetlands Day (WWD), 2018 at DeeporBeel, a Ramsar Site in Guwahati, Assam.
- The 2018 theme ‘**Wetlands for a sustainable urban future**’ marks the role of healthy wetlands play in making cities and towns liveable.

#### **Ramsar Convention on Wetlands**

- The Convention was adopted in 1971 at the Iranian City of Ramsar.
- It is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.
- India is a party to the Convention since 1982.
- The Ministry of Environment, Forest and Climate Change is the nodal Ministry for wetlands conservation in India.
- Wetlands in India account for 4.7% of the total geographical area

#### **Inland Waterways Authority of India (IWAI)**

- IWAI signed an project agreement with the world bank for the **Jal Marg Vikas** on Ganga (NW1)
- The IWAI came into existence for development and regulation of inland waterways for shipping and navigation.
- Functions of IWAI with respect to National Waterways
  1. Survey
  2. Navigation, Infrastructure and Regulations
  3. Fairway Development
  4. Pilotage
  5. Coordination of IWT with other modes

#### **Initiatives of FSSAI for Nutritional and Safe Food**

- Food Safety and Standards Authority of India (FSSAI) has developed science-based standards for various categories of food products to ensure availability of safe and wholesome food in the country.
- FSSAI has introduced **+F Logo** for **fortified** foods.
- To promote awareness among consumers on Nutrition, mandatory labelling requirements for pre-packaged foods, is prescribed.
- FSSAI has also undertaken ‘**Safe and Nutritious Food (SNF)**’ initiative to promote awareness towards consumption of safe and nutritious food.

#### **Rabi Crops Sowing**

- The area under the sowing reached 324 lakh hectares
- The word ‘rabi’ in Arabic means **winter**
- Rabi crops are sown in winter from October to December and harvested in summer from April to June.
- Some of the important rabi crops are wheat, barley, peas, gram and mustard.
- Punjab, Haryana, Himachal Pradesh, Jammu and Kashmir, Uttarakhand and Uttar Pradesh are important for the production of rabi crops.
- Western temperate cyclones during winter provides the precipitation in these areas

#### **First International Kala Mela**

- First International Kala Mela is being inaugurated by the vice president in Delhi.
- Lalit Kala Akademi, the premier institution for the promotion of Art and Culture is organizing an International Kala Mela (Arts Festival)
- It is going to prove a boon to especially those artists who cannot afford to exhibit their works of art in the Art Galleries.
- Central objective of Kala Mela is to focus on direct interaction between the artist and the connoisseur.

#### **CriSidEx**

- India's first sentiment index for micro and small enterprises (MSEs) developed jointly by CRISIL & SIDBI here today.
- CriSidEx is a composite index measures MSE business sentiment
- Its readings will flag potential headwinds and changes in production cycles and thus help improve market efficiencies.

#### **Advantage Assam-Global Investors Summit**

- It is an investment promotion and facilitation initiative by the Government of Assam
- 'Advantage Assam: India's Express way to ASEAN' is an holistic vision of the summit.
- The event shall showcase the manufacturing prowess and the opportunities offered by the state in terms of export-oriented manufacturing and services to growing economies viz. ASEAN and BBN countries

#### **Sheen Khalai (Blue Skin)**

- It is an Afghan community in India who fled with their families from the tribal areas between Afghanistan and Pakistan during the Partition in 1947.
- The women are part of a community of Pushtun Hindus that lived in the Baloch areas and belong to the Kakari tribes still living in afghan.
- Pushtuns are an Iranic ethnic group who mainly live in Pakistan and Afghanistan
- They speak the **Pashto** language and adhere to Pashtunwali, which is a traditional set of ethics guiding individual and communal conduct.

#### **Maratha Light Infantry Regiment**

- Maratha Light Infantry (LI) regiment will celebrate its 250th regimental day.
- The Maratha LI was the first infantry unit to be designated "light infantry" for being "swift-footed."
- The regiment has a long history of gallantry and sacrifice and has a string of honors.

#### **National River Conservation Plan**

- Under the National River Conservation Plan the river Sal project in Goa was sanctioned by the Ministry of Environment, Forest & Climate Change.
- The aim of the plan is to prevent pollution of rivers and improving water quality.
- The activities under National River Conservation Plan include following
  1. Sewage treatment plants for treating the diverted sewage.
  2. Low cost sanitation works to prevent the open defecation on riverbanks.
  3. Public awareness and public participation.
  4. Electric crematoria to ensure proper cremation of the bodies brought to burning Ghats.

#### **Task force on artificial intelligence**

- The Department of Defense Production constituted a task force headed by Tata Sons Chairman N Chandrasekaran to study use of artificial intelligence.
- It has potential to provide military superiority apart from driving technology-driven economic growth.
- Similarly, in 2017, the then Commerce and Industry minister constituted the 'Task force on AI for India's Economic Transformation' chaired by V. Kamakoti of IIT Madras

#### **Maldives**

- Maldives is facing a constitutional and political crisis with its government is against the judiciary, polity and a section bureaucracy.
- It is a south Asian island country located in the Arabian sea part of Indian ocean.
- The Maldives archipelago is located atop **the Chagos-Maldives-Laccadive** Ridge, a vast submarine mountain range in the Indian Ocean.
- Maldives is a founding member of the SAARC. It is also a part of the United Nations and Organization of Islamic Cooperation.

#### **Global Terrorism Index**

- The Global Terrorism Index (GTI) is a report published annually by the Institute for Economics and Peace (IEP)
- Two third of the countries experienced a terrorist attack in 2016
- India is one among the ten most impacted countries by terrorism
- Five countries account for three quarters of all deaths from terrorism: Iraq, Afghanistan, Syria, Nigeria and Pakistan.
- The major reason for terrorism in most impacted countries is internal conflict.

#### **European Commission**

- European commission will publish a paper setting out the prospects of giving membership to six countries by 2025
- The countries are Albania, Bosnia, Kosovo, Montenegro, Serbia and Macedonia.
- The European Commission (EC) is an institution of the European Union, responsible for proposing legislation, implementing decisions, upholding the EU treaties and managing the day-to-day business of the EU
- The Commission was to act as an independent supranational authority separate from governments.
- The commission is based in Brussels.
- The commission consists of a President and commissioners from the 28-member nations.

#### **National Adaptation fund for climate change**

- The National Adaptation Fund for Climate Change (NAFCC) is a Central Sector Scheme.
- The overall aim of NAFCC is to support concrete adaptation activities which mitigate the adverse effects of climate change.
- National Bank for Agriculture and Rural Development (NABARD) is the National Implementing Entity (NIE).
- The Scheme has been designed to fulfill objectives of National Action Plan on Climate Change (NAPCC) and operationalize State Action Plans on Climate Change (SAPCC).

#### **Digital Gender Atlas**

- Digital Gender Atlas has been developed to identify the low performing geographic pockets for girls, on specific gender related education indicators.
- The Pockets are particularly from marginalized groups such as scheduled castes, scheduled tribes and Muslim minorities.
- The Atlas is placed on the MHRD website and available and ready to use by States/Districts/Blocks education administrators.
- The Atlas is designed around the two broad areas of performance of girls' education and vulnerabilities visualized in the following five sections,
  1. Composite gender ranking
  2. Special Focus Districts
  3. Trend Analysis of Gender Indicators
  4. Children with Disabilities
  5. Vulnerabilities based on educational indicators

#### **World Government Summit**

- PM Modi will address World Government Summit in his coming UAE Tour.
- The World Government Summit is an annual event held in Dubai, UAE.
- It brings together leaders in government for a global dialogue about governmental process and policies with a focus on the issues of futurism, technology and innovation.
- The first World Government Summit was held in Dubai in 2013, and has been held annually since then.
- In 2017, the World Government Summit held the first **Global Dialogue for Happiness**, a one-day event prior to the summit

#### **Surajkund International Crafts Mela**

- Surajkundmela is an annual confluence of India's culture and folk traditions is taking place at Faridabad, Haryana.
- It is a spectacular showcase of regional and international crafts, handlooms, traditions along with multi-cuisine food for the visitors.
- The theme state for this edition is Uttar Pradesh.
- The Mela is organized by the SurajkundMela Authority & Haryana Tourism in collaboration with Union Ministries of Tourism, Textiles, Culture and External Affairs

#### **Rashtriya Vayoshri Yojana**

- The Ministry of Social Justice and Empowerment has launched the 'Rashtriya Vayoshri Yojana (RVY)'. Its objective is to provide senior citizens belonging to BPL category, who suffer from age related disabilities, with such physical aids and assisted living devices which can restore near normalcy in their bodily functions.
- The Scheme is entirely funded from the Senior Citizens' Welfare Fund (SCWF).
- Under the Scheme, assisted living devices such as walking sticks, elbow crutches, walkers/ crutches, tripods/ quadpods, hearing aids, wheelchairs, artificial dentures, spectacles are distributed to the beneficiary senior citizen.

#### **Pradhan Mantri VayaVandhanaYojana**

- This scheme deals with senior citizen insurance scheme which promises assured annual return of 8% for 10 years.
- The insurance is sold by Life Insurance of India for the citizens.
- The Minimum age of entry is 60 years of age with no maximum limit.

#### **Tiger Census**

- India's tiger census has been commissioned by the union environment ministry's National Tiger Conservation Authority (NTCA).

- The census will see coordination with **Bhutan, Nepal and Bangladesh** in estimating the territorial spread of the animal in the subcontinent.
- The Wildlife Institute of India, a Union Environment Ministry-funded body, has been tasked with coordinating the tiger estimation exercise.
- Along with tigers, the survey also collects information on the prey population of deer and other animals.
- The techniques used to estimate tiger population are Pugmark Technique, camera trapping and DNA finger-printing.

#### Vadnagar

- Gujarat and the Centre are jointly developing the historical and ancient town of Vadnagar as a major tourist hub.
- The projects cover Vadnagar's famous Kirti Toran, Sharmishtha lake, Hatkeshwar Temple and archaeological sites.
- The town full is of sites that are related to Hinduism and Buddhism
- The famous Chinese traveler Hiuen Tsang has visited the place around AD 640 and referred to it as Anandpur.
- It is also the birth place of Prime Minister Narendra Modi.

#### Udhyagiri Caves

- The Udayagiri caves, in Vidisha, Madhya Pradesh, contain some of the oldest Hindu temples and iconography, related to Vaishnavism, Shaivism and Shaktism.
- They were built during the Gupta period (350-550 CE)
- Though it is present north of Tropic of Cancer, it is believed that historically, on the day of summer solstice, the sun was directly overhead in this place, making Udhyagiri (Mount of sunrise) a place of worship.
- It also houses some important Gupta age inscriptions.
- Iconic **Varaha Sculpture** rescuing the earth symbolically represented by Bhudevi clinging to the boar's tusk as described in Hindu mythology is a salient feature of the place.



#### Centre for Science and Environment (CSE)

- The Centre for Science and Environment (CSE) is a public interest research and advocacy organization based in New Delhi.
- The Centre for Science and Environment (CSE) has been ranked the top environment policy think tanks in India and 16<sup>th</sup> at the global level.
- The rank was given by The Think Tanks and Civil Societies Program (TTCSP) of the Lauder Institute at the University of Pennsylvania.
- The CSE's efforts are built around five broad programs
  1. Communication for Awareness
  2. Research and Advocacy
  3. Education and Training
  4. Knowledge portal
  5. Pollution monitoring
- CSE publishes the fortnightly Magazine 'Down to Earth'.

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#### MLCR

- The **Marginal Cost of Funds-based Lending Rate (MCLR)** refers to the minimum interest rate of a bank below which it cannot lend.
- Reserve Bank of India will link the base rate with the Marginal Cost of Funds based Lending Rates (MCLR).
- RBI decided to shift from base rate to MCLR because the rates based on marginal cost of funds are more sensitive to changes in the policy rates.

#### Operation Cactus

- In 1988 a group of Maldivians led by Abdullah Luthufi tried to overthrow then Maldivian Government.
- The attempt was a failure due to the intervention of the Indian Armed Forces.

- The operation was code named as Operation Cactus.
- INS Godavari and Betwa were used by the Indian Navy in the operation

### **The Great India Blog Train**

- It is the **Social Media Key Influencer campaign** of Ministry of Tourism
- It involves the Bloggers across the world and they are invited to travel to destinations in the country on the Luxury Trains operating in different States.
- The objective of the campaign is to position luxury trains of India as a unique tourism product both in the domestic and overseas markets

### **Railway development Authority**

- Rail Development Authority will help the Indian Railways take decisions on pricing of services, consumer interests, generating revenue and competition.
- Government has approved formation of a Rail Development Authority (RDA) comprising Chairman and three Members.
- The objective underlying RDA is to get expert advice/make informed decision on:
  1. Pricing of services commensurate with costs.
  2. Suggest measures for enhancement of Non-Fare Revenue.
  3. Protection of consumer interests, by ensuring quality of service and cost optimization.
  4. Promoting competition, efficiency and economy.
- Other than the above-mentioned objectives the authority also deals with resource allocation, setting service benchmark etc.,

### **ENCORE**

- The **Eastern Naval Command Operational Readiness Exercise (ENCORE)**, Theatre Level Readiness and Operational Exercise concluded on the Eastern Seaboard by the Indian Navy and Indian Air Force aircrafts.
- The exercise was conducted in phases to test various facets of war-fighting capabilities of the combat units.
- The exercise was conducted in real time covering a vast expanse of Indian Ocean Region (IOR)

### **Minamata Convention on mercury**

- The Union Cabinet approved the proposal for ratification of Minamata Convention on Mercury.
- The Convention protects the most vulnerable from the harmful effects of mercury and also protects the developmental space of developing countries
- The objective of the convention's implementation to protect human health and environment from the anthropogenic emissions and releases of mercury and mercury compounds.
- The Convention is named after the Japanese city Minamata, as the city went through a devastating incident of mercury poisoning.

## **Supreme Court's Decision on Iron Ore Mining in Goa**

**In News:** The Supreme Court quashed all iron ore mining leases in Goa.

### **Background**

- In Goa, the State government has displayed disregard for rules and processes while renewing licences for a second time in 2015.
- It inexplicably chose not to exercise its right to view the licences as fresh leases that require new environmental impact assessments.
- The government in Goa invited a cloud of suspicion by hastily launching the renewal of licences.
- This was just a day after it unveiled a Grant of Mining Leases Policy on November 4, 2014.
- Quite extraordinarily, it issued 31 orders on a single day, January 12, 2015.
- This is apparently to pre-empt the Centre's Mines and Minerals (Development and Regulation) Amendment Ordinance that came into force the same day.
- Besides, the Union Environment Ministry's Expert Appraisal Committee raised some concerns in 2013.
- It said many of the past leases were issued without approval of the National Board for Wildlife.
- And miners had extracted ore in excess.
- The requirement for clearance from the Central Ground Water Board was ignored.
- Last year, public protests over contaminated groundwater and fouled air underscored the need for strict environmental controls.

### **SC's Directive**

- In April 2012, SC ordered a 10% levy on the sale value of ore to set up a **Goa Permanent Fund (GPF)** for protection of intergenerational equity.
- The idea of the SC was to hold the natural and cultural environment of the Earth in common both with other members of the present generation and with other generations, past and future.
- SC directions were in line with framing a policy to fight corruption, protect the environment, and safeguard common people's interest.
- But such fund has been never set due to the powerful vested interest.

### **Mining Sector is Hesitant to Create GPF**

- In 2015 union government had ordered the setting up of the District Mineral Foundations (DMFs) in mining-affected districts to fund the PradhanMantriKhanijKshetraKalyanYojana.
- Contributions were fixed at 10% of royalty for leases granted on or after January 12, 2015, and 30% for older leases.

- And these funds were being used to supply drinking water, control pollution, healthcare, education, sanitation, welfare of vulnerable sections, and skill development, etc.
- Mining companies have challenged the creation of the GPF, due to their contributions to DMFs and claimed GPF amounted to a double levy.

### Global Experience

- The global experience underlines the “benefit of inheritance” which the Economic Survey 2016-17 also noted.
- About 50 countries/sub-nations have created permanent funds based on extracting economic rent from oil and other natural resources
- **Norway** - Set up in 1990, Norway’s Oil Fund is now the world’s largest sovereign wealth fund, worth more than \$ 1 trillion — over 1.5 times the country’s GDP.
- In September 2017, it guaranteed \$ 192,307 (over Rs 1.2 crore) to every Norwegian citizen.
- **North America** -Alberta and Alaska set up Oil Funds in the mid-1970s.
- Alberta and Alaska used the bulk of revenues to cut or abolish taxes, and allocated only a fraction to their Funds.
- **South America** -Chile set up its Copper Stabilisation Fund in 1985.
- During the 1997-98 financial crises, it channelled \$ 200 million from the Fund to the national economy.
- **Africa** -Botswana established the Pula Fund in 1994 to save part of the income from diamond exports for future generations.
- **Mongolia**- It created a Human Development Fund, making every citizen eligible to own an equal share of the national mineral wealth.

### Significance

- The mining operations are to be stopped from March this year till fresh mining leases and environmental clearances are granted.
- With SC’s order, grant of fresh licences and proper accounting of the losses, mining activity in its entirety should begin on a clean slate.
- Future decisions should be guided solely by the true cost to the environment and to human health.
- The court order should help restore some balance to the exploitation of iron and manganese ore in ecologically fragile Goa.
- The order has highlighted the grievous effect of commercial mining activity in absence of clearly laid down and strictly enforced rules.
- The Supreme Court’s directions provide Goa with an opportunity to change course and become a mainstream tourist State.
- It can regain its position as a top destination for global visitors and broaden employment in services.
- Tourist charters need to replace its open cast mines and dust bowls.

### State Government's Stance

- Goa has argued that the mining industry is crucial to its economy as it brings in foreign exchange.
- It also provides employment and supports a transport industry.
- Given that mining has a severe destructive impact on the ecology, resumption of large-scale activity should await a scientific audit.

## Labour Reforms - Fixed Term Employment

**In News:** The Finance Minister advocated “fixed term employment” in the budget speech.

### Evolution of labour laws

- Present labour laws are a carryover from **war-time legislation** promulgated by the **British** to protect industry from disruption.
- These laws were incorporated into the **Industrial Disputes Act** in 1947.
- The crux of the law is **government intervention in industrial disputes** to balance between labour and management.
- This never worked well and succeeding labour ministries tried to end this war-time anachronism.
- The role of the State in essentially an issue between labour and management was sought to be reduced.
- The aim is to ensure **bilateral resolution** of conflict, as happens in every liberal democracy.
- During the emergency period it was ruled that **permanent workers** cannot be sent away.
- Nor were the places of work be closed down without the consent of the state.
- Industry’s response to the rule on permanent workers has been a massive **shift to contract labour**.

### Contract Employment in India

- There are firms which employ no permanent workers at all, except for a small clutch of officers.
- Industries are also increasingly diluting the law that forbids the employment of contract labour in core processes.
- Permanent workers are unconcerned with these changes so long as their interests and emoluments are secure.
- The trade unions are just beginning to organise contract workers.
- The unions at most ask for minimum wage for the contract labourers.

- The unions cannot call a strike because permanent workers will not back it.
- The contract workers themselves cannot go on strike because they risk losing their jobs.
- Employers will in any case not pay more.
- Although employers are the driving force behind the shift to massive contract employment, the government also seems to be supporting this.

#### Significance of Fixed Term Employment

- The **present unfixed contracts** can be terminated any time.
- Organised industry is riding on **cheap contract labour**, due to immortality on the enterprise.
- In this backdrop, the fixed-term employment does not promise lifetime employment.
- However, it will be a **clear tenure**, as a company or an enterprise hires an employee for a specific period of time.
- The contract can be **renewed or terminated** according to the performance of the worker.
- A fixed term contract will enhance **workers' security and remuneration**.
- It will also allow the **employers the flexibility** they desire.

#### Way Forward

- The fixed contract could raise opposition from both labour and management.
- Fixed contracts will push up the wage bill, which employers will resist.
- These are important considerations and challenges before working on labour laws.
- But India cannot continue to rely on an insecure and impoverished labour force, for it to become a manufacturing powerhouse.
- The insensitive exploitation of the weak and vulnerable in the formal sector cannot be justified in a society striving for equality.
- Well thought out labour reforms are crucial to address all these.

### Trafficking of Persons (Prevention, Protection and Rehabilitation) Bill

#### Context:

- Government is planning to introduce the Trafficking of Persons (Prevention, Protection and Rehabilitation) Bill, 2016.
- There seems to be some flaws in the basic understanding and approach towards the social menace of trafficking.

#### Key Provisions

- **Penalties** - The Bill has stringent penalties like life imprisonment for aggravated forms of trafficking.
- The burden of proof lies on the traffickers.
- Also, there are provisions for stripping traffickers of their assets.
- **Institutions** - An anti-human trafficking wing is proposed to be set up.
- This would be under a central investigation agency like the National Investigation Agency.
- A district-level anti-trafficking unit with an anti-trafficking police officer is also proposed.
- A designated session's court for speedy trials is also part of the provisions.
- **Fund** - State governments need to create a Rehabilitation Fund.
- This will allocate financial resources for protection homes.
- They also offer legal assistance to victims and provide skill development programmes.
- The fund will also be used for victim and witness protection, and for generating awareness to prevent human-trafficking.

#### Present Legal Protections

- The Indian Penal Code and the Immoral Traffic Prevention Act (ITPA), 1956 are noteworthy anti-trafficking provisions.
- The social welfare legislation on contract and bonded labour, and inter-state migrant work are also in place.
- In India, a combination of penal, labour and contract laws are used to impose obligations for better working conditions.
- These clutches of laws often delay the trial process.
- The Trafficking Bill would thus be umbrella legislation in this regard.

#### Shortfalls

- **Understanding** - The policy makers largely mistake trafficking to be equivalent only to sex trafficking and sex work.
- Thus, the criminal laws like the ITPA generally target the men traffickers.
- The current definition of trafficking in Section 370 of the IPC is also not limited to sex work.
- **Approach** - The present Trafficking Bill is clearly **neoabolitionist**.
- This is an approach which perceives trafficking only through the sensationalist accounts of "modern slaves".
- This is seen as victimisation tricked by unscrupulous traffickers.
- Their only hope for rescue is believed to be the law-enforcing personalities.
- The Bill thus pursues the **classic raid-rescue-rehabilitation model**.



- It also seems to be extending the same model beyond sex work to other labour sectors.
- **Machinery** - The Bill also creates a range of new institutions with unclear roles.
- They are offered with enormous powers including for surveillance.
- However, there seems to be no accountability mechanisms.
- There is no clarity on how the Bill relates to the ITPA and to labour laws.

#### Way Ahead

- The legislation should be comprehensive enough to address all forms of trafficking.
- It is thus essential to create the necessary regulatory response to reduce incidence of trafficking in the first place.
- The policies should consider:
  - a multi-faceted legal and economic strategy
  - a robust implementation of existing labour laws
  - improved labour inspection, including in informal economy
  - corporate accountability for decent work conditions
  - self-organisation of workers
- There is also the need for systemic reforms to counter distress migration, and to end caste-based discrimination.
- Proper enforcement of the rural employment guarantee legislation would help in this regard.
- This would also avoid voluntary sex work and protect migrants' mobility and rights.
- Working on these fronts is essential for India to meet its Sustainable Development Goal 8.7.
- It relates to eradicating forced labour, ending modern slavery and human trafficking, and ending child labour by 2025.

### NITI Aayog's Health Index

**In News:** NITI Aayog recently released a comprehensive Health Index report titled "Healthy States, Progressive India".

#### About report

- It ranks all states and Union territories based on their year-on-year incremental change and overall performance in health.
- All States and UTs have been ranked in three categories to ensure comparison among similar entities.
- They are accordingly Larger States, Smaller States, and Union Territories (UTs).
- The report has been developed by NITI Aayog with technical assistance from the World Bank.
- Ministry of Health and Family Welfare (MoHFW) was also consulted in the process.
- The report is the first attempt to establish an annual systematic tool to measure and understand the nation's health performance.

#### Key Highlights

- **Larger States** - The Health Index is a **weighted composite Index**, which for the larger States, is based on indicators in **three domains**.
- These are Health Outcomes (70%), Governance and Information (12%) and Key Inputs and Processes (18%).

#### WHERE THEY STAND

##### OVERALL PERFORMANCE

TOP THREE	BOTTOM THREE
<ul style="list-style-type: none"> <li>▪ Kerala</li> <li>▪ Punjab</li> <li>▪ Tamil Nadu</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bihar</li> <li>▪ Rajasthan</li> <li>▪ Uttar Pradesh</li> </ul>

##### INCREMENTAL IMPROVEMENT

TOP THREE	BOTTOM THREE
<ul style="list-style-type: none"> <li>▪ Jharkhand</li> <li>▪ J&amp;K</li> <li>▪ Uttar Pradesh</li> </ul>	<ul style="list-style-type: none"> <li>▪ Gujarat</li> <li>▪ Haryana</li> <li>▪ Kerala</li> </ul>

Source: NITI Aayog Health Index

- Among the Larger States, Kerala, Punjab and Tamil Nadu ranked on top in terms of **overall performance**.
- Jharkhand, Jammu & Kashmir, and Uttar Pradesh ranked as top three States in terms of annual **incremental performance**.
- Some of the indicators for incremental performance ranking include:
  - Neonatal Mortality Rate (NMR)
  - Under-five Mortality Rate (U5MR)
  - Full immunization coverage
  - Institutional deliveries
  - People Living with HIV (PLHIV) on Anti-Retroviral Therapy (ART)
- Uttar Pradesh, Rajasthan, Bihar, Odisha and Madhya Pradesh occupied the **bottom ranks**.
- **Odisha** is estimated to have the **highest neonatal mortality rate** at 35 per thousand live births.
- **Smaller States** - Among Smaller States, Mizoram ranked first followed by Manipur on overall performance.
- In terms of annual incremental performance Manipur ranked top followed by Goa.
- Manipur registered maximum incremental progress on indicators such as:

- PLHIV on ART
- First trimester antenatal care (ANC) registration
- Grading quality parameters of Community Health Centres (CHCs)
- Average occupancy of key State-level officers
- Good reporting on Integrated Disease Surveillance Programme (IDSP)
- **UTs** - Among UTs, Lakshadweep showed best overall performance as well as the highest annual incremental performance.
- It showed the highest improvement in indicators such as:
  - institutional deliveries
  - tuberculosis (TB) treatment success rate
  - transfer of National Health Mission (NHM) funds from State Treasury to implementation agency

#### What does it imply?

- **Trend** - Clearly, States with a record of investment in literacy, nutrition and primary health care have achieved high scores.
- States and UTs that start at lower levels of development are generally at an advantage in notching up incremental progress.
- Whereas for States with high Health Index scores, it is a challenge to even maintain their performance levels.
- E.g. Kerala ranks on top in terms of overall performance but sees the least incremental change.
- However, the incremental measurement reveals that about one-third of States have registered a decline in their performance in 2016 as compared to 2015.
- **Significance** - Health-care delivery is the responsibility of States, with Centre providing the financial and policy support.
- States' performance in health is crucial for meeting the Sustainable Development Goals over the coming decade.
- The Index hopes to make a difference by leveraging co-operative and competitive federalism for potentially better health outcomes.

#### What does it call for?

- Intra-State inequalities in health performance have to be addressed.
- Both the Centre and the States have to scale up their investment on health as a percentage of their budgets.
- The findings stress the need for pursuing domain-specific, targeted interventions.
- Common challenges for most States and UTs include the need to focus on:
  - addressing vacancies in key staff
  - establishment of functional district Cardiac Care Units (CCUs)
  - quality accreditation of public health facilities
  - institutionalization of Human Resources Management Information System (HRMIS)
- Additionally, almost all Larger States need to focus on improving the Sex Ratio at Birth (SRB).
- The index could be linked to incentives offered under the National Health Mission by the Ministry of Health and Family Welfare.

## ECONOMIC AFFAIRS

### **RBI's Monetary Policy Report**

**Context:** RBI has left the repo rate unchanged in order to keep inflation under check.

#### **Last MPC Meet of the Fiscal**

- RBI's "Monetary Policy Committee" met for its regular bi-monthly to consider and review the monetary direction ahead.
- **The Policy Outlook** - Vigilance on price stability was stressed amid fresh price uncertainties and it was decided to leave the Repo Rates unchanged.
- As inflation is at the fastest pace in 17 months, there wasn't much ambiguity expected on the outcomes of the MPC meet.
- Significantly, the MPC retained a 'neutral stance', which gives it the flexibility to change gears in either direction.
- **Inflation Stats** - Consumer Price Index (CPI), which is the parameter on which inflation targeting is done, has accelerated for the 6<sup>th</sup> straight month.
- The RBI had in December made a projection for inflation in the range of 4.3-4.7% in the six months through March 2018.
- But as fuel prices having risen sharply in January, the estimates for the 4<sup>th</sup> quarter have been raised to 5.1%.

#### **Future Prospect**

- Projections beyond the current fiscal indicate a worsening inflation scenario, which is also clouded in multiple uncertainties.
- **The uncertainties** - Staggered impact of increase in “House Rental Allowance” by various State governments, which may induce 2<sup>nd</sup> order effects.
- The Budget’s proposed changes to the “minimum support price” norms for crops as well as the proposals to increase customs duty on a range of goods.
- Fiscal slippage could also fan inflation and increase borrowing costs.
- **Optimism** - The normalisation of monetary policy by advanced economies could spell a decisive end to global ‘easy money’ conditions.
- While this may trigger some flight of capital from emerging markets like India, there are positives for the economy in term of pickup in global growth.
- RBI also looks optimistic in its prediction that CPI inflation for the first half of the next fiscal will be in the 5.1-5.6% range before moderating to 4.5-4.6%,
- But this is with the assumption that 2018 will have a normal monsoon, which one can only hope and never say with certainty.

#### Quick Facts

- **Monetary Policy Committee** - It is a committee of the “Reserve Bank of India” that is responsible for fixing the benchmark interest rate in India.
- It usually meets once in 2 months and is mandated to meet at least 4 times a year and it publishes its decisions after each such meeting.
- The committee comprises six members – Three officials of the Reserve Bank of India and three external members nominated by the Government of India.
- The Governor of RBI is the ex-officio chairperson of the committee and has a casting vote while taking decisions that are tied.
- The current mandate of the MPC is to maintain inflation within the targeted range of 4%<sub>-2%</sub>, which is to be adhered till March 2021.

### Proposals for Enhancing Farmers Income

**In News:** Union budget has announced new proposals for enhancing the farmers’ income.

#### Practical Problems of Farmers

- Over 70 per cent of the farmers in India seldom receive the MSPs for want of official market intervention.
- These prices are effective only for wheat and rice and, occasionally, for a couple of other crops in a handful of states, elsewhere, the procurement infrastructure does not exist.
- Recently announced MSP formula does not address the demands by the farmers as MSPs for many crops are already higher than 1.5 times the paid-out costs and the estimated value of family labour.
- Small and marginal farmers are unable to transact at the markets run by the agricultural produce marketing committees (APMCs).

#### Budget Announcement

- Union budget has announced MSPs at 50 per cent above the production cost.
- The National Institution for Transforming India (NITI) Aayog will figure out the status about reach of MSP to the farmers.
- The budget proposes to launch “Operation Greens”, on the pattern of the milk sector’s “Operation Flood”.
- These operations will be used for the marketing of highly perishable commodities, such as tomato, onions, potato and others, which witness vicious price fluctuations.
- Budget proposes to create parallel marketing infrastructure by upgrading the existing 22,000 rural hats into gram in agricultural markets.
- These mandis will be exempted from the APMC regulations to facilitate direct sale to consumers and bulk purchasers.
- It also encourages farmer producer companies and cooperatives by fully exempting their profits from income tax.
- Budget seeks to promote agriculture’s allied activities like animal husbandry and fisheries, which are more lucrative than crop farming.
- Budget has also proposes to provide a Kisan Credit Card-like facility to those engaged in these ventures.

**Note:** To know about MSP Formula refer our Earlier issue

### MSP Based Deficiency Payments

#### Context:

- Madhya Pradesh has a MSP-based deficiency payments scheme, which central government is planning to introduce nationwide.

- But in Madhya Pradesh the deficiency payments swell due to market manipulation and are struggling to achieve its goal.

### **MSP based deficiency payments**

- Under this, farmers will be compensated for the difference between the MSPs for select crops and their actual market prices.
- For crops which suffers ineffective MSP price deficiency payments system has been introduced in MP.
- A farmer must to register with the nearest APMC mandi and report the total area sown, to avail this benefit.
- The subsidy is paid via Direct Benefit Transfer (DBT) into the farmer's Aadhaar-linked bank account.
- For other targeted crops, price deficiency payments system will be introduced.
- However, notably there may be a cap on the extent to which the Centre will bridge the gap between MSP and market price.
- A farmer would have to register with the nearest APMC mandi and report the total area sown, to avail this benefit.
- The subsidy would be paid via Direct Benefit Transfer (DBT) into the farmer's Aadhaar-linked bank account.

### **Practical Difficulties**

- The biggest beneficiaries of this scheme are local traders, as the local trades manage to depress the market for their benefits.
- There is a lower level bureaucracy in the state that decides which farmers get to register for the scheme and are being biased.
- MP traditionally had lower prices than other states for most crops, after the implementation of the scheme in September 2017, the price difference has risen.
- For instance, Urad prices in MP were 93% of those in Rajasthan in FY17 but this fell to 77% in FY18, and from 65% to 57% when a comparison is made with Uttar Pradesh.
- An average price difference of 20% has been assumed between MSP and the market price of the commodity for deficiency based payment system.
- The difference would have been higher if only mandi prices in the state were used, but the MP government has included prices in other states also to calculate the reference price for the compensation.
- Which had cost the state around Rs 1,950 crore for eight crops in Kharif 2017 and this is estimated to improve.

### **Implications for the Union government**

- This same scenario might happen to the central government scheme also.
- There might be a dramatic increase in market arrivals since the government has assured a high price relative to the market.
- The marketable surpluses that the government had to procure at the MSP used to be quite small, if this new scheme implemented it will be very large.
- Due to this there will be high fiscal burden to the government, which is estimated to be 80,000 crore.
- Thus the Centre instead of this scheme can distribute cash to farmers based on the size of their landholdings which will ensure that middlemen don't corner the benefits meant for farmers.

## **SC's Ruling on Synchronised Trading**

**In News:** The Supreme Court has recently upheld an adjudication order by SEBI and set aside a SAT order on synchronised trading.

### **Synchronised Trading**

- A 'synchronised' trade is a pre-negotiated trade.
- **How** - Here, the buyers and sellers enter the quantity and price of shares on the screen they wish to transact at nearly the same time.
- The buy and sale transaction at the same day for the same quantity between the same set of broker/clients is called reversal of trade.
- Except the parties who have pre-fixed the price, nobody has the position to participate in the trade.
- This is done with the support of the brokers.
- Through circular trading between related entities of the company promoter, the price of the stock would be inflated.
- A year later the investor would sell the shares to promoter entities at the inflated price.
- The profit gained would then be shown as long term capital gains (used to be tax free till the recent Budget made it taxable).
- **Purpose** - The 'profit' would be returned to the promoter in either cash or through another set of fake transactions.
- These transactions may not necessarily happen through the stock exchange platform.
- It thus serves as a means of converting black money to legitimate income.
- Market is also manipulated to book artificial losses for tax purposes.
- **Effect** - Synchronised trading may at times distort price discovery and affect other investors also.
- SEBI had no way of proving these offline cash transactions.
- It found it hard to raise charges of tax evasion and stock manipulation.

### present case

- SEBI had imposed a penalty of Rs.1.8 crore on Rakhi Trading.
- This was for indulging in synchronised trading through the 'reversal of trade' route in March 2009.
- Notably, the price did not reflect the value of the underlying in synchronized and reverse transactions.
- SEBI considered this a violation of the Prohibition of Fraudulent and Unfair Trade Practices Regulations.

### SAT's order

- The case went for appeal before the Securities Appellate Tribunal (SAT).
- SEBI's order was struck down by SAT in 2011.
- SAT admitted that the trades were synchronised.
- But it held that the trades had no impact on the market and neither induced the investors.
- As, SAT held that the derivative trades could not influence the market (Nifty index).
- SEBI however alleged that the fictitious trades created false liquidity in the Nifty options contract, manipulating the market.
- SEBI then appealed the SAT ruling in the Supreme Court.

### SC's ruling

- The Supreme Court has now set aside the SAT order.
- The Court observed that the stock market is not a platform for any fraudulent or unfair trade practice.
- SC has not mentioned the tax evasion angle in its judgement.
- However it had made it clear that the synchronized trades did affect market integrity.
- It held that orchestrated trades, whether in the cash or derivatives segment, are a misuse of the market mechanism.
- Moreover, protection of interest of investors as per SEBI Act, 1992 necessarily includes prevention of misuse of the market.
- The bench reiterated the need for a more comprehensive legal framework governing the securities market.
- It stressed the need for SEBI to keep pace with changing times and develop principles for good governance in the stock market.

### significance

- SC's ruling on synchronised trading strengthens SEBI in prosecuting cases of price manipulation in future.
- It empowers SEBI to impose severe penalty even on the smallest manipulations in the derivative segment.

## RBI's New Framework for Resolving NPAs

**In News:** The Reserve Bank of India (RBI) has turned up with a leaner framework for the resolution of non-performing assets (NPA).

### new framework

- The new framework, will subsume most existing stressed asset schemes such as the Strategic Debt Restructuring Scheme (SDR) and the Scheme for Sustainable Structuring of Stressed Assets (S4A).
- It would give primacy to the Insolvency and Bankruptcy Code (IBC) of 2016.
- It will also disband the concept of a Joint Lenders' Forum (JLF), the Joint Lender's Forum is a dedicated grouping of lender banks that is formed to speed up decisions when an asset (loan) of more Rs 100 crore or more turns out to be a stressed asset.
- With the JLF out of the way, the new RBI guidelines demand that banks identify stressed accounts as soon as they go into default.
- The banks are supposed to categorise them as special mention accounts, report to the RBI and start the resolution process straight away.

### prime focus of the new framework

- A focus on timely identification of bad loans and the speedy resolution of such assets has been roped in.
- The central bank has toughened the reporting of default to the central repository by making it a monthly, instead of a quarterly, requirement.
- All borrower entities in default with an exposure of more than Rs 50 million have to be reported on a weekly basis.
- RBI made it clear that default in the borrower entity's account with any lender all banks, singly or jointly shall initiate steps to address it, which makes the banks to start the resolution process.
- The RBI has laid clear timelines, not exceeding 180 days from March 1, for the resolution process to yield results, failing which insolvency proceeding will have to commence within 15 days.

### significance

- The new framework will obviously lead to short-term pain for many banks and may throw up challenges for borrowers.
- For example, the strict timelines to come up with a resolution plan could mean that a larger number of accounts will go into insolvency.
- The condition that a restructuring plan must be agreed upon by all banks involved in large accounts may be difficult to implement as experience shows such a thing rarely happens.

- Over the long term, however, the revised framework should work well as the process still provides over one year to resolve a stressed assets problem initial 180 days to implement the resolution plan and then another 270 days under the IBC.

#### IBC, 2016

- The Insolvency and Bankruptcy Code (IBC) was enacted in 2016 to facilitate a time-bound resolution for ailing and sick firms.
- It could either be through closure or revival, while protecting the interests of creditors.
- Under IBC, either the creditor (banks) or the loaner (defaulter) can initiate insolvency proceedings.
- It is done by submitting a plea to the adjudicating authority, in this case, the National Companies Law Tribunal (NCLT).
- The resolution process was expected to aid in reducing the rising bad loans in the banking system.

#### Standing Deposit Facility Scheme

- RBI uses array of instruments such as Cash Reserve Ratio, Open Market Operation, Market Stabilisation Scheme to absorb excess liquidity in the economy.
- These measures are considered as Liquidity Adjustment Facility (LAF) to bring the liquidity gap under control.
- However, these tools were not proven to be useful when the money market liquidity is in excess to deal with. Eg. Post demonetization scenario.
- During post demonetization, RBI ran out of government securities to offer as collateral and had to temporarily hike its CRR.
- Now, there is a proposal to introduce Standing Deposit Facility Scheme (SDFS) which was already recommended by Urjit Patel Committee in 2014.
- It is to empower RBI with an additional instrument for liquidity management.
- SDFS is a toolkit of monetary policy for absorption of surplus liquidity from the system but without the need for providing collateral in exchange.

#### Changing the definition of MSME

- The government is changing the criteria to define micro, small and medium enterprises (MSMEs), to make these in sync with the goods and services tax (GST) regime.
- The earlier classification was based on the investment in plant and machinery in case of goods companies and in equipment in the case of service companies.
- The new classification is based on **annual turnover**.

Enterprises	Old Definition (In Million Rs.)		New Definition (In million Rs.)
	Goods Companies	Services Firm	
MICRO	2.5	1	50
SMALL	25-50	1-20	50-750
MEDIUM	50-100	20-50	750-2500

- The change would be effective when the proposed amendments to the Micro, Small and Medium Enterprises Development Act, 2006, comes into effect.

#### Panel on Crypto currency

- The panel on cryptocurrency, headed by Economic Affairs Secretary **Subhash Garg**, is expected to submit its report.
- The panel was set up in 2017 to study the impact of crypto currencies and come up with recommendations to regulate them.
- In his budget speech Finance minister said that crypto currencies are not legal tender.
- However, the Centre will explore the uses of block chain technology, the encrypted data structure on which crypto currencies are built.

#### RFID Technology in GST E-way Bills

##### Context:

- Union government planned to implement e-way bills from 1<sup>st</sup> Feb 2018 but it was postponed.
- The challenges in implementing the e-way bill can be addressed using RFID technology.

##### Decision on e-way bill

- The e-way bill is virtually an electronic version of the way bill in the value-added tax (VAT) regime which required to be carried as a physical printout for the benefit of the checking authorities.

- Union government had made a compulsory introduction of the electronic way (e-way) bill from February 1, for the movement of consignments above Rs 50,000.
- The decision was even accepted by 15 states to follow the same deadline for the introduction of intra-state e-way bills.
- But due to practical challenges of patchy implementation of the goods and services tax (GST) the decision was postponed indefinitely.

**Challenges incurred in e-way bill operation**

- The network which is being used for the e-way bill was ill-equipped to bear the increased load points.
- The GST Network portal had crashed in several states two days before, bringing truck movements to a virtual standstill.
- This e-replication of the provision of the VAT regime created an interminable queue at inter-state checkpoints.
- The failure escaped media scrutiny due to the tabling of Union Budget.

**measures being considered by the government**

- Government is planning to introduce e-way bill system for intra-state movements first and testing the network's load-bearing ability before rolling it out for inter-state movements.
- The possibility of initially limiting the e-way bill to higher value consignments is other one.
- RFID tags for goods or consignments are also on the discussions as a useful alternative.

**How a RFID tag will address the issue?**

- Radio frequency identification (RFID) these tags are being used in our day today life from supermarkets to toll collection.
- RFID tags has been already introduced in India for improving traffic management, for new vehicles registration etc.
- RFID tags for e-way bill can be used through loading the information about the consignment which is being carried through the vehicle which already has a RFID.
- When a vehicle crossing any toll gate the RFID will be scanned and information regarding the consignment with precise GST number will be gathered.
- The collected information will be updated through an online portal and can be used further by any concerned agencies.

**What is an e-way bill?**

- The e-way bill can be electronically generated on GSTN either by the supplier or recipient of the consignment, before the movement of goods.
- The transporter needs to carry an electronically generated way bill, with every consignment having value exceeding INR 50,000.
- This will be valid for varying durations depending on the distance travelled.
- Over 150 items of common use, including LPG cylinders, vegetables, food grain and jewellery, will be exempt from such transport permits, which can be checked by designated tax officials by intercepting a transporting vehicle.
- Few States like Karnataka have already imposed their own requirements for such bills.

**INTERNATIONAL AFFAIRS**

**Alliance Politics in Germany**

**Context:**

- In a welcome development, Ms. Merkel's CDU has reached a tentative agreement with its long-term ally 'SDP' to renew their alliance.
- But the strain between their respective constituencies could pull them apart.

**Cause of stalemate**

- The conservation "Christian Democratic Union" (CDU) of Ms. Angela Merkel has been at the helm in Germany for more than a decade.
- They've had a longstanding coalition with the leftist "Social Democratic Party" (SPD), and have cohabited power.
- **Election** - Both parties registered their worst performance in recent times in the September 2017 elections, which developed strain in the alliance.
- After the election results, the SPD had initially proposed that it wants to sit in the opposition and build its organisation and ideology.
- As CDU lacked the numbers, Ms.Mekel made a subsequent outreach to the greens and the liberals, which too failed due to ideological differences.
- Hence, Germany came close to calling for fresh elections, which was desired.

**Available alternative**

- Euro-sceptic ultra-right "Alternatives for Germany" (AfD) party, had bagged 13% votes in the current elections and is on an upswing.

- Hence, if fresh elections were called, it might possibly strengthen AfD which isn't desired by any of the mainstream political forces.
- The only way out was for Ms. Merkel to lead a minority government with an external support from the SPD, which wasn't appealing to either.
- Hence, to break the impasse, despite the initial rhetoric, the CDU and SPD seem to have agreed for renewing the coalition for national interest.
- Notably, the wider crisis European Union too would've pressured the alliance ahead as currently, EU's future largely hinges on Germany's polity.

#### strains in the alliance

- While the alliance renewal has indeed brought cheer, there is considerable disillusionment in both party camps on the concessions made for the other.
- SPD has bagged six ministries, including finance, which has annoyed fiscal hawks within the CDU.
- Notably, these people are against bankrolling financially weaker EU countries although Germany enjoys a huge budget surplus.
- Also, the joint programme must first be approved by the SPD party delegates, who themselves are internally divided on some issues.
- Parties have struck a pragmatic compromise for the time-being to safeguard the political middle-ground and preventing extremism from spreading.
- But voices of dissent could veer things to the extremes, which is a risk.

### New Agreements between India-UAE

**In News:** India and UAE has signed five new agreements related to energy sector, railways, manpower and financial services.

#### Agreements signed

- A MoU between the Indian Consortium (OVL, BPRL & IOCL) and the Abu Dhabi National Oil Company (ADNOC) was signed for the acquisition of a 10% participating interest in the Abu Dhabi's offshore.
- To cooperate in the field of manpower, India and the UAE signed a MoU that aims to institutionalise the collaborative administration of contractual employment of Indian workers in the Gulf country.
- A MoU for technical cooperation in railways was also signed between the two sides; it aims at cooperation in infrastructure sector especially railways.
- To deepen bilateral cooperation in the field of finance, a MoU between Bombay Stock Exchange and Abu Dhabi Securities Exchange was also signed.
- A MoU between the Government of Jammu and Kashmir and DP World to establish multi-modal logistics park and hub in Jammu.
- It will comprise warehouses and specialised storage solutions.

#### prospects of these agreements

- The concession on oil will be for 40 years from 2018 to 2057, with 60% of the participating interest will be retained by ADNOC and remaining 30% will be awarded to other international oil companies.
- India's annual petrol consumption could jump from 30 billion litres now to 50 billion litres by 2030.
- Similarly annual diesel consumption in the world's third-biggest oil consuming nation could go up by 67% to hit 150 billion liters in the same time frame.
- It's also historic because this is the first time that Indian oil and gas companies have been given a stake in Abu Dhabi's hydrocarbon resources.
- This is the first Indian Investment in upstream oil sector of UAE, transforming the traditional buyer-seller relationship to a long-term investor relationship.
- Labour related MoUs will end the existing malpractices, combat trafficking and organise collaborative programs for education and awareness of contractual workers.
- Railway related MoU will facilitate development of joint projects, knowledge sharing, joint research, and technology transfer and envisages formation of a Joint Working Group.
- The financial MoU will enhance cooperation between both the countries in financial services industry and facilitate investment in financial markets by investors from both the countries.

#### India's Diversification

- India is keen to diversify its oil importing destination with the view of USA- Iran tussle and emerging geo-political scenario in Arab world.
- It will reduce the India's dependency on particular market as well as enhance the outreach to use in case of emergency situation.
- In reference to Chabhar project if executed successfully, it will provide easy transit for UAE's oil to central Asia and Europe, and Afghanistan.

#### Strategic Petroleum Reserves

- Abu Dhabi National Oil Company (ADNOC) will send ships carrying crude oil to fill half of the 1.5 million tonne strategic oil reserves India has built at Mangaluru.
- Indian Strategic Petroleum Reserves Ltd has built 5.33 million tonnes of strategic crude oil storage at three locations — **Padur (Kerala) and Mangaluru** on the western coast and **Visakhapatnam** on the eastern coast



- The oil stored in the underground rock caverns at the three locations is to be used in an emergency.

## **Endgame for Bi-party Dichotomy in Bangladesh**

### **Context:**

- Former Prime Minister of Bangladesh, Begum Khaleda Zia has been sentenced to five years rigorous imprisonment in a corruption case.
- As she continues to hold the reigns of the Bangladesh National Party (BNP), the verdict is bound to severely affect its credibility as an alternative.

### **Political history**

- Since secession in 1971, Bangladesh's polity has been more or less evenly divided between the Awami League (AL) and the BNP.
- They've mostly traded office after every election since 1991.
- **Bad Reputation** - BNP sowed the seeds of its current political disenfranchisement with its irresponsible governance from 2001 to 2006.
- BNP-led alliance was openly corruption, leading 'Transparency International' to rank Bangladesh as the most corrupt country for five years in a row.
- It presided over a time of unprecedented violence against the country's minority community and the political opposition.
- This included the assassination of two senior AL leaders and a grenade attack on an AL public meeting that killed 24 people and injured over 300.
- Notably, the current PM Sheikh Hasina, had narrowly survived the attack and Ms. Zia's son is one of the accused facing trial in the case.
- The BNP's misrule came to an end when a military-backed caretaker government seized power in January 2007.
- **The Opposition Years** - When elections were held in December 2008, AL saw a landslide victory, and the BNP began its downward slide.
- During its tenure, the AL succeeded in leveraging the perquisites of office to rebuild itself into the dominant political force in the country.
- Simultaneously, the BNP suffered the usual indignities and routine repression of opposition, which is common in Bangladesh.
- But despite this, aided by anti-incumbency, the BNP was still a very strong contender when elections were called in 2013.

### **Unfolding of current mesh**

- **Unsuccessful Revolt** - The AL had amended the constitution to do away with the caretaker government provision for holding elections, in 2013.
- This was done as there was a fearful that this could be used as cover for another military takeover, like the one in 2007.
- As opinion polls indicated a decent popularity for the BNP, there was every possibility of it returning to power through elections.
- But instead, BNP resorted to street protests to restore the caretaker government provision and made it a precondition for electoral participation.
- While a solid majority of the country agreed with the BNP's position, it still failed to either force the government to capitulate or the army to step in.
- Contrarily, BNP protests got increasingly violent, which blotted its public popularity and also raised serious questions as to its own fitness for office.
- **Recent Trends** - The BNP boycott of the 2014 elections, saw AL retaining power with a massive victory and subsequently consolidating its strangle hold.
- Contrarily, BNP has withered continuously since, partly due to severe government repression and partly due to its own intrinsic shortcomings.
- Many senior BNP leaders have been arrested for long terms and local leaders and cadre are on the run or have gone underground.
- Also, recently, BNP chairperson, Ms. Khalela Zia has also been convicted by the supreme court for corruption, and has been sentenced to 5 years in jail.
- This has decimated the party's organisational capacity and its ability to mobilise resources, and it is almost 11 years since it was in power.
- All these factors gives rise to the perception that the bi-party dichotomy in Bangladesh is coming to an end with AL emerging as the sole primary pole.

### **Future prospect**

- **2019 elections** - The term for AL will end in 2019 and elections must be called before then, which might possibly see another walkover from the BNP.

- This will likely strengthen the AL and also result in the BNP seeing a relaxation of its registration as per the election law.
- But this might rise legitimacy problems internationally and would also not be to the liking of India, which is AL's principle international ally.
- Hence, the best-case scenario for the AL would be securing the participation of a weakened BNP in the election, possibly without Ms. Zia.

#### **Possible scenarios**

- Ms. Zia's current conviction would automatically disqualify her, unless her appeal seeking 'Special Leave' is accepted.
- If the appeal is granted and she subsequently gets a bail from prison, she will be able to contest the elections, albeit with a taint of corruption.
- Defections of the second rung leadership of BNP due to Zia's unpopularity or a revolt against her from within are hence real possibilities.
- Hence, the jailing of Ms. Zia even temporarily will be a body blow to the BNP, which in any case does not look like a credible challenger for 2019.
- While a resurrection by BNP form here looks difficult, it can't be written off completely, as the opposition space is without perceivable contenders.

### **Protectionism in the Stock Market**

#### **Context:**

- Structural problems within India's stock exchanges are causing trading in Indian derivatives to move offshore.
- But rather than addressing them, BSE, NSE and MSE recently announced stopping data feed regarding Indian stocks and indices to overseas exchanges.

#### **Stopping data feed to overseas exchanges.**

- While foreign exchanges seem to be doing better at attracting new clients, India's stock exchanges aren't willing to compete.
- Instead, they've resorted to protectionism to guard the home turf against foreign exchanges by resorting to data feed disruption.
- They've spelt out their intention to not renew existing agreement with foreign exchanges regarding data-sharing, most of which will expire in 6 months
- The reason stated is that offshore derivatives could be causing "migration of liquidity from India, which is not in the best interest of Indian markets".
- But in reality, higher volumes of Indian derivatives are trading in the offshore market than in domestic bourses, which has spooked Indian exchanges.
- This crackdown on offshore derivatives market is hence more to boost the businesses of Indian exchanges than anything else.
- This move is also expected to benefit ambitious endeavours such as the "International Financial Services Centre" in Gujarat.

#### **structural issues**

- Index derivatives such as the SGX Nifty that is linked to stocks that form Nifty, have gained the patronage of large foreign investors for many reasons.
- These instruments are traded for longer hours in offshore exchanges, including hours when Indian exchanges are closed for business.
- Contrarily, the proposal to extend trading hours by Indian stock markets has failed to take off.
- Also, places like Singapore and Dubai, are low-tax jurisdictions that offer investors the chance to lower their transaction costs.
- In India, in contrast, the securities transaction tax and the capital gains tax discourage foreign investment in financial assets.
- All of these make the foreign exchanges more investor-friendly, and the fact that offshore derivatives are denominated in dollars adds to their allure.

#### **Challenges**

- **Sustainability** - Foreign bourses will find other ways to list derivatives linked to Indian stocks and indices without any help from Indian exchanges soon.
- The present move, thus, is unlikely to rein in the vast offshore market for Indian derivatives.
- **Addressing Demand** - Singapore Exchange Limited (SGX) had recently decided to introduce futures on individual stocks that are part of Nifty.
- Incidentally, the SGX's decision to introduce futures was spurred by the SEBI's decision last year to restrict foreign investment in domestic futures.
- While the current protectionism can be seen as a counter to this, it needs to be recognized that offshore markets are simply catering to the unmet demand.

#### **Way Forward –**

- India's policymakers should hence address the structural problems that have caused trading in Indian derivatives to move offshore.

- This would be a far better response than any knee-jerk response favouring domestic exchanges and also boost trading volumes and businesses.

### **Concerns over Indian Stock Market Trade**

**In News:** National Stock Exchange of India Ltd (NSE), BSE Ltd and Metropolitan Stock Exchange has released a joint action agreement.

#### **Trend in Indian derivative market**

- Exchanges as business entities need to promote their products globally or earn index service fees from foreign bourses.
- Indian stock markets has various problems ranging from the non-availability of sophisticated financial products, tax uncertainty, administrative complexity in governing capital flows outside India.
- Due this reasons the volumes in derivative trading based on Indian securities including indices have reached large proportions in some of the foreign jurisdictions.
- This has resulted in migration of liquidity from India, which is not in the best interest of Indian markets.

#### **About Joint action**

- Exchanges used to provide real-time data online through dedicated private, high-speed, leased line circuits.
- Which include licensing indices, prices of Indian securities for trading derivatives on foreign exchanges.
- The three stock exchanges released a joint press statement for terminating existing licensing agreements with overseas exchanges for providing indices and securities-related data feed services.
- The exchanges will also have a clause in contracts with data vendors that any market data shared by the exchange should not be used to trade on foreign exchanges.

#### **Significance**

- SGX (Singapore stock exchange) starts trading a few hours before Indian exchanges, and SGX Nifty futures are generally referred to by traders for early trading decisions.
- Recently SGX started offering single-stock Nifty futures on top 50 Indian stocks, which account for more than a third of the futures volumes on the National Stock Exchange (NSE).
- Foreign portfolio investors use such contracts to hedge their exposure in the cash segment, and moving to Singapore reduces costs as contracts are dollar-denominated and offer tax advantage.
- This decision by SGX to launch single stock futures that has led to the current action by Indian agencies.
- The exchanges, Securities and Exchange Board of India (SEBI) and the finance ministry take this measure to counter SGX's growing market share and concerns that foreign exchanges are becoming price setters for Indian securities.

#### **pitfalls**

- Instead of economic reforms India has taken the path of interfering in Singapore's ability to produce Nifty futures trading.
- The loss will be for the Indian exchanges, who will lose revenues they currently earn from licensing their indices.
- Foreign investors will feel that the cost of doing business in India is high, that policymakers lack sound instincts, and India will further lose appeal in the global community.
- The international finance community will also look for workarounds that undermine the action.
- The action constitutes protectionism, which harms a market (Singapore Stock Exchange, or SGX) that has served global investors well.
- As with all protectionism, this decision favours one industry (the domestic securities industry) and harms the larger economy as the costs of foreign investment into India have just gone up.

## **DEFENCE/SECURITY AFFAIRS**

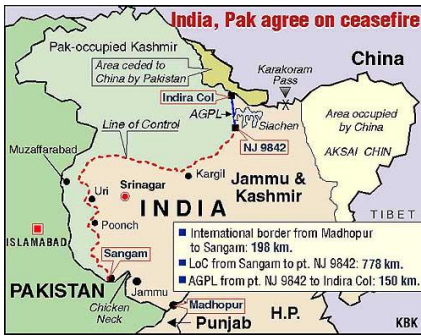
### **Violating India Pakistan Cease Fire Agreement**

**In News:** Four Indian soldiers, including an Army Captain, were killed in the Bhimber Gali sector in cross-border firing.

• This has been a part of a series of violations of the cease fire agreement between India and Pakistan.

#### **cease fire agreement**

- The 2003 cease fire agreement between India and Pakistan came just four years after the Kargil war, and soon after both the countries almost went to war following the December 13, 2001 terrorist attack on the Indian Parliament.
- Pakistan Prime Minister announced a unilateral ceasefire on the Line of Control.



- India accepted Pakistan's offer and suggested including the Siachen heights.
- The ceasefire was eventually extended to the International Boundary.
- It had resulted in a dramatic drop in military casualties, and thousands of border residents had been able to return home from temporary shelters on both sides.

### Present scenario

- The recent casualties are an extension of what has been unfolding along the International Boundary as well as the Line of Control for the past several months.
- The two countries are caught in a spiral of almost daily exchanges of fire along the border.
- 2017 has turned out to be the worst year since the commencement of the agreement, with at least 860 incidents of ceasefire violations recorded on the LoC alone.
- So there is a danger of political rhetoric acquiring its own momentum.
- January 2018 recorded the highest number of ceasefire violations in a month since 2003.
- Thousands of civilians have been forced to flee their border homes.

### Rafale Deal Controversy

**In News:** The Defence Minister refused to share the price details on Rafale purchase, citing the Security Agreement provisions.

#### Rafale aircraft

- Rafale is a twin-engine medium multi-role combat aircraft manufactured by the French company Dassault Aviation.
- Dassault claims Rafale has 'Omnirole'. This is the capability to perform several actions at the same time.
- Rafale can carry out both air-to-ground as well as air-to-air attacks. It can also carry out interceptions during the same flight.
- The aircraft is fitted with an on-board oxygen generation system (OBOGS). It suppresses the need for liquid oxygen re-filling or ground support for oxygen production.

**India to buy French Rafale fighter jets**  
India's defence ministry has announced that it will buy 126 French-made Rafale combat aircraft in a massive \$11 billion deal that will increase the might of the world's fourth largest air force

**Engines**  
Twin SNECMA M88-2 turbofans, each rated at 75kN

**Specifications**  
Length: 15.3m  
Wing area: 46 sq m  
Wingspan: 10.8m

**Type**  
Single / twin-seat multirole fighter

**Entered service**  
December 2000

**Max. take-off weight**  
24,500kg

**Maximum speed**  
Mach 1.8 (1,910km/h)

**Combat radius**  
1,850km

**Armament:** One 30mm cannon with 125 rounds, up to 9.5 tonnes of weapons on 14 hardpoints

**Typical air defence mission:** 6 x Mica air-to-air missiles (AAMs)

**Ground-attack:** 3 x laser-guided bombs, 6 x Mica AAMs

**Nuclear strike:** Nuclear strike stand-off missile, 6 x Mica AAMs

Sources: Airforce-technology, wire agencies  
Picture: Getty Images  
© GRAPHIC NEWS

#### deal

- Indian Air Force (IAF) raised the requirement for Medium Multi Role Combat Aircraft (MMRCA) in 2007.
- This was to replace the aging fleet of MiG aircrafts.
- **Tender** - Tenders for 126 Medium Multi Role Combat Aircraft (MMRCA) fighters were issued by India in 2007.
- It was an open competition between companies including Dassault Aviation of France.
- Dassault was announced as the lowest bidder in 2012.
- **Earlier Deal** - Of the 126 jets required, 18 fighters were to be imported in a fly-away condition.
- Hindustan Aeronautics Ltd (HAL) would manufacture the remaining 108 jets.
- This was agreed to be with Transfer of Technology (ToT) from Dassault.
- **Stall** - India and France were unable to decide on a price for the jets.

- The workshare agreement between HAL and Dassault Aviation was signed in 2014.
- But with the new NDA government in place, clarity on the progress of the deal remained unclear.
- **New deal** - On PM's visit to France in 2015, India's intention to buy 36 Rafale aircraft in "fly-away" condition was announced.
- Defence Minister announced the previous 126 fighter jet deal to be dead.
- Subsequently, the deal for the acquisition of 36 aircraft was signed by the Defence Ministers of India and France in 2016.
- This was done through a government-to-government deal.

#### present concerns

- **ToT** - The current deal has a 50% offset component.
- Accordingly, Dassault will manufacture items worth 50% of the deal in India.
- However, the absence of transfer of technology (ToT) component is raised as an issue.
- Also, no role is guaranteed for any Indian public sector company, including HAL.
- **Deal** - The present deal as direct government-to-government agreement, as against the earlier open tender, is criticised.
- Also, the 36 fighters are said to be purchased at a much higher price than earlier negotiated.

#### dispute with sharing price details

- **Earlier deal** - The previous government's price for 126 aircraft was never finalised, and no contract was signed or executed.
- Hence, no official figure on the price was ever given.
- **New Deal** - Recently, the Defence Minister declined to share the cost of the Rafale fighters under the new deal, with RajyaSabha.
- It was said that the price details were "**classified information**".
- This was as per the **Inter-Governmental Agreement (IGA)** between the Governments of India and France.
- Accordingly, material exchanged under IGA is governed by the provisions of the **Security Agreement**.
- However, in 2016, Minister of State for Defence had shared the price in the Lok Sabha in a written reply.
- The basic price of each Rafale aircraft was said to be around Rs 670 crore.
- At the time of its signing, the 36-aircraft deal was said to be worth around Rs 59,000 crore.

#### Security Agreement

- **Security** - Signed between the two nations in 2008, it has some confidentiality provisions.
- It relates to Protection of Classified Information and Material in the field of Defence.
- For any contract or sub-contracting contract with classified information and material, a security annex shall be drawn up.
- The competent security authority from the information forwarding party shall specify what has to be protected by the receiving party.
- **Renewal** - It was specified that the Agreement shall remain in force for a period of 10 years.
- It shall be renewed by "tacit consent" for new 5-year period.
- Accordingly, the agreement will continue unless one of the Parties notifies its intention to not renew.
- This has to be given in writing 6 months prior to the end of the current period of validity.
- The initial 10-year life of the Agreement signed in 2008, ended on January 24, 2018.
- It is not clear if it has been renewed by tacit consent by the government.

#### Parliamentary procedure

- It has generally been the practice to share the cost of defence deals with Parliament.
- However, in some cases, the details have been kept secret for reasons of national security.
- Nevertheless, the government is duty-bound to share the pricing details with Comptroller and Auditor General (CAG) and the Public Accounts Committee (PAC) of Parliament.

## ENVIRONMENTAL AFFAIRS

### **Asian Water-bird Census**

#### Context:

- Asian Water bird Census (AWC) that surveys sites across 23 countries (including Australia) was recently conducted.
- The trends highlight the dangers facing water birds and their habitats.

#### migratory bird landscape

- Every winter, the thousands of wetlands that dot India, transform from muddy slips of water to harsh bird parties.
- Ducks and geese from Ladakh and Tibet swim through aquatic vegetation, and wader on half-submerged banks, and 'oriental darters' spear the water for fish.
- While the data for the current census isn't out yet, the census by energetic citizens over the years has pointed to some clear trends.

- India has the biggest species diversity among the regions sampled by AWC, tallying to a mean figure of 1.8 million water birds over 300 sites.
- Chilika Lake in Odisha alone supports a staggering half-a-million water birds.
- Most of these water birds are migratory and winter in India's wetlands.
- For instance, the bar-headed goose, breeds in Mongolia, Tibet and Kyrgyzstan and crosses the Himalayas and Hindu Kush to reach India.

#### **Declining numbers**

- There has been a noticeable decline in several species visiting India over the years, which is concerning.
- The Oriental darter (long necked), which was once a common sight in many wetlands, numbered just 4,000 in the sites that got surveyed currently.
- The Indian skimmer (with a bright orange bill) — which can 'skim' over water to snap up fish, were counted to be just 300.
- Sarus crane, the world's tallest flying bird, often found in pairs or small groups, accounted for as little as just about 100 birds over several years.
- These are mainly because, the wetlands, which are cherished equally by local residents, and birdwatchers are in peril.

#### **Wetlands International**

- Wetlands International coordinates the International Water bird census of which Asian Water bird census is an integral part.
- It is a global not-for-profit organization dedicated to the conservation and restoration of wetlands.
- It is one of the International Partner Organizations of the Ramsar Convention.
- It was formerly known as International Waterfowl & Wetlands Research Bureau (IWRB) and their scope included the protection of wetland areas.

#### **status of wetlands in India**

- The National Wetland Atlas, prepared by the ISRO in 2011, found that India has over 2 lakh wetlands, most which aren't notified as such.
- They thus run the risk of being destroyed and many court cases across the country reflect the precarious existence of wetlands.
- The iconic East Kolkata Wetlands, which is also designated 'Ramsar wetland' of international importance, is being steadily eaten up by construction.
- Like in many cities, this wetland too is becoming a sewage canal, and a case has been filed with the National Green Tribunal (NGT).
- In Delhi-NCR, birdwatchers have filed a case to protect the Basai wetland, which is fed by sewage but continues to harbour almost 300 bird species.
- Similar cases were also filed to conserve Najafgarh (a riverine wetland).
- Also, Sukhna Lake in Chandigarh, DeeporBeel in Guwahati, and the lakes in Nainital, are all choked by sewage, garbage and encroachment.
- Notably, the new "Wetland (Conservation and Management) Rules, 2017" has made matters worse as it denounces manmade water bodies as wetlands.
- The previous rules had stated that manmade water bodies like tanks and salt pans are also wetlands (these do support bird populations in reality).

#### **Way Ahead**

- The census clearly indicates that several water bird populations in the Central Asian flyway (comprising migratory routes) are declining.
- Urgent national and regional action is needed to reverse this trend and hundreds of wetlands in India are in need of identification and notification.
- India was an active participant in the 2017 Conference of the Parties to the "Convention on the Conservation of Migratory Species of Wild Animals".
- It even offered to initiate consultations for the creation of a "Central Asian Flyway Action Plan" to Conserve Migratory Water birds and their Habitats.
- The vision of the action plan is to reduce threats to waterfowl and conserve wetlands while also tackling threats such as power lines and windmills.

### **An Unequal Adaption to Climate Change**

#### **Context:**

- There are on-going efforts to reduce greenhouse gas emissions and restrict global warming to below 2°C or even below 1.5°C.
- Simultaneously, there are also efforts in many countries on projects developing adaptation techniques to cope with rising average global temperatures.

#### **problem with Adaptation Projects**

- Many adaptation projects study what climate impacts are expected, what kinds of vulnerabilities exist locally and how these can be addressed.

- But a 2010 survey covering over 1,700 projects concluded that adaptation projects were mostly elite centric and didn't focus on the vulnerable.
- The 'Global Adaptation Fund', managed by the UN climate secretariat also runs projects to assist developing countries adapt to climate adversaries.
- Even these projects were not accounting for unequal power structures, with the well-off cornering most of the limited allocated resources.
- When failures of adaptation projects were studied, most of it fell into one of the four main headers that were discovered.

#### **four headers**

- The first is enclosure, which is when private agents acquire public assets or expand their authority over them, to the deprivation of the rest.
- Exclusion is the second mode of failure, which is associated with some stakeholders getting excluded or marginalised in the scheme of things.
- The third is encroachment, in which the adaptation actions undertaken during the project end up intervening in areas that are rich in biodiversity.
- This thereby interferes with the ecosystem's natural services and often results in an increase in greenhouse gas emissions.
- The last is entrenchment, where the condition worsens for those who are already disempowered or marginalised in the local social context.
- This includes the poor, women or other minorities and the disabled.

#### **Classification of the projects**

- There are various examples of projects from both developing and advanced industrial countries that fail under these themes.
- A private desalination plant was constructed in Melbourne (Australia), by government seizure of land from the Binturongs aboriginal community.
- In Norway, the representation of community organisations and environmental groups were low during the coastal planning process.
- Hence, their concerns, ideas and aspirations couldn't be voiced effectively.
- In Alaska, the Army Corps and private contractors built a barrier against the sea even though this was against the wishes of the local community.
- In Tanzania marine protection areas were set up to boost the resilience of coral reefs by encroaching on the lands of traditional fishing communities.
- Interestingly, this forced them to turn resort to energy-intensive farming for a livelihood, which led to higher rates of greenhouse gas emissions.
- Disaster relief funds provided to cities first led to crises in rural communities in Kenya and also led to political unrest.
- Notably, all these situations may also result in multiple harmful effects, and can be classified under multiple headers.

#### **Excessive stress on Tech-centric solutions**

- There has been a tendency to identify climate impacts and then regard technology as the straightforward solution.
- For example, use drip irrigation or watershed development to increase water availability, or building barriers along the shore for protection from storms.
- The problem in such an approach is that the 2<sup>nd</sup> order ramifications and worsening of social and political conditions of the masses are usually ignored.
- Thus, adaption projects, in addition to vulnerabilities and costs, should also consider justice and social hierarchies in its very design.
- Otherwise, existing social, economic, ecological and political problems might get aggravated.

#### **way forward**

- Power struggles to control resources need to be acknowledged as indispensable and mechanisms to anticipate and deal with them correctly needs to be built.
- These are needed to prevent elitist capture of resources as land, water and other privileges like being involved in decisions needs to be shared with all.
- A thorough analysis of stakeholders' interests and power relationships between allies and competitors are hence vital in adaptation projects.
- **India's case** - India is a deeply stratified society with entrenched elite networks and growing levels of inequality and a burgeoning population.
- Additionally, multiple adaptation projects are being carried out in India, considering its geography and particularly significant climate vulnerability.
- Hence, anticipating problems and trying to reduce the adverse effects with the ultimate aim to reduce the effects of global warming are needed.

**In News:** The Northwest, Central and Western India are likely to experience less temperatures and spell of showers for few more days.

**present weather condition**

- Recently India Meteorological Department (IMD) reported fairly widespread precipitation across Punjab, Haryana, Uttar Pradesh, Madhya Pradesh, and Maharashtra's Vidarbha and Marathwada region.
- There were also reported snowfall in Jammu & Kashmir, Himachal Pradesh and Uttarakhand.
- This showers are due to the interaction of western disturbances (cyclonic storms originating in the Mediterranean) and low-level easterlies.
- The current spell of rain in North and Central India will be beneficial to the standing Rabi crop, especially wheat.
- Minimum temperatures are also likely to come down by 2-3 degrees Celsius in Northwest, Central and Western India for few more days.

**help for Rabi crops**

- Usually till the last week of January both maximum and minimum temperatures will be at above normal levels in most wheat-growing areas.
- Generally this weather helps to prevent diseases like stem rot, white rust, blight, frost or aphid attacks etc. which take place during low or high temperatures, along with high humidity.
- For the crops is in the pre-flowering stage, and the light showers will help bring down temperatures, and provide much-needed water.
- The flowering transfer of pollen from the male to female parts of the flower) of the crop in northern and north-western India happens towards the last week of February.
- This ends with seed setting, and is followed by the "dough", or grain-filling, stage from mid-March.
- Even in the grain-filling stage, day temperatures should not ideally cross the low 30s, so that the starch material accumulates gradually in the kernel for it to become hard and ripe for harvesting from mid-April.

**Farmer's concerns**

- The present light showers also create few concerns over chickpea and lentils that are in the maturity or harvesting stages.
- Apart from that farmers and scientists are worried about a recurrence of March 2015, which saw unseasonal heavy rain, accompanied by strong winds and hailstorms, in large parts of North, West and Central India.
- The Rabi crop that was either in the grain-filling stage, or lying in the fields after harvesting, suffered massive damage.
- If rain is followed by sunshine, there can be grain shattering (dispersal before pod ripening) and harvesting losses.
- But any such concern is currently limited mainly to the pulses crop, particularly in Maharashtra and MP.

**State of Forest Report (SFR 2017)**

**Context:**

- 'India State of Forest Report 2017', which was released by Environment Ministry, shows that there have been some positives.
- We must refine the strategy to further revive forests in totality – which requires moving away from monoculture plantations.

**SFR 2017**

- SFR is a biennial report published by Forest Survey of India (FSI), which is under the Ministry of Environment.
- The latest report states that, India posted a marginal **0.21% rise** in the area under forest between 2015 and 2017.
- The document says that India has about 7, 08,273 square km of forest, which is **21.53% of the geographic area** of the country.
- The top five States where maximum forest cover has increased are Andhra Pradesh, Karnataka, Kerala, Odisha and Telangana.
- India's northeast showed a decrease in the forest cover.
- The **five States where forest cover has decreased** most are Mizoram, Nagaland, Arunachal Pradesh, Tripura and Meghalaya.
- The main reasons for the decrease are shifting cultivation, other biotic pressures, rotational felling, diversion of forest lands for developmental activities, submergence of forest cover, agriculture expansion and natural disasters
- **Madhya Pradesh** has the **largest** forest cover in the country **in terms of area**, followed by Arunachal Pradesh and Chhattisgarh.
- In terms of **percentage of forest** cover with respect to the total geographical area, **Lakshadweep** has the highest forest cover, followed by Mizoram and Andaman and Nicobar Island.
- The survey, which has for the first time assessed water bodies, said that during last decade, the area under water bodies is increased by 2647 sq.km.

**Cause for concern**



- The environmental policy that envisions raising forest cover to 33% of the geographical area in the long term has yielded some dividends.
- Based on satellite imagery, 'India State of Forest Report 2017', and shows that 24.4% of India's land area is under some form of forest or tree cover.
- This means that the forest and tree cover together registered a 1% rise over the previous estimate two years ago.
- However, these estimates are mere remote sensing data don't really provide deep insights into the integrity of the green areas.
- Notably, the qualitative difference between "very dense, moderately dense, and scrub forests" needs further scientific pondering.
- Also, mere tree cover is not the same as having biodiversity, and mono-culture plantation cater more to commercial industrial needs than to nature.
- Recreating forests akin to the previously undisturbed assemblage of plants, trees and animals, is what would constitute a comprehensive revival.

#### **Glitches in the present approach**

- **Economics** - Some have come to regard the calculation of national income accounts (GDP), wealth generation and development as weak.
- This is because the degradation of forests and the consequent loss of their natural services such as climate moderation aren't accounted for.
- Notably, forest degradation erodes the gains made by many communities, because lost natural capital eventually contributes to material losses.
- Hence, developmental activities need to be environmentally sensitive.
- **Compensating Losses** - The Ministry's report has calculated a cumulative loss of forests in Mizoram, Nagaland and Arunachal of nearly 1,200 sq km.
- The impact of such a terrible loss must be seen against the backdrop of the Northeast representing a global biodiversity hotspot.
- Hence, remediation programmes elsewhere, like in Odisha, or Himachal cannot adequately compensate for biodiversity losses in the Northeast.

#### **Way forward**

- India must move away from monoculture plantations that are presently favoured by even forest development corporations in many States.
- Scientific reviews to bring true natural forests with its biodiversity intact are needed, which is more than merely increasing the number of trees.
- Presently, more than 300,000 sq km of area is open forest with a tree canopy of 10-40%, which can be capitalised to drive the revival program.
- Such actions, combined with a policy against open cast mining, and efforts to protect the precious Northeast forests can bring about a forest renaissance.

### **Ratification of Minamata Convention**

**In News:** The Union Cabinet has approved proposal for ratification of Minamata Convention on Mercury and depositing instrument of ratification enabling India to become Part of Convention.

- The approval entails ratification of convention along with flexibility for continued use of mercury-based products and processes involving mercury compound up to 2025.

#### **Minamata Convention on Mercury**

- The Convention is global treaty that aims to protect human health and the environment from anthropogenic emissions and releases of mercury a mercury compounds.
- It derives its name after Japanese city Minamata which had went through devastating incident of mercury poisoning.
- It aims to control anthropogenic releases of mercury throughout its lifecycle.
- The Convention was agreed at 5th session of Intergovernmental Negotiating Committee on Mercury in Geneva, Switzerland in January 2013 and was adopted in October 2013 at Diplomatic Conference (Conference of Plenipotentiaries), Kumamoto, Japan.

#### **Obligations on Parties of Convention**

- Ban on new mercury mines, the phase-out of existing ones.
- Phase out and phase down of mercury use in a number of products and processes.
- Control measures on emissions to air and on releases to land and water.
- Regulation of the informal sector of artisanal and small-scale gold mining

#### **Significance of Convention**

- It is implemented in context of sustainable development agenda with objective to protect human health and environment from anthropogenic emissions and releases of mercury and mercury compounds.
- It addresses interim storage of mercury and its disposal once it becomes waste, sites contaminated by mercury as well as health issues.
- It protects most vulnerable from the harmful effects of mercury. It also protects the developmental space of developing countries.
- Therefore, protect interest of the poor and vulnerable groups.

- It further urges enterprises to move to mercury-free alternatives in product and non-mercury technologies in manufacturing processes.
- This will drive R&D, and promote innovation.

### Mercury pollution

- Mercury is global and ubiquitous metal that occurs naturally and has broad uses in everyday objects.
- It is released to the atmosphere, soil and water from a variety of sources such as burning coal for power plants, waste from industrial and medical products like batteries, measuring devices, such as thermometers and barometers, etc., extraction of minerals (smelting of gold electric switches and relays in equipment, lamps (including some types of light bulbs) etc.

### Harmful effects

- According to WHO, Mercury is considered as one of top ten hazardous chemicals of major public health concern.
- Once released into environment mercury bio-accumulates and bio-magnifies in food chain and easily enter human body.
- It has toxic effects on nervous, digestive and immune system and on lungs, kidneys, skin and eyes. Exposure to even small amount of mercury may cause serious health problems.
- It is threat to the development of child in utero and early in life.
- It may also cause skin rashes and dermatitis.
- Mercury is the only metallic element that is liquid at standard condition for temperature and pressure.

## Flue gas desulphurization system

**In News:** The state owned BHEL has bagged major order from the NTPC for setting up of flue gas desulphurization (FGD) system at Nation Capital Power Station (capacity 2×490 MW) at Dadri Uttar Pradesh.

### Key Facts

- The order involves installation of an indigenously developed FGD system NTPC power station.
- The system is aimed at controlling various harmful emissions, as per stringent emission norms declared by the Union Ministry for Environment and Forests and Climate Change (MoEFCC).
- It will be the 13th order for desulphurization unit being executed by BHEL a part of Make in India programme and Intended Nationally Determine Contributions scheme to reduce carbon footprint.

### Flu-Gas Desulfurization (FGD)

- FGD is a set of technologies used to remove sulphur-dioxide (SO<sub>2</sub>) from exhaust flue gases of fossil-fuel power plants, as well as from the emissions of other SO<sub>x</sub> emitting processes.
- Common methods used in it are wet scrubbing method, Wet and Dry lime scrubbing method, Spray-dry scrubbing method, SNOX method, Dry sorbent injection method, etc.
- For a typical coal-fired power station, FGD system may remove 90% or more of the SO<sub>2</sub> in the flue gases.
- SO<sub>2</sub> emissions are a primary contributor to acid rain and have been regulated by every industrialized nation in the world.

### Flue Gases

- Flue Gases is mixture of gases produced by combustion of fuel and other materials in power stations and various industrial plants and released via flue (ducts) in atmosphere.
- It largely contains oxides of nitrogen derived from combustion of air, sulphur-oxides, carbon dioxide, carbon monoxide, water vapor, excess oxygen, particulate matter like soot.

## Three new eel species discovered

**In News:** Scientists from Zoological Survey of India (ZSI) have discovered three new species of eel along northern Bay of Bengal coast.

They are *Gymnothorax pseudotile*, *Gymnothorax visakhaensis* and *Enchelycorepropinqua*.

### Gymnothorax pseudotile:

- It was discovered at the Digha coast of the Bay of Bengal.
- It has dark brown and white dots on the dorsal side.
- It is about 1 foot to 1.5 feet long.

### Gymnothorax visakhaensis:

- It was discovered from the Visakhapatnam coast of the Bay of Bengal. It is uniformly brown. It is about a foot long.

### Enchelycorepropinqua:

- It was also discovered from Visakhapatnam coast. It has reddish brown body mottled with irregular creamy white spots.
- It is the smallest of three measuring less than a foot.

### Eels

- Eels are found mostly at bottom of rivers and seas. There are about 1,00 species of eels identified so far across the world.
- In India, there are around 12 species of eels identified.
- Eel species belonging to Muraenidae family, referred commonly as Moray eels, recorded about 200 species of which more than 3 species are found in India.
- Recent Discoveries With these new discoveries, Bay of Bengal coast has yielded at least 5 new species of eel.

- In 2016, *Gymnothorax indicus*, an edible species of eel was discovered. In 2015, a short brown unpatterned moray eel, name *Gymnothorax mishrai* (Bengal moray eel) was discovered.

### **ASH TRACK App**

- Union Minister of State for Power and New & Renewable Energy launched a Web based monitoring System and a Fly Ash mobile application named ASH TRACK.
- The Platform will provide a better interface between fly ash producers (Thermal Power Plants) and potential ash users such as – road contractors, cement plants etc.
- Fly ash, the end product of combustion during the process of power generation in the coal based thermal power plants.
- It is a proven resource material for construction industries and currently is being utilized in manufacturing of Portland Cement, bricks/blocks/tiles manufacturing, road embankment construction and low-lying area development, etc.
- Now the usage of flyash stands at 63% and the aim is to raise to 100 %.

### **White -naped tit bird**

- White-naped tit was the centre of attention at the 21st Indian Birding Fair, Jaipur.
- White-Naped is a robust, strongly patterned, mainly black-and-white coloured bird with yellow in the flanks and sides of the breast
- The white-naped tit (*Machlolophus nuchalis*) is endemic to India where it is found in dry thorn scrub forest in two disjunct populations, in western India and southern India.
- International Union For conservation of nature (IUCN) classifies the bird as **vulnerable**.
- The Bird is considered vulnerable to extinction because of the scarcity of suitable habitats.

## **BIO/ HEALTH ISSUES**

## **TECHNOLOGICAL AFFAIRS**

### **Challenges with Sustainability of Electric Vehicles**

**In News:** About 50 new electric vehicles have been launched in Delhi Auto Expo 2018.

#### **Significance of the EVs**

- The reduction in the per-kilometre cost of driving electric cars as compared to those based on fossil fuels is highly possible.
- As diesel and petrol become more expensive electric vehicles becomes more accessible and affordable.
- EVs produce less carbon and less of the suspended particulate matter that causes local air pollution.

#### **governmentstand**

- Union Road Transport Ministry is ambitious to transform 100 per cent of passenger vehicles to be electric by 2030.
- The union government is boosting the production by mooting manufactures to do so.
- By this the government don't want petrol and diesel vehicle manufacturing to stop.
- The government senses that EVs would become popular among consumers, if the commuting cost for the public comes down.

#### **practical challenges**

- In India the infrastructure required for electric vehicle transition is not in place.
- Preferential parking, Low-cost and accessible charging stations, are yet to become ubiquitous in Indian cities.
- In order to transform the vehicle industry government has not taken any path breaking initiatives.
- Instead of introducing service led electric vehicle transitions India is following consumer-first approach and passenger vehicle fleet.
- To reduce carbon emissions India is choosing electricity as an alternative which is already a carbon source.
- Thus government must concentrate more on affordable, environmentally sustainable and efficient public transport system than a focusing on EVs.

### **Privatising the Space Sector**

**Context:**

- Elon Musk's "SpaceX" and its high profile projects have highlighted the increasing significance of the private players in the space sector.
- This has also opened up debates on the possible horizons of future explorations and the need for regulatory reforms in the sector.

#### **SpaceX's latest milestone**

- SpaceX recently launched a car into space that is headed towards the asteroid belt with a dummy strapped in the driver's seat.
- The silliness has indeed managed to capture the imagination of the masses, which could be put to further advance research.
- The car was launched through the reusable "Falcon Heavy" rocket (currently, the most powerful launcher) from NASA's Kennedy Space Centre.
- As it is reusable, it has contributed significantly to bring down costs by enhancing launch capacity by 64 tonnes at the low price of merely \$90 million.
- This project is in line with current decadal trend of the increasing role of private sector in space exploration.

#### **Falcon Heavy**

- Falcon Heavy is a reusable super heavy-lift launch vehicle designed and manufactured by SpaceX, a private American aerospace manufacturer.
- Its first test flight carrying a red sports car was successfully launched from Florida pad used by NASA.
- It is the most powerful operational rocket in the world.
- It can lift about twice the payload at one third of the cost by Delta 4 rocket which was the most powerful rocket till now.
- This lift capacity allows to launch heavier satellites into low Earth orbit, or reach higher geostationary orbits to keep station over the same part of Earth.
- Its three first-stage boosters are designed to be reusable.

#### **role of the private sector**

- Private sector companies have operated in the space sector since the 1980s in most of the elite space club countries.
- In India, despite the various strategic, security and regulatory constraints, a private ecosystem has evolved around the ISRO.
- But there is a substantial difference between older business models and what Musk and the new-gen space entrepreneurs have been attempting lately.
- Previously, private were merely contracting with national space agencies to build satellites and subsystems.
- Contrarily, the current trend is developing entire vertically integrated operations without licensing or purchase agreements with national agencies.
- This has also triggered diversity in ambitious targets, with Musk envisioning mass exploration and companies like Amazon envisioning space tourism.
- While most of these targets are indeed overstretched in the current scenario, and involve multiple risks, the vision does indeed hold potential sway.

#### **new potential areas**

- Some have argued that liberalising space access to private would unleash a new leap-frog moment in technological progress like the "internet revolution".
- Entrepreneurial energy in the sector is already starting to combine, with even start-ups competing for privately conceived projects by larger space firms.
- The rush to enhance internet connectivity for the masses is also a significant "demand oriented pull factor" for increased commercial interest in space.
- This is already driving the need to commission massive constellations of small communications satellites in the "Lower Earth Orbit".
- Asteroid mining is also another potential area that looks promising, with scope for monetization and disrupting commodity markets.

#### **regulatory framework**

- There hasn't been much progress in this domain as space activity is still governed by the 1967 Outer Space Treaty.
- This bars state actors from militarizing or claiming celestial bodies and calls upon them to regulate all private sector activity within their borders.
- Most countries including the US and India haven't yet comprehensively understood the evolving trends and regulatory reforms needed in the sector.
- But Luxembourg is already envisioning as an asteroid mining hub and has passed a law passed recently to establishing the necessary legal frameworks.
- This might give it the first mover's advantage and India too needs to urgently capitalise on its private sector's potential to make significant gain.
- **India's Case** - India even lacks an independent body that can create a level playing field for government and private space enterprises.

- But there are signs of progress, and a few months ago, the “Department of Space” had published a draft “Space Activities 2017 Bill” for public comments.
- While the bill fails to take the substantially different requirements of various space-related activities on board, it is indeed a start in the right direction.
- India has the public and private sector potential to exploit first-mover advantage—if it addresses the private sector space race with more urgency.

## **A Moon Trip that Failed to Take-off**

### **Context:**

- An agreement was made between Antrix Corporation (commercial arm of ISRO) and a start-up Team Indus on a mission to moon.
- Recently that project was called off due to some practical difficulties.

### **About agreed mission**

- Google Lunar XPrize was contest which was to soft-land a spacecraft on the moon, and move a robotic rover for 500 metres on the lunar terrain.
- It was also demanded that the robot must send videos and pictures from there all this before March 31, 2018.
- It was mandated that each team must be at least 90% private-funded.
- In 2007 a Bengaluru based start-up TeamIndus conceived the moon-landing contest, this made corporate icons and about 70-odd individuals to bless TeamIndus and put their money in it.
- Some of ISRO’s retired brains, who had led its 2008 Chandrayaan-1 and Mars orbiter missions, were roped in to achieve the mission
- TeamIndus also won an encouraging milestone prize of \$1 million from google.
- In December 2016, it also found timely space transport through ISRO’s PSLV rocket.

### **Cause of failure**

- About 100-plus young engineers for over seven years were working for this project but the project was failed.
- It noted that the teams could not raise the funds they needed, they also ran into technical and regulatory difficulties.
- It needed another six months to raise the money for hardware imports for the spacecraft and the rover.
- The landing spacecraft and the rover should have been sent to the ISRO for flight qualification clearance about six months before the launch date. TeamIndus was nowhere near it.
- Antrix and TeamIndus, which are contract-bound not to disclose details of the deal, have not clarified the whispers around the cancelled launch.

### **constrains in funding a space project**

- Pioneering state-funded lunar landing missions of the U.S. and the former Soviet Union did not succeed at first shot, the Google Lunar XPrize itself conceded a private-funded “moonshot” is not easy.
- TeamIndus raised about half of the \$60-65 million (around Rs.400 crore) it needed to complete the mission, new investors did not appear enthused.
- Space travel costs are high even it is a ride on an internationally economical PSLV.
- It may have cost TeamIndus Rs.150-200 crore plus insurance to launch its 600 kg spacecraft.
- TeamIndus was to pay Antrix in instalments and clear the entire sum before the launch but the company was only able to pay its 1<sup>st</sup> instalment.

## **UK allows doctors to create three-parent babies**

In News: Britain’s fertility regulator Human Fertilization and Embryology Authority (HFEA) has allowed doctors to create country’s first ‘three-parent’ baby through mitochondrial donation therapy (or MRT).

- The move is aimed at preventing passage of incurable genet diseases from mothers to offspring.
- The procedure will use MRT for the women having neurodegenerative disorder genes which cause problem with movement or mental functioning.

### **Mitochondrial Replacement Therapy (MRT)**

- MRT or Mitochondrial donation is medical technique in which defective mitochondria carried by a woman is replaced with the healthy mitochondria a donor.
- Through invitro fertilization technique (IVF), the egg is then fertilizing with the partner’s sperm.
- Thus the embryo remains free from any such defect
- The two most common techniques in mitochondrial donation are maternal spindle transfer and pronuclear transfer.
- UK was first country to officially pass law to allow three parent babies. But procedure was successfully tested Mexico, giving birth to world’s first three parent baby in September 2016.

### **Benefits**

- It will prevent transmission of mitochondrial (genetic) disease from one generation to the next. It will give parents chance of having a child that is over 99% genetically matched to them and most importantly free of the mitochondrial disease.
- It has no impact on personality or looks of the offspring from third DN set, as surrogate mitochondrial DNA is separate from core DNA in cells.

## Thermal Spray Coating Technology

**In News:** National Aeronautics and Space Administration (NASA) is interested in new India-made thermal spray coating technology used for gas turbine engine in spacecraft.

- It has been developed by Dr. Satish Tailor, Rajasthan based researcher working with Jodhpur-based Metallizing Equipment Company (MEC).

### Key Facts

- The technology is called controlled segmented Yttria-Stabilised Zircon (YSZ)-Plasma sprayed coating technology.
- It has potential to reduce thermal spray coating cost by almost 50%.
- It develops vertical cracks (segmentation) coating, beneficial for gas turbine engine application used in spacecraft.
- The new technology has advantage over current, costly techniques such as SPS or EB-PVD deposited coatings.
- These present technologies develop such cracks through very expensive processes (in several crore) and are not controllable.

### Significance

- The YSZ thermal barrier coatings produced by atmospheric plasma spray (APS) technique have potential of wider industrial and strategic acceptability.
- It can be industrially adopted to make a strain-tolerant coating more economical.

### Thermal Spray Coating Technology

- Thermal spray coating refers to number of processes in which substrate coated to improve functional performance.
- It involves the deposition of coatings from stream of high velocity finely divided particles in molten or semi-molten state impinging onto the substrate.
- Many types of coating materials can be applied by thermal spray processes.
- These coatings can range in thickness from thousandth of inch up to eighth of inch.
- Thermal spray coatings are used to protect parts from wear, abrasion corrosion, high temperatures, etc. and also to build dimensions on undersize parts.

### Rotavac: First India- vaccine to pass WHO test

**In News:** Rotavac became first indigenously developed vaccine from India to be pre-qualified by World Health Organisation (WHO).

- It means that vaccine can be so internationally to several countries in South America and Africa.
- So far, several vaccines from India have been pre-qualified by WHO, but Rotavac is first vaccine entirely developed locally to get this status in safety and efficacy.

### Rotavac

- Rotavac conceived and developed by the Hyderabad-based Bharat Biotech Limited.
- It protects against childhood diarrhoea caused by the rotavirus.
- It was developed under the joint collaboration between India and United States area of medical research.
- It was developed under public-private partnership (PPP) model that involve Ministry of Science and Technology, institutions of the US Government and NGOs in India supported by Bill and Melinda Gates Foundation.
- The vaccine was built on strain of the virus isolated at the All India Institute of Medical Sciences (AIIMS), New Delhi over 30 years ago.
- It has been included India's national immunization programme.
- The vaccine was tested in field for over a year, have not shown any negative effect.

### Significance

- This recognition signifies credible industrial, scientific and regulatory process in place to develop vaccines in India.
- It paves the way for health and humanitarian organizations such as UNICEF, GAVI and Pan-American Health Organization to procure Rotavac for public health vaccination programme across the world.

### Rotavirus

- It is a most common causative agent of moderate-to-severe diarrhoea (MSD) among infants below 11 months age group in India.
- It spreads from person to person due to bacterial and parasitic agents that are primarily transmitted through contaminated food or water.
- It is responsible for estimated 36% of hospitalizations for childhood diarrhoea around world and for estimate 200,000 deaths in low- and middle-income countries.
- In India, diarrhoea caused by rotavirus, kills nearly 80 thousand children under age of 5 years and up to 10 lakh hospitalizations each year.

## MISCELLANEOUS

### **Theatre Olympics in India**

#### **Context:**

- Starting in Greece in 1995, Theatre Olympics fest has since been held across the world every few years since 1995.
- The 2018 edition will be hosted by India (the first time in the country) and Preparations for the same are on in full swing.

#### **Global Theatre Olympics**

- The Vice President of India will inaugurate the 8<sup>th</sup> Global Theatre Olympics in New Delhi.
- The theatrical extravaganza is being hosted for the first time in India by the National School of Drama under the aegis of Ministry of Culture, Government of India.
- The theme of the 8th Theatre Olympics is “**Flag of Friendship**”.
- It aims to bridge borders and bring people of different cultures, beliefs and ideologies together through the medium of theatrical art.
- The Theatre Olympics was established in 1993 at Delphi, Greece.

#### **Theatre Olympics**

- Greek theatre director ‘Theodoros Terzopoulos’ conceptualised Theatre Olympics and it was held for the first time in Delphi, Greece.
- The idea was to gather the best theatre practitioners from around the world and create a forum for exchange — of ideas, cultures, forms and practices.
- It was also to be another kind of exchange, between eras, trying to find a continuum between the past, present and future of theatre.
- The current edition in India is being organised by the National School for Drama (NSD), which is an autonomous body under the ministry of culture.
- This event will see numerous Indian and foreign drama troops performing across multiple cities over the course of the fest.

#### **History of Indian theatre**

- India has had a rich theatre history as early as 200 BCE and saw the likes of Kalidasa and Bhavabhuti, Sudraka and Bhasa producing masterpieces.
- Simultaneously, there is an equally fertile landscape produced tribal, subaltern and folk theatre that morphed and thrived down the ages.
- The anti-colonial theatre of the mid-19th century brought in the draconian Dramatic Performances (Prevention) Act of 1876.
- Later, the pre-Independence Left movement generated vital critical energy through the Indian Peoples Theatre Association.
- But our long theatrical tradition hasn’t been sufficiently exhibited to our own people and the “Indian theatre needs a push, to become vibrant again.
- Thus, the Olympics being envisaged is not just about bringing international theatre to India but also about bringing Indian theatre to Indians.

#### **concerns**

- There is considerable concern on how the festival will respond to political dissent, Dalit concerns or other controversial topics.
- Notably, there is no censorship and a mere guideline against “nudity and anti-nationalism” has been provided.
- Plays were selected through a two-tier process and most plays were submitted on DVD, many of which were of poor quality (due to small regional groups).
- The sheer numbers and content diversity often hindered the review process, and also language and cultural barriers got aggravated by distance.
- The review format also tends to neglect thoughtful, text-based plays and also results in loss of context and local traditions, which are lost in translation.
- Notably, Germany has a hefty theatre culture, and each play usually comes with a booklet that gives an overview of the contextual setting and its customs.

#### **hoped out of the festival**

- Theatre Olympic is a massive effort, but mere massiveness alone can do little to help theatre, although it need not be dismissed completely.
- This event can potentially become the very first theatre census conducted in the country, and can serve as an invaluable research project.
- There will be Catalogues, brochures, papers, videos, a documentary, and live streaming of the recordings of thousands of hours of performances.
- The extensive documentation planned around the Olympics, thus, stands to become its single most significant legacy.
- This will also help in increasing networking of various drama teams and provide the much needed oxygen for the currently struggling art form.

- This event will also boost awareness and therefore theatre infrastructure.

## INSHORT

### MLCR

- The **Marginal Cost of Funds-based Lending Rate (MCLR)** refers to the minimum interest rate of a bank below which it cannot lend.
- The MCLR was introduced in April 2016, replacing the existing base rate system.
- Reserve Bank of India will link the base rate with the Marginal Cost of Funds based Lending Rates (MCLR).
- RBI decided to shift from base rate to MCLR because the rates based on marginal cost of funds are more sensitive to changes in the policy rates.

### Operation Cactus

- In 1988 a group of Maldivians led by Abdullah Luthufi tried to overthrow then Maldivian Government.
- The attempt was a failure due to the intervention of the Indian Armed Forces.
- The operation was code named as Operation Cactus.
- INS Godavari and Betwa were used by the Indian Navy in the operation

### The Great India Blog Train

- It is the **Social Media Key Influencer campaign** of Ministry of Tourism
- It involves the Bloggers across the world and they are invited to travel to destinations in the country on the Luxury Trains operating in different States.
- The objective of the campaign is to position luxury trains of India as a unique tourism product both in the domestic and overseas markets

### Railway development Authority

- Rail Development Authority will help the Indian Railways take decisions on pricing of services, consumer interests, generating revenue and competition.
- Government has approved formation of a Rail Development Authority (RDA) comprising Chairman and three Members.
- The objective underlying RDA is to get expert advice/make informed decision on
  1. Pricing of services commensurate with costs.
  2. Suggest measures for enhancement of Non-Fare Revenue.
  3. Protection of consumer interests, by ensuring quality of service and cost optimization.
  4. Promoting competition, efficiency and economy.
- Other than the above-mentioned objectives the authority also deals with resource allocation, setting service benchmark etc.,

### ENCORE

- The **Eastern Naval Command Operational Readiness Exercise (ENCORE)**, Theatre Level Readiness and Operational Exercise concluded on the Eastern Seaboard by the Indian Navy and Indian Air Force aircrafts.
- The exercise was conducted in phases to test various facets of war-fighting capabilities of the combat units.
- The exercise was conducted in real time covering a vast expanse of Indian Ocean Region (IOR)

### Galapagos

- The rising tourist arrival to Galapagos Island puts pressure on this fragile volcanic archipelago.
- The Galapagos Islands, part of the Republic of Ecuador, distributed on either side of the Equator in the Pacific Ocean surrounding the centre of the Western Hemisphere.



- The island inspired Charles Darwin's Theory of evolution and was his field of study.



- The Islands and their surrounding waters form the Galapagos Province of Ecuador, the Galapagos National Park, and the Galapagos Marine Reserve.
- UNESCO recognised the islands as a World Heritage Site and as a biosphere reserve

#### **Prime Minister's Research fellow scheme**

- 'Prime Minister's Research Fellows (PMRF)' scheme aims to improve the quality of research by attracting the best talents across the country.
- Under this scheme, the best students who have completed or are in the final year of B.Tech or integrated M.Tech or M.Sc in science and technology streams in the IISc/IITs/NITs/IISERs/IIITs will be offered direct admission in the PhD programme in the IITs/IISc.
- The fellowship scheme will be implemented for a period of seven years from 2018-19.
- A maximum of 3,000 fellows will be selected over first three-year period, beginning 2018-19.
- The students who get shortlisted through the selection process would be offered a fellowship of Rs. 70,000 per month for the first two years, Rs. 75,000 per month for the third year and Rs. 80,000 per month in the fourth and fifth years.
- Apart from this, a research grant of Rs.2.00 lakh will be provided to each of the fellows for a period of 5 years to cover their foreign travel expenses for presenting research papers in international conferences and seminars.
- It will help in tapping the talent pool of the country for carrying out research indigenously in cutting edge science and technology domains.

#### **Vizag - Next Scuba Diving Destination**

- A second shipwreck was found off the coast of Vishakhapatnam, Andhra Pradesh.
- The ship wreck is spotted with critically endangered fish species called Goliath.
- A century-old shipwreck was unearthed in the same region a month before.
- Some of the other interesting aqua life species spotted were barracuda, the trevally and jack fish and a rich bed of corals like the star feather corals, sand corals and whip corals.
- Scuba diving is a mode of underwater diving where the diver uses a self-contained underwater breathing apparatus (scuba) which is completely independent of surface supply, to breathe underwater.

#### **Goliath grouper**

- It is extremely rare fish species, recently discovered by a team of experienced divers and diving instructors near vizag.
- It is recognised as a critically endangered species by the IUCN (International Union for Conservation of Nature).
- It is considered to be the keystone species of an ecosystem and is entirely protected from harvest in the U.S.
- It is usually found in tropical and subtropical waters of the Atlantic Ocean.
- It is regionally abundant near Vishakapatnam in the Bay of Bengal region.
- It is found from inshore to about 100 m in reef, mangrove, seagrass, and estuarine habitats.

#### **NABARD**

- Amendments were passed by Parliament to the NABARD Act, 1981.
- These amendments support the government's push to boost the rural and agricultural sector.
- National Bank for Agriculture and Rural Development (NABARD) is an apex development financial institution in India, headquartered at Mumbai.
- It was established on the recommendations of B.Sivaraman Committee, to implement the National Bank for Agriculture and Rural Development Act 1981.
- The 1981 Act was enacted to establish a development bank
  1. to provide and regulate credit
  2. to promote and develop agriculture, small-scale industries, cottage and village industries
  3. to support handicrafts and allied economic activities in rural areas.

#### **Indian Agriculture Research Institute**

- The President praised the Institute for its critical role in green revolution that changed the food production in the country.
- One of the mandates of the institute is to provide basic, strategic and anticipatory research in field and horticultural crops for enhanced productivity and quality.
- IARI has different international collaborations with following organizations:
  1. United State Agency for International Development(USAID)
  2. International Development Research Centre(IDRC)
  3. United Nations Environment Program Regional Research Centre for Asia and the Pacific (UNEP RRC.AP)
- The institute was started in 1905 at PUSA, Bihar then shifted to Delhi. Its name was changed from Imperial Institute of Agriculture Research (IARI) to Indian Research Institute of Agriculture (IARI) in 1936

#### **International Conference on Unani Medicine**

- Central Council for Research in Unani Medicine (CCRUM) under Ministry of Ayush is organizing a two-day 'International Conference on Unani Medicine' as part of celebration of National Unani Day (Feb 11)
- The theme of the conference is **Integration of Unani System of Medicine in main stream healthcare.**
- National Unani Day is celebrated to mark the contribution of Hakim Ajmal Khan, founder of Ayurvedic and UnaniTibbia (medical) College, Delhi.
- Hakim Ajmal Khan was an eminent Indian Unani physician who was versatile genius, freedom fighter, educationist and founder of scientific research in Unani Medicine.

#### India Health Fund

- The India Health Fund (IHF) is an initiative by Tata Trusts, in collaboration with the Global Fund.
- It is to financially support innovations and technologies designed to combat tuberculosis and malaria.
- The IHF aims to support new products and strategies that impact the entire lifecycle of TB and malaria, from prevention to post-cure recovery.
- The funds will support the long-term exercise aligned with the country's goal of **eliminating TB by 2025 and malaria by 2030.**
- The two diseases account for over 4.23 lakhs deaths and around 15 million lab-confirmed cases every year.

#### Human Egg grown to maturity in lab

- Scientists have succeeded for the first time in growing human eggs in a laboratory from **the earliest stages in ovarian tissue** all the way to full maturity.
- It is the first-time human egg was developed outside the human body.
- If the success rate and safety measures are improved, the process may help in preserving the fertility of cancer patients, improving fertility treatments, and deepening scientific understanding of the biology of the earliest stages of human life.
- **Stem cells** are undifferentiated biological cells that can differentiate into specialized cells and can divide to produce more stem cells.
- There are two broad types of stem cells: **embryonic stem cells**, which are isolated from the inner cell mass of blastocysts, and **adult stem cells**, which are found in various tissues.

#### PradhanMantri LPG Panchayat

- The LPG Panchayat, which was launched in Gandhinagar last year, is aimed at driving rural households to adopt Liquefied Petroleum Gas.
- Now, the President is planning to conduct one in Rashtrapati Bhavan.
- As a part of it, over 100 beneficiaries of the PradhanMantri Ujjwala Yojana (PMUY), from 20 states will share their experiences of how the clean cooking fuel has changed their lives, in the presence of the President.
- After the launch of the PMUY, LPG consumption witnessed an increase of 10 per cent to 21.5 million tons during 2016-17, compared to the previous year.

#### Wakhan Corridor

- Wakhan corridor is a narrow strip of inhospitable and barely accessible land in Afghanistan bordered by the mountains of Tajikistan and Pakistan, and extending all the way to China.



- The corridor is also known by its Persian name **Bam-e-Dunya, or "roof of the world"**
- The area is populated by the Wakhins who are the members of a nomadic tribe in the region.
- Created in the 19th century as a **Great Game buffer zone** between tsarist Russia and British India, the corridor has since remained untouched by any kind of government
- It can be reached from surrounding countries through the "Pamir Knot", where three of the highest mountain ranges in the world converge.

#### National Productivity Day

- The National Productivity Council is observed 12<sup>th</sup> February as National Productivity Day, and till 18<sup>th</sup> February National Productivity Week.
- "Industry 4.0 Leapfrog Opportunity for India" is the theme of the National Productivity Week -2018.
- Industry 4.0 is characterized by the increasing digitization and interconnection of products, value chains and business models.

#### National Productivity Council (NPC)

- NPC is a mission oriented apex, autonomous and not for profit organization.

- It is established by the Ministry of Industry, Govt. of India in 1958.
- The council is celebrating its 60<sup>th</sup> anniversary this year.
- Its objective is to promote the cause of productivity in all sectors of the Indian economy.
- NPC is a constituent of the Tokyo-based Asian Productivity Organization (APO), an Inter-Governmental Body, of which the Government of India is a founder member.

#### Senior Citizen's Welfare Fund

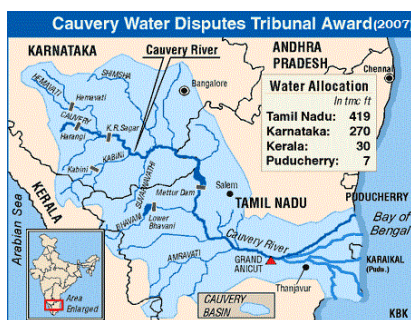
- Insurance regulator IRDA has asked all insurers to transfer the deposits of policyholders that have been laying unclaimed for over 10 years to the Senior citizen's welfare fund.
- The corpus of the Senior Citizens Welfare Fund comprise of any credit balance in any of the accounts under the small savings like Post Office Saving Schemes, Banks, etc. remaining unclaimed for 7 years from date of declaration as an inoperative account.
- The nodal Ministry for the administration of the Fund shall be the Ministry of Social Justice and Empowerment.
- The Fund shall be utilized for such schemes that are in line with the National Policy on Older Persons and the National Policy on Senior Citizens.

#### SC Verdict in Cauvery River Water Dispute

**In News:** The Supreme Court has pronounced its verdict on the sharing of Cauvery water among Tamil Nadu, Puducherry, Karnataka and Kerala.

#### Background

- The Cauvery dispute started in the year 1892, between the Madras Presidency (under the British Raj) and the Princely state of Mysore when they had to come to terms with dividing the river water between the two states.
- In 1986, a farmer's association from Tanjavur, Tamil Nadu moved the Supreme Court (SC) for tribunal formation for the adjudication of dispute.
- In 1990, the SC asked state to complete negotiations. However the two failed to do so, following which the SC directed the Centre to constitute a tribunal and distribute the water between states.
- In 1991, the tribunal by calculating the average inflows over 10 years, directed Karnataka to ensure that 205 tmcft reach Tamil Nadu every year.
- They also directed Karnataka not to increase irrigated land area from the existing measure.
- As Karnataka failed to obey the interim order in 1995 due to deficit rain, Tamil Nadu approached the SC.
- In 1998, the Cauvery River Authority (CRA) was formed with the prime minister presiding as the chairperson and the chief ministers of the four states as members.
- In 2007, Cauvery Water Disputes Tribunal (CWDT) gave out their final award. Tribunal validated the 1892 and 1924 agreements between the government of Madras and Mysore.
- **The award was as follows:** Tamil Nadu: 419 tmc, Karnataka: 270 tmc, Kerala 30 tmc, and Pondicherry 7 tmc.
- In 2013, the Centre notified the final award of the CWDT. The government was mandated to constitute the Cauvery Management Board (CMB) with the gazette notification of the final award of the Tribunal.
- Both Tamil Nadu and Karnataka challenged the tribunal's order.
- Karnataka claimed 312 TMC of water as against the 270 TMC ordered by the tribunal.
- The court reserved its order in September 2017.



#### Geographical location

765-km-long River cuts across two Indian states, Karnataka and Tamil Nadu. It originates at Talacauvery in Kodagu district in Karnataka. While it flows mainly through Karnataka and Tamil Nadu, a lot of its basin area is covered by Kerala and the Karaikal area of Puducherry.

#### Present SC Verdict

- The Court declared Cauvery a "national asset".
- It upheld the principle of equitable apportionment of inter-State river water among riparian States.
- The judgment concluded that the CWDT did not take into account Tamil Nadu's stock of an "empirical" 20 TMC of ground water.
- Accordingly, Karnataka is "entitled to marginal relief".
- In its present verdict, the Supreme Court has thus reduced the allocation of Cauvery water from Karnataka to Tamil Nadu.

State	Quantity of water allocated ( <b>Latest</b> )
Karnataka	284.75 tmcft, including 4.75 tmcft for Bengaluru
Tamil Nadu	404.25 tmcft
Kerala	30 tmcft
Puducherry	7 tmcft

- This means a reduction of 14.75 TMC quota of Cauvery water to Tamil Nadu from the earlier 192 TMC as stipulated by the tribunal.
- This change will be adjusted from the Biligundlu site.
- Karnataka will now release only 177.25 TMC Cauvery water from Billigundlu site to Mettur dam in Tamil Nadu.
- The SC has given the Centre 6 weeks to frame a scheme to make sure the final decisions are implemented.
- SC has also directed the formation of the Cauvery Management Board (CMB) immediately.
- CMB will be an inter-state forum which will work to ensure the implementation of orders of the CWDT.
- The Board shall be under the control of the Ministry of Water Resources.
- The members of the Board will include a Chairman, two full-time members, and representatives of the central government and each of the four states.
- The expenses of the Board will be borne by the state governments.

### SC's Water Sharing Principle

- The Supreme Court declares an inter-State river like Cauvery as a '**national asset**'.
- It is for the common benefit of the community as a whole.
- It has emphasized the principle of **equitable apportionment** or the principle of equality among riparian States.
- Importantly, it does not imply equal division of water.
- It is rather a **fair and equitable share** of the water according to the needs.
- In other words, an equal consideration and equal economic opportunity of the co-basin States.
- Accordingly, no State can claim exclusive ownership of its waters.
- None can either deprive other States of their equitable share.

### Implementation Mechanisms

- The Cauvery Water Disputes Tribunal had prescribed two machineries to monitor the implementation of its order.
- These are: Cauvery Management Board (CMB) and Cauvery Water Regulation Committee (CWRC)
- The **CMB** would monitor the **storage position** in the Cauvery basin and the trend of rainfall.
- This is to assess the likely **inflows for distribution** among the States.
- The CMB will have three full-time members including a chairman.
- It will also consist of six part-time members.
- Four of them will be from the riparian States of Karnataka, Kerala, Tamil Nadu, and the Union Territory of Puducherry.
- The **CWRC** is to ensure that the **Tribunal's order** is carried out in due spirit.

### Importance CMB and CWRC

- **Requirement** - June to September marks the south-west monsoon season in Tamil Nadu.
- Notably, Tamil Nadu gets less rainfall from the south-west monsoon than many other states.
- It thus requires more water during June-September than in other months.
- **Control** - With the Board and the Committee in place, Karnataka will lose its earlier supervisory control over the 4 Cauvery basin reservoirs.
- These are Krishnarajasagar, Hemavathi, Kabini and Harangi reservoirs.
- In other words, Karnataka cannot exercise the option to release water to Tamil Nadu.
- Tamil Nadu will be ensured a regular release of water as per the order.

### Verdict Mean for TN

- **Impact** - The reduction in allocation of water will have only a marginal impact on Tamil Nadu.
- This is because the quantum of reduction is small.
- The reduction is less than 10% of the 192 TMC that TN ought to receive from Karnataka as per the Tribunal's award.
- **Groundwater** - The Tribunal had noted that underground water use should not be reckoned as use of Cauvery water.
- The Supreme Court, however, accounted the quantity of available groundwater in calculating the final determination of the share.
- It thus calls for Tamil Nadu to bank on 10 TMC of groundwater available with it.
- In other words, TN now has an increased responsibility to protect its groundwater reserves by taking adequate measures.

### Verdict Benefit Bengaluru

- The **tribunal's allocation** of 8.75 tmcft to the city proved to be insufficient.
- Notably, it had **miscalculated** Bengaluru's water needs.

- It had assumed that 50% of the drinking water requirements would be met by **ground water**.
- However, increasing urbanization and population has been depleting and contaminating groundwater, making it unusable.
- Moreover, the tribunal had accounted only the **one-third of the city** that falls within the Cauvery basin.
- The Supreme Court has ruled out this approach.
- Thus, the share of water for a basin State is for addressing the social and economic needs of its community as a whole.
- With an additional entitlement of 4.75 tmcft, the verdict comes as much-needed relief for the whole of Bengaluru city.

### **Jurisdictional Implications**

- **Article 363** - The 1892 and 1924 agreements were between the princely State of Mysore and the Madras presidency.
- It pertained to the allocation of Cauvery water to regions now comprising Tamil Nadu, Karnataka, Kerala and Puducherry.
- Article 363 of the Constitution restricts judicial review of a pre-Constitution treaty or agreement.
- The court however dismisses the validity of Art 363 in the case of 1892 and 1924 agreements.
- It observes that these agreements were not political arrangements but based on public interest.
- **Art 262** - The Centre had earlier maintained that the Court lacked the jurisdiction to hear inter-state river water dispute.
- This is as per the Inter-State Water Disputes Act of 1956.
- The provisions of Act restrict the Supreme Court from hearing or deciding any appeals against the Tribunal's decision.
- The Centre had thus claimed the Tribunal award as final.
- The Court, however, held that the remedy under Article 136 was a constitutional right.
- Art 136 empowers the Supreme Court to grant leave to appeal from any judgment, decree or determination by any Court or Tribunal.

### **Significance of the Verdict**

- The verdict comes as a precedent for a fair and scientific adjudicative process in water sharing disputes.
- It puts an end to the delaying procedures.
- States do not have to rush to the court for ad hoc orders to open the reservoirs during monsoon-deficit years.
- It affirms a basin State's right to its share of water on a regular basis.
- The Centre should now create the legal and technical framework to implement the Tribunal's award, as modified by the judgment.

## **ECONOMIC AFFAIRS**

### **RBI's New Framework for Resolving NPAs**

**In News:** The RBI has come up with a revised framework for quicker and time-bound resolution of non-performing assets (NPA).

#### **New Framework Look Like**

- The new framework will subsume most of the existing stressed asset schemes such as the Strategic Debt Restructuring Scheme (SDR) and the Scheme for Sustainable Structuring of Stressed Assets (S4A).
- It would give primacy to the Insolvency and Bankruptcy Code (IBC) of 2016.
- It will also disband the concept of a Joint Lenders' Forum (JLF), which is a dedicated grouping of lender banks that is formed to speed up decisions when an asset (loan) of Rs.100Crore or more turns out to be a stressed asset.
- With the JLF out of the way, the new RBI guidelines demand that banks identify stressed accounts as soon as they go into default.
- The banks are supposed to categorise them as special mention accounts, report to the RBI and start the resolution process straight away.

#### **Prime Focus of the New Framework**

- A focus on timely identification of bad loans and the speedy resolution of such assets has been roped in.
- The central bank has toughened the reporting of default to the central repository by making it a monthly, instead of a quarterly, requirement.
- All borrower entities in default with an exposure of more than Rs 50 million have to be reported on a weekly basis.
- RBI made it clear that default in the borrower entity's account with any lender all banks, singly or jointly shall initiate steps to address it, which makes the banks to start the resolution process.
- The RBI has laid clear timelines, not exceeding 180 days from March 1, for the resolution process to yield results, failing which insolvency proceeding will have to commence within 15 days.

## Significances

- The new framework will obviously lead to short-term pain for many banks and may throw up challenges for borrowers.
- For example, the strict timelines to come up with a resolution plan could mean that a larger number of accounts will go into insolvency.
- The condition that a restructuring plan must be agreed upon by all banks involved in large accounts may be difficult to implement as experience shows such a thing rarely happens.
- Over the long term, however, the revised framework should work well as the process still provides over one year to resolve a stressed assets problem initial 180 days to implement the resolution plan and then another 270 days under the IBC.

## Need for new reform

- Following the RBI's first asset quality review (AQR) in 2016, state-owned banks had reported sharp slippages.
- In the same year a whopping Rs.2.7 lakh-odd crore of bad loans were added to the system.
- Nearly Rs.1.7 lakh crore NPAs were added in just the first nine months of the current fiscal.
- A significant portion of NPAs had been swept under by banks under the appearance of various restructuring schemes.
- For this reason RBI has withdrawn the CDR, JLF, SDR, S4A or 5/25, and placed them under the new framework.

## Working of New Framework

- Banks will now have to begin the resolution process on an account as soon as it is classified as a Separately Managed Account (SMA-0), where payments are overdue by 1-30 days by any one bank within a consortium.
- This will tighten the norms for reporting default to the central repository.
- At least 20 per cent of the outstanding principal and capitalized interest will have to be repaid by the defaulters for the account to be upgraded back to 'standard' from default.
- In respect of accounts with aggregate exposure of Rs.2,000 crore and above, lenders will have to draw up a resolution plan within 180 days from March 1, 2018 (or default date as the case may be).
- The resolution plans proposed by the banks need the approval of credit rating agencies and will have to deliver results.
- Failing which banks will have to refer the case for insolvency under the IBC.

## Practical Constrains with RBI's Framework

- Banks will have to make higher provisioning 15% when an asset's restructured and 50 per cent if referred to the IBC.
- With around Rs.2 lakh crore of loans likely to come under the revised framework, capital issues could annoy PSBs yet again.
- The requirement of all lenders agreeing to the resolution plan could also prove challenging.
- Whether the existing infrastructure under the IBC set up will be able to deal with the expected deluge of insolvency filings is another issue.
- Above all, the new framework still deals with the stock of the NPA problem and not the flow.

The following schemes of RBI has been abolished

**CDR:** Corporate debt restructuring is the reorganization of a company's outstanding obligations. It is often achieved by reducing the burden of the debts on the company by decreasing the rates paid and increasing the time the company has to pay the obligation back.

**SDR:** Strategic Debt Restructuring was introduced by RBI to help banks recover their loans by taking control of the distressed listed companies. The Scheme has been enacted with a view to revive stressed companies and provide lending institutions with a way to initiate change of management in companies which fail to achieve the milestones under Corporate Debt Restructuring ("CDR").

**S4A:** Scheme for Sustainable Structuring of Stressed Assets was introduced by RBI as an optional framework. The S4A envisages determination of the sustainable debt level for a stressed borrower, and bifurcation of the outstanding debt into sustainable debt and equity/quasi-equity instruments. This is expected to provide upside to the lenders when the borrower turns around.

**5/25 rule:** In Infra projects the project's economic life is 20-25 years and its cash flows are beyond that, but the repayment was restricted to 10 or 15 years. The 5:25 scheme allows banks to extend long-term loans of 20-25 years to match the cash flow of projects, while refinancing them every 5 or 7 years.

This expected to match the cash flows according to the repayment schedule and making long-term infrastructure projects viable.

## PNB Banking Fraud Case

**In News:** One of the branches of State-owned Punjab National Bank (PNB) has recently detected fraudulent transactions worth over Rs 11,000 crores.

### Letter of Understanding (LoUs)

- LoU is an assurance given by one bank to another to meet a liability on behalf of a customer.

- It is similar to a letter of credit or a guarantee.
- It is used for overseas import remittances and involves four parties — an issuing bank, a receiving bank, an importer and a beneficiary entity overseas.
- According to norms, they are usually valid for 180 days.
- LoUs are conveyed from bank to bank through “Society for Worldwide Interbank Financial Telecommunication” (SWIFT) instructions.
- Notably, till now, there is no record of a breach in SWIFT instructions anywhere in the world.

#### **PNB Case**

- PNB has alleged that two of its employees had “fraudulently” issued LoUs and transmitted SWIFT instructions to the overseas branches of Indian Banks.
- This was done to raise buyer’s credit for the firm of a diamond merchant without making entries in the bank system.
- The bank has alleged that one such fraudulent LoU issuance took place on January 2018, the trail of which revealed the entire design.
- These LoUs were mostly issued to two Hong Kong branches of Indian Banks and was for the aforesaid diamond merchant.
- The details on whether LoUs were backed by collateral or the quantum of liability that the bank faces against these LoUs aren’t out yet.

#### **Implications on PNB**

- For India’s second largest bank to be defrauded in the manner suggested is astounding, especially since regulatory oversight has tightened in recent years.
- Notably, the mounting stressed asserts has led to greater scrutiny of account books by - bank’s audit committees and boards, as well as the central bank.
- The government, had recently unveiled a plan to infuse about Rs. 1 lakh crore into 21 capital-starved public sector banks this fiscal (recapitalisation).
- Of this, Rs. 5,473 crore is to be injected into PNB, which currently looks dwarfed in comparison to the amount that was swindled in the current scam.
- Hence, despite the proposed infusion, the capital adequacy ratio of PNB is expected to worsen due to the fraudulent leakage.
- Notably, PNB’s market capitalisation has dropped by Rs. 8,077 crore over the past two days, with the share price falling over 20% since the news broke.
- The bank’s top brass has suspending around 10 officials and the CBI has booked one retired and one serving PNB employee so far.
- The bank has claimed that regulatory lapses are being probed, as a handful of junior employees couldn’t have orchestrated such a massive fraud singularly.
- Enforcement Directorate has initiated a money laundering case against the main accused, billionaire-jeweller Nirav Modi, and his aides.
- Notably, the firms run by him had seen a meteoric rise and an IPO was also in the offing soon.

#### **What is the way forward?**

- PNB has sought to blame overseas branches of other banks for not undertaking due diligence before accepting such transactions.
- But that may be too simplistic an explanation and an inquiry by the RBI must get to the bottom of the systemic lapses to fix accountability across the sector.
- While the banker-borrower nexus has plagued the banking system for years, this episode exposed that the nexus is a lot deeper than imagined.
- RBI and investigating agencies should act speedily to restore trust in the banking system in particular and also the larger financial setup.

### **Addressing Administrative Failures in PSBs**

**Context:** Various incidents in India prove that public sector banking has lack of transparency and accountability.

- Government needs to take firm administrative reforms to address such issues.

#### **Recent Issues**

- PSBs need equity capital of Rs 2.4 lakh crore (Rs 2.4 trillion) by 2018 to meet Basel III norms.
- The top 30 bad loans account for Rs 87,368 crore (Rs 873.68 billion) ie 35.9 per cent of total Gross NPAs of PSBs.
- To the collective dismay of the public recent bank scam which involves a public sector bank (PSB) Punjab National Bank is an example.
- The convictions have the scam allegedly pulled off a daring heist of over Rs 110 billion and fled to the US proving the ignorance of PSBs.
- Recently State Bank of India, the premier public sector bank, confessed to over-reporting its profits by 36 per cent and under-reporting bad loans by Rs 232.39 billion or 21 per cent.

#### **Reason Behind such Issues**

- The apex bank has lack of mechanism to enhance the transparency in PSBs and bank top management and other auditors are usually helping the violators.

- The bank's systems were flawed with responsibility and accountability issues.
- Union government has taken various measures like Indradhanush project and Banks Boards Bureau to address such issues but without changing the ownership and control of banks.
- It keeps the ownership and control the same and expect changes in systems and top-level staff to deliver a clean, efficient organization, this involves too many assumptions.
- This leads to corruption, meddling politicians, crony capitalism, regulatory failure and repeated 'recapitalization'.
- Thus PSBs are in a perpetual mess because of the way they are owned and controlled.

#### Way Ahead

- To improve the outcome of time, money, and effort simple measures on every issue and every timeframe needs to be taken instead of a generic solution.
- If the policymakers were to apply this in the case of PSBs, it would reduce bad loans, improve efficiency, and prevent scams.
- Government need to change the ownership of PSBs and pass on the responsibility to the new Private owners to fix the problems and face the consequences.
- There is less inefficiency and corruption in private banks because there is inherent accountability.
- If there is a scam in private sector banks, it is shareholders alone who suffer and, to a limited extent, depositors, but in PSBs public money is wasted and nation's economy is hindered.

### CCI's Fine on Google

**In News:** The Competition Commission of India has imposed a fine of Rs 1.36 billion on Google.

#### Competition Commission of India

- CCI was formed under The Competition Act (Amendment) 2007 by the union government, consisting of a Chairperson and 6 Members.
- The Act follows the philosophy of modern competition laws.
- The Act prohibits anti-competitive agreements, abuse of dominant position by enterprises and regulates combinations (acquisition, acquiring of control and M&A), which causes or likely to cause an appreciable adverse effect on competition within India.
- It is the duty of the Commission to eliminate practices having adverse effect on competition, promote and sustain competition, protect the interests of consumers and ensure freedom of trade in the markets of India.
- The Commission is also required to give opinion on competition issues on a reference received from any statutory authority.

#### Google Case

- Google was fined a Rs 135.86-crore for "search bias" and abusing its "dominant position".
- The order came on complaints filed back in 2012 by Bharat Matrimony.com and Consumer Unity & Trust Society (CUTS).
- Bharat Matrimony.com claimed that its rival, Shaadi.com, was more prominently displayed, even when "Bharat Matrimony" was searched.
- Google has been found "search biased" by displaying search results which were harmful to competitors and, indirectly, to users, thereby abusing its dominant market position.
- The fine imposed amounts to 5 per cent of the average revenue generated in India by Google and its subsidiaries between 2012 and 2015.
- It is perfectly acceptable for a mall or a store to display in-house brands more prominently, but this would be acceptable in case of e-market due to dominance.

#### Difficulties in Governing Google

- Google arguably performs a public service by providing a search engine platform that aggregates data freely accessed by users.
- But that platform is also a marketplace, where businesses bid for keywords and compete to place ads.
- Google remains a de facto monopoly in cyberspace, both globally and in India, with respect to these two functions.
- Google is itself a service provider, it offers a basket of services (and also partners with specific businesses) similar to those offered by its clients.
- Thus regulating digital advertisements and search-related marketplaces through laws and principles that govern more conventional businesses is difficult.
- There are no proper mechanisms to solve the issues arising in the cyber space, a year is equivalent to generations in the cyber space.

### Draft National Auto Policy

**In News:** The Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises has recently released the draft National Auto Policy.

#### Objectives

- The policy envisages propelling India as an automotive industry amongst the top three nations in the world.
- This is in terms of engineering, manufacturing and export of automotive vehicles and components.



- It aims at making India a globally competitive auto R&D and manufacturing hub.
- It also intends to make the automotive industry a major contributor to the country's manufacturing sector GDP.
- It is also to aid achieving the targeted objectives of green mobility.

### Key Provisions

- **Import duty** - The Policy proposes lowering of import duties.
- This applies to capital goods, equipment and machinery for manufacture of new technology components.
- Companies will have to declare at the beginning of every financial year the volume of prototypes planned to be imported.
- The import duty exemption to companies will be given only on this pre-declared volume.
- **Green Mobility** - The policy emphasizes fast-tracking widespread adoption of green mobility in India.
- It calls for mandating a minimum share of green vehicles among those purchased by the government and municipal agencies.
- Accordingly:
  - central and state governments - 25% from 2023 and 75% from 2030
  - municipal corporations in metros - 50% from 2023 and 100% from 2030
- **Emission** - The policy eyes adoption of a long-term roadmap for emission standards.
- It proposes to define emission standards that will be applicable after BS-VI.
- The standards will be with a target of harmonizing them with the most stringent global standards by 2028.
- Introduction of new norms will be initiated in 2026 with a 2-year phase-in period.
- It also envisions the Corporate Average Fuel Economy (CAFE) norms till 2025 and beyond.
- These norms are for improving the average fuel economy of vehicles, and fix incentives or penalties.
- **GeM portal** - The draft policy suggests utilising the Government e-Marketplace (GeM) portal.
- This is to aggregate all green vehicle orders with standard specifications and enable bulk procurement.
- **Infrastructure** - The policy recommends conducting a detailed study on requirement of public infrastructure for green vehicles.
- This is to make the necessary infrastructure investments for green mobility.
- **Skill development** - The policy proposes improving the skill development and training eco-system.
- It advocates increasing the accountability of Automotive Skills Development Council (ASDC) to achieve this.
- Performance based funding is suggested as a measure.
- Performance metrics include incremental employment generated, level of employment, curriculum coverage, etc.
- **Employment** - The draft policy suggests ASDC to implement a Labour Market Information System (LMIS).
- This is to facilitate aggregated information of certified candidates.
- It also serves as a marketplace to match demand and supply of skilled labour.
- It thereby helps boost employment creation in the sector.
- **Investment** - The policy entails incentivizing Public Private Partnership (PPP) based industry investments.
- This is particularly for research and development of commercially viable technologies through a Hybrid Annuity Model (HAM).
- The policy also calls for encouraging FDI in the country's Automobile sector.
- This is proposed to be in coordination with Invest India to attract investments in identified areas.
- Initiating trade pacts with countries with attractive markets for Indian automotive exports is also called for.
- **Besides**, the draft auto policy also suggests setting up of a 'technology acquisition fund'.
- It proposes creation of a nodal body with a two-tier structure having an Apex Body supported by the National Automotive Council (NAC).
- The apex body will have government representatives as well as stakeholders nominated from the industry and academia.

## Reforming the Spectrum Auctions

**In News:** Union government of India is rethinking its approach to spectrum auctions.

### Spectrum Auction

- Energy travels in the form of waves known as electromagnetic waves, these waves differ from each other in terms of frequencies, and this whole range of frequencies is called the spectrum.
- In Telecom electromagnetic waves of different wavelengths are used, they are divided into bands based on frequencies.
- A spectrum auction is a process whereby a government uses an auction system to sell the rights (licences) to transmit signals over specific bands of the electromagnetic spectrum and to assign scarce spectrum resources.
- Spectrum auctions make use of natural resources for revenue raising and ensuring economic development.

### Concerns in Auctions

- Earlier spectrum was allotted to various companies which are favorable of government's choice at much cheaper prices or for free.

- At critical times, government demanded Telecoms to buy fresh spectrums to renew their licenses, telecoms also bought spectrums at high cost to sustain their markets.
- Once few reforms had brought in spectrum auctions, the prices of spectrums went sky high and even coal/iron ore allocations were cancelled for the same reason that they were not competitively bid.
- This High auction bids had caused mobile tariffs to rise, and now tariffs are decided by competition.
- These auctions tried to maximize government revenues instead of maximizing development by bringing in greater benefits to citizens or to the private sector.

#### Way Ahead

- Government need to remove the irrational excitement of the past to address the impact of bad policy like the shortage of spectrum.
- If government's design is right, it can auction even water while keeping tariffs affordable or even subsidized, thus a better policy design is crucial.
- The auction design must ensure the poor get a service at affordable price instead of concentrating on revenues.
- Reforms also need to be roped in to reduce the ridiculously high license/spectrum charges and address the problems faced by the industry for better ease of doing.

### Revival Trend in Indian Industrial Activity

**In News:** In India Industrial activity has been improved in terms of IIP and PMI.

#### Status of Indian Industrial Growth

- Industrial growth is measured by the government's Index of Industrial Production (IIP) and the private sector Purchasing Managers' Index (PMI).
- Both of these Indexes have been improved significantly in the months of Nov 2017 – Feb 2018.
- Growth in the IIP soared to 8.8% in November, the highest since October 2015, and stood at a slightly slower but still robust 7.07% in December, this growth was largely driven by the manufacturing sector.
- The PMI surged to a 60-month high of 54.7 in December 2017 and came in at 52.4 in January 2018.

#### Revival Status

- The November 2016 demonetization had a major impact on industrial activity and the manufacturing sector was slowed down.
- Activity resumed thereafter, but was hit again by the prospect of the Goods and Services Tax and then its fallout.
- Industrial activity contracted in June because firms halted production to get rid of their stock in preparation for the GST.
- A combination of impending festive season and the re-stocking of inventory led companies to increase their activity thereafter, with a recovering global economy boosting exports, which further propelled industrial growth in November and December.
- There were other factors at play, such as companies getting increasingly comfortable with the GST regime.
- The government has also taken steps to ease the woes of exporters due to the input tax credit system.

#### Implications

- While the IIP is an output measure, the PMI is an indication of the activity at the input, or purchasing, level.
- If both show strong growth, the implication is an overall recovery in industrial activity and sentiments.
- Economic growth itself is expected to increase, with private sector analysts and economists saying there are signs of a recovery.
- It is also important to note that the IIP and the PMI measure only the formal sector.
- Several accounts say the informal sector, a very large segment of the economy that accounts for significant employment, is still recovering from the effects of demonetisation.
- This trend also implies that part of the recovery is based on global economic trends, any dip there will have a detrimental effect on India's exports.

#### IIP

- The Index of Industrial Production (IIP) is an abstract number or ratio which measures the growth of various sectors in the economy.
- In India, IIP is a representative figure which measures the general level of Industrial activity in the country.
- Being an abstract number, it does not show volume of activity and only shows the magnitude which represents the status of production in the industrial sector for a given period of time as compared to a reference period of time.

#### PMI

- The Purchasing Managers' Index (PMI) is an indicator of the economic health of the manufacturing sector.
- The PMI is based on five major indicators such as new orders, inventory levels, production, supplier deliveries and the employment environment.
- The purpose of the PMI is to provide information about current business conditions to company decision makers, analysts and purchasing managers.

## INTERNATIONAL AFFAIRS

### **South Africa gets a New President**

**In News:** 'Cyril Ramaphosa' has replaced 'Jacob Zuma' as President of South Africa due to pressure from within the ruling, "African National Congress" (ANC) party.

#### **Mr. Zuma's Tenure**

- The President of South Africa is elected by the National Assembly, the lower house of Parliament, and is usually the leader of the largest party.
- In May 2014, Jacob Zuma was inaugurated as the President of the Republic of South Africa for his second term in office.
- During his entire tenure, 75-year-old Mr. Zuma had survived 8 non-confidence motions and was even nicknamed "Teflon president", for his resilience.
- But pressure from within his own party saw him peeve within weeks, which ultimately ended his nine-year-long scandal hit tenure.
- Allegations and charges of fraud, money laundering and racketeering, had marred his and his party's reputation over the years.
- The growing pressure on Mr. Zuma was reflected on his close acquaintances like the India-born Gupta brothers, whose properties were raided by officials.
- The Gupta brother trio, whose business interests range from mining to media and technology, are accused of having made illegal gains with Zuma's help.
- The allegations include - "state capture" by possessing inside information, influencing ministerial appointments and swinging big state contracts.

#### **Mr. Zuma's Ouster**

- The unseating of Mr. Zuma has come at a time when ANC's popularity is at an all time low since the anti-apartheid struggle (which it led).
- It is also significant to note that the general elections are slated for 2019, which the ANC will have to face with a very poor track record.
- Significantly, South Africa is now characterized by high levels of inequality and corruption and a flagging economy, with 30% unemployment and low growth.

#### **Way Ahead**

- **New president** - Mr. Ramaphosa is a veteran reformist, who was previously a trade union leader, and a key figure in the anti-apartheid movement.
- He was also a close associate of Nelson Mandela and led the effort to draft the country's new constitution in 1994.
- As ANC chose 'Thabo Mbeki' to succeed Mandela in 1999, Mr. Ramaphosa's presidential ambitions were dashed and he moved on to focus on his business.
- He subsequently emerged as one of South Africa's wealthiest businessmen and in December 2017, he successfully contested for presidency of the ANC.
- **The Agenda** - Mr. Ramaphosa has spoken of a new direction for the country and envisions prioritising the economy.
- His rich experience due to his background in politics and business, gives reason to be optimistic about South Africa.
- However, whether and to what extent the new leadership will allow the law to independently take its course with regard to Mr. Zuma remains to be seen.

### **Indo-Iran Bilateral**

**Context:** Iranian President Hassan Rouhani recently concluded his bilateral visit to India on a successful note.

- The visit has underlined the criticality of the Indo-Iran engagement.

#### **Highlights of the Visit**

- **Qualitative Aspects** - The importance of bilateral ties and the strategic imperative for their growth were stressed in the joint statements issued.
- Discussions were held on enhancing bilateral trade, investment, and ease of doing business between the India and Iran.
- The constitution of an expert group to recommend "trade remedy measures" and a Double Taxation Avoidance Agreement (DTAA) was also contemplated.
- Mr. Rouhani endorsed India's bid for a permanent seat at the UN Security Council with the veto.
- The joint statement also had a toughly worded warning to the countries harboring "sanctuaries for terrorism".
- **Quantitative Aspects** - India and Iran signed agreements and Memorandums of Understanding (MoUs) on a variety of issues.

- India was also awarded the contract to operate the “ShahidBeheshti Port terminal at Chabahar, after the project is completed.
- Significantly, no announcement was made on the Farzad-B gas field that India has expressed an interest in, but a follow up on the same is expected.

#### **Significant Trade Concession give to Iran**

- Just before Mr. Rouhani’s visit, India announced it would allow Indian investment in Iran to be done in rupee terms.
- Notably, this concession is presently enjoyed by only Bhutan and Nepal.
- This allows money lying in Indian banks to be repatriated as payment for Iranian imports, which is mostly oil.
- Till recently, these funds were been blocked because international banks had refused to trade with Iranian entities, fearing further US sanctions.
- In return, Iran extended the credit period for oil payments from India by issuing more generous guidelines.

#### **Larger Geo-Political Implications**

- The present Indo-Iran bonhomie is also in the larger geo-political context, considering that the US has been openly hostile to Iran lately.
- Trump administration has been taking a hard line against the Iranian nuclear deal and even called for its scrapping and re-imposition of sanctions.
- Also, USA has recently asked countries to keep a check on their investments in Iran as these might be supporting terrorism and unrest in the Middle East.
- It is hard to predict if the implications if Indian overtures to Iran would impact the Indo-US ties or the Indo-Israeli ties.
- But irrespective of this, Iran is a crucial energy supplier to India and a gateway to central Asia, which mandates a continued cordial relationship to last.

### **Stability with new Gov. in Nepal**

**Context:** A stable government has emerged in Nepal after decades of uncertainty, with the leftist coalition raising to power with a clear majority.

- As the new dispensation takes charge of Nepal’s progress, India needs to work on rectifying its equation with Nepal, which is currently strained.

#### **Strain in the Indo-Nepal Relations**

- Considering the shared culture, social and economic linkages across the open border, Indo-Nepal friendship and mutual cooperation is only natural.
- But, New Delhi seems to have constantly under-estimated Kathmandu’s fierce sense of self, partly due to its global preoccupations.
- Consequently, various Indian efforts to influence Nepal’s politics saw severe backlashes in the recent years, to the extent of generating mutual animosity.
- **Indian Interventionism** - India became progressively intrusive in Nepal, as internal crisis intensified there during and after the Maoist insurgency.
- Also, the hill-plain polarization escalated during the constitution-writing, with plains based Madeshi groups becoming more vocal due to tacit Indian backing.
- India seemed to treat Nepal as a mere extension of its own territory, with a sense of entitlement, exceptionalism and a big brotherly arrogance.
- Notably, along with the multiple domestic factors, a key reason for prolonged political instability in Nepal has been India’s overt and covert actions.
- **Chinese Foray** - India is understandably apprehensive as the Chinese geo-economic juggernaut has been trying to infiltrate into Nepal.
- Notably, Qinghai-Tibet Railway is expected to reach Nepal’s northern border by 2020, and is expected to be a game-changer for the region.

#### **Mr. Oli’s regime and India**

- As PM K.P.SharmaOli’s government has a comfortable majority in the parliament, the regime is expected to last its full term unlike previous regimes.
- This provides for the opening of a new chapter in the Indo-Nepal ties, although the regime has largely shared a bad equation with India previously.
- Notably, the bitterness was mainly on the account of the prolonged blockade of the southern border, when Mr.Oli was PM the previous time.
- The perception that India was tacitly supporting the blockaders saw Mr. Oli resorting to China for ensuring essential supplies.
- Hence, it needs to be recognized there is a need for India to course correct and restrain from coercive intrusive actions to overcome the past bitterness.
- Mr. Oli has been exhibiting pragmatic political traits, which provides for ample avenues for India to rebuild lost love, by promising a hands-free approach.
- In this context, the Modi government has been a swift mover and Foreign Minister SusmaSwaraj has already visited the new dispensation.

- Notably, economies progresses of the eastern UP and northern Bihar which constitute some of the poorest parts in India are directly tied to Nepal.

#### **Priority for New Government**

- **Constitutional Issues** - Singular majority of Mr. Oli will facilitate the easy implementing the Constitution, which has been partly contentious.
- Hence, the uncertainty of the last two decades seems to be approaching its end, as Nepal's becomes a federal and secular republic, with a 3 tier setup.
- But there is confusion on the powers of various tiers, and that of the Supreme Court, which needs to be sorted out going ahead.
- The transitional years, has left the police, bureaucracy and judiciary politicized, and reversing this will be a challenge.
- The central socio-political task would be to establish inclusive governance by giving Madhesi and Janajathi people a sense of state ownership.
- **Economy** - Private sector cartels that control the economy to corruption that has seeped to the village terraces are other aspects that need rectification.
- Raising employment through tourism, industry, agroforestry and agriculture, ensuring energy self-sufficiency through hydro projects are economically vital.
- Winning investor confidence by ensuring rule of law in Nepal is also a primary challenge to rebuild businesses locally.
- **Other Issues** - The ongoing truth and reconciliation process has been touted by some as a sham exercise to pardon wartime (moist) atrocities.
- With Nepal having been recently elected to the UN Human Rights Council, there is opportunity to raise Nepal's international profile.
- Considering the constitutional safeguards and that the hardliners representing Hindutva ideology have been completely routed is a positive in this regard.
- Post-earthquake reconstruction has become increasingly scandalous due to allegations of corruption, which needs to be rectified.
- On the foreign policy front, balancing India and China would be crucial.

#### **Other Internal Political Considerations**

- Mr. Oli's primary preoccupation will be managing the government's relationship with the opposition Nationalist Congress and the Madesh parties.
- Notably, a number of statues under the framework of the new constitution remain to be drafted, which will certainly require a larger consensus.
- Also, Mr Oli's alliance partner Mr. Prachanda is another constraint in the larger scheme of things whose unwavering support is not a granted one.
- Despite being a junior partner, Mr. Prachanda has been nurturing Prime Ministerial ambitions which might derail the stable mandate.
- While the two parties are indeed preparing a permanent unification document currently, it is important to ensure that parallel power centers don't arise.

#### **Myanmar Dam near Manipur**

**Context:** Myanmar is building a new dam, close to the border near Manipur.

- This has raised some concerns among the border villages in Manipur.

#### **About Project**

- The dam, called Tuidimjang, is being built on the Twigem River. It flows into Myanmar from Manipur. The dam is barely 100 metres from the zero line separating the two countries.
- International rules warrant border countries to check activities in No Man's Land. This applies to a 150-metre strip on either side of the boundary line.

#### **Concerns**

- Border villagers in Kengjoisubdivision of Manipur's Chandel district are concerned of the project.
- The residents of Khangtung village recently reported to the district officials.
- Khangtung is inhabited by the Thadou tribe and is 137 km south of Manipur capital Imphal.



- The villagers, dependent on the river, are already facing water scarcity.
- Given the topography of the area, the new project could make it even more vulnerable.
- If the dam comes up, Khangtung and other Indian villages will be submerged.
- Villagers will have to be relocated and rehabilitated.
- This may have huge negative social, cultural and economic impact on the residents.

#### Internal Dams in Manipur

- **Mapithel** - Mapithel dam, initially known as Thoubal Multipurpose Project, aimed to produce 7.5MW of power.
- Irrigation and providing drinking water were also the objectives.
- Despite inking an understanding with the State government, the villagers were not facilitated with a proper relocation site.
- In June 2015, a tribal village named Chadong in Ukhrul district was submerged.
- **Khuga dam** - Taken up in 1980, the project lies south of Manipur's Churachandpur town.
- Lying dormant until 2002, it led to a cost escalation from the initial Rs. 15 crore to more than Rs. 350 crore in 2009.
- The project sanction by the Planning Commission was said to have inherent flaws.
- Resultantly, the power component of 1.5MW incorporated in the initial design was scrapped despite near-completion of a powerhouse.
- **Tipaimukh** - It is a mega hydroelectric project proposed on river Barak in Manipur 35 years ago.
- Bangladesh is against this project, as Barak flows into it from Manipur through southern Assam.
- It feeds the Surma and Kushiara rivers in Bangladesh.

#### Way Ahead

- Many of the internal dams in Manipur are already facing varied controversies and limitations.
- A number of ecological, political and procedural aspects of the projects are causes of concern for the region.
- The dam by Myanmar, close to the border, is a new threat to the ecological and water sustainability of the region.
- The Chandel district officials are expected to survey the dam construction site to assess the condition.

## DEFENCE/SECURITY AFFAIRS

### **Looking into Army Excesses**

**Context:** Instances of excesses committed by the security forces call for a fair probe and judicial Redressal.

#### Manipur Case

- The Extra-Judicial Execution Victim Families Association (EEVFAM), an NGO, documented over 1,500 murders by the armed forces.
- The court is hearing a PIL petition seeking a probe into these **extra-judicial killings** in Manipur from 2000 to 2012.
- Fake encounters are alleged to have been executed by the Army, the Assam Rifles and the police in Manipur.
- The Supreme Court has earlier directed a time-bound probe by the CBI into over 80 such deaths.
- The CBI's SIT recently apprised the Court that 42 cases had been registered on such killings.
- Following this, the Court expressed its dissatisfaction with the progress made by the SIT in the case.

- Following SC's reprimand, the CBI has registered 11 more fresh FIRs related to suspect extra-judicial killings in Manipur.

#### Recent case in Kashmir

- **Two civilians were killed** allegedly when Army personnel fired at a stone-pelting mob in Ganovpora village in Shopian, J&K.
- The Chief Minister ordered an inquiry into the incident.
- An FIR was filed against Major Aditya Kumar in connection with the killing.
- **Petition** - A petition was filed before the Supreme Court seeking the quashing of the FIR.
- The petition also sought guidelines to protect soldiers' rights and payment of adequate compensation for them.
- This is to ensure that no Army personnel was harassed by criminal proceedings for bona fide actions in exercise of their duties.
- **Court** - The Supreme Court subsequently issued notice to Jammu and Kashmir government and Centre.
- The court sought their responses within two weeks.
- Importantly, it directed that "**no coercive action** shall be taken" against Major Kumar till then.
- **Pellet guns** - Using pellet guns is another worrying issue in Jammu and Kashmir.
- The Kashmiris do not want police using the pellet-firing, 12-gauge shotgun that the CRPF uses against them.
- Pellet-firing has notably torn out the eyes of over 1,000 Kashmiris, including children and bystanders.

#### Implication of these cases

- These incidences are perceived as excesses by the armed forces.
- **Kashmir** - It is clearly not possible for the Jammu and Kashmir government to coerce the Indian army.
- The Kashmir chief minister does not even have control over the state's policing force.
- The CRPF that operates in Kashmir reports directly to the Union Home Minister.
- **AFSPA** - The existence of controversial AFSPA is another reason behind the excesses.
- AFSPA confers special powers to the armed personnel including unwarranted arrest and search in disturbed areas.
- There are various reports and evidences making allegations of constant rights violations using AFSPA.

#### Legal Response

- **Cases** - Charge sheets have been filed against the soldiers in Kashmir before as well.
- A total of 50 cases have been received by the Union Government from the Government of Jammu and Kashmir.
- This is for getting Prosecution Sanction against Armed Forces personnel under AFSPA, 1990.
- The cases, going back to 2001, include rapes, murder, kidnap, and torture by the armed personnel.
- Notably, no case had received sanction from the union government for prosecution.
- In 47 of the cases, permission is "denied" and in another three of the cases, the earliest from 2006, permission is "pending".
- **Army** - The army claims to be delivering justice under its martial courts.
- However, the opaque working of martial courts leaves scope for scepticism.
- **Court** - The Supreme Court seems to be protective when it comes to soldiers in Kashmir.
- However, its active response in prosecuting those involved in extra judicial killings in Manipur signals a change in response.
- What makes for the double standards need to be inquired into.
- The army meant for protecting the civilians should be cleansed of its criminal behaviour with fair justice system.

## ENVIRONMENTAL AFFAIRS

### **Link between Sanitation and Stunting**

**Context:** Results of different studies involving the impact of sanitation on stunting have implications for India.

#### **Stunting**

- Stunting is a complex problem which is related to the low height of the children with respect to their age.
- The factors which are believed to implicate stunting are prenatal health, breastfeeding and diet.
- Researchers have homed in on an alternative hypothesis, that poor sanitation plays a greater role in stunting, because faecal bacteria and parasites deprive the child of nutrition.
- Various trials showed that intestinal inflammation, possibly caused by exposure to faecal germs, is correlated with stunting.
- Children in richer South Asian countries are shorter on average than those in poorer Sub-Saharan African countries, and no intervention so far has closed this gap.

- Much of the height variation among those regions could be explained by differences in open defecation rates

### Study Report

- WASH, this study was made with trials, which implemented water, sanitation and hygiene (WASH) interventions in Bangladeshi and Kenyan villages for two years.
- The WASH interventions included replacing poor-quality toilets with improved ones, chlorinating drinking water, and promoting hand washing.
- This was an effort to prevent stunting (low height for age) seen in children less than two years in developing countries.
- When the trials ended, researchers found these children were not taller than those who did not receive these interventions; this is because the study required at least two generations of trials.
- The findings are a setback to the hypothesis that improving sanitation can thwart childhood stunting, but the findings have given various insights on developing countries.

### Important insights of the study

- India is the only country today in which over 50% of the rural population still defecates in the open.
- Bangladesh, while close to India in population density, brought down open defecation rates from 42% in 2003 to just 1% in 2016.
- Only around 3-9% of the participants in the trial in Bangladesh, and less than 5% in the trial in Kenya, defecated in the open.
- Even in countries like Bangladesh, poor-quality toilets can cause heavy faecal contamination. Villages saw high rates of both contamination and stunting.
- The study also showed that open defecation had a stronger impact on height when population density was higher, as is the case of India.

### Implications for India

- India introduced Swachh Bharat Abhiyan (SBA) to eliminate open defecation by 2019.
- National Family Health Survey reports show that open defecation still remains quite common in rural India and its distribution across districts looked pretty similar to 2011.
- This proves India's Swachh Bharat Abhiyan (SBA) it is difficult to change people's sanitation habits.
- Thus programmes like the SBA that focus on constructing toilets can't do much in the face of deep-rooted cultural beliefs about open defecation.
- If behavioral change campaigns are not initiated to tackle the problem, Indians will continue to defecate in the open even if they get toilets for free.
- Against this backdrop, the Bangladesh study is significant because it did succeed in changing participant behavior.

## BIO/ HEALTH ISSUES

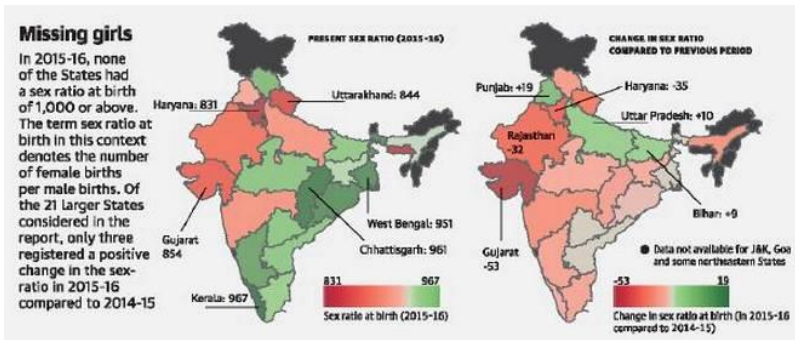
### **Healthy States, Progressive India Report**

**In News:** Niti Aayog has released the Performance in Health Outcomes Index named *Healthy States, Progressive India*.

#### Key Findings

- Sex ratio at birth (SRB) refers to number of female births per 1000 male births.
- It reflects the extent to which there is reduction in number of girl children born by sex-selective abortions.
- SRB saw a decline in 17 out of 21 large states of the country.
- Gujarat records an alarming dip of 53 points i.e. 854 females from 907 females per 1,000 males born.
- Gujarat is followed by Haryana, which registered a drop of 35 points, Rajasthan (32 points), Uttarakhand (27 points), Maharashtra (18 points), Himachal Pradesh (14 points), Chhattisgarh (drop of 12 points), and Karnataka (11 points).
- The improvement in SRB was witnessed in Punjab, which registered a rise of 19 points, followed by Uttar Pradesh (10 points) and Bihar (9 points).





- The report also stated that there is a clear need for states to effectively implement the **Pre-Conception and Pre-Natal Diagnostic Techniques (PCPNDT) Act, 1994** and take measures to promote the value of the girl child.

### Performance in Health Outcomes Index

- The NITI Aayog in collaboration with the ministry of health and family welfare (MoHFW) and World Bank released the Performance in Health Outcomes Index.
- It is a composite index that captures overall performance of States in health along with annual improvements in outcomes, governance and processes.
- It uses 24 different indicators to rank the states.
- States have been ranked in three categories larger States, smaller States and Union Territories to allow for better comparability.
- The overall objective of the index is to highlight the top performers and States that are making significant improvements.

### States Ranking

- Kerala, ranks at the top in terms of overall performance, however, with respect to annual incremental progress, it ranks at the bottom.
- This is because it has already made significant progress in health outcomes, and showing marginal improvements when the baseline is fairly strong is more challenging.
- Among the larger States, Kerala, Punjab and Tamil Nadu have emerged as the top performers, whereas Jharkhand, Uttar Pradesh and Jammu & Kashmir have shown the maximum improvement in annual performance.
- These states have reduced neonatal mortality, under-5 mortality rates, and increased immunisation coverage, institutional deliveries, and total case notification rate of tuberculosis.

### significance of this Index

- The index will play an important role in shifting the discourse from inputs and outputs to the achievement of health outcomes.
- The index can also serve as a catalyst for enhancing the timeliness, accuracy and relevance of data systems in the health sector.
- In areas such as health, promoting competitive and cooperative federalism becomes more important as most of the action happens at the State-level.
- The trend of devolving a larger share of resources and increasing spending by States is likely to become stronger on account of greater decentralisation and urbanisation.
- By ranking States not just in terms of their overall performance but also their annual incremental progress, the index will nudge them towards transformative action in health.

### Way Ahead

- Financing mechanisms need to be redesigned to act as levers for improving the efficiency and effectiveness of the health system.
- There is a critical data gaps in areas like non-communicable diseases and out-of-pocket expenditure in public health facilities to the front, Data systems needs to be strengthened to address such gaps.
- Availability of credible outcome data at more frequent intervals is critical for guiding health system action as well as putting health-related issues at the centre of the public discourse.
- Promoting competition needs to be accompanied by the provision of technical support in the form of human capital and management practices.
- This is important because the States that are lagging behind are typically the ones that have weaker capacities.

## Price Control Decision on Coronary Stents

**In News:** The National Pharmaceuticals Pricing Authority (NPPA) has decreased the price of Drug eluting Stents. **drug eluting stents**

- Stents are usually metal mesh tubes inserted during PCI, a procedure that widens the blocked artery by temporarily inserting and inflating a tiny balloon.
- Coronary stents are used to open narrowed arteries, reduce symptoms like chest pain and treat a heart attack.

- Even with stents, arteries can sometimes become blocked again. Drug-eluting stents can make this less likely to happen.
- Drug-eluting stents have a polymer coating over mesh that emits a drug over time to help keep the blockage from coming back.

#### **Decision on stent pricing**

- India's drug pricing regulator NPPA has further brought down the cost of drug-eluting stents (DES) from Rs.29,600 to Rs.27,890.
- While the cost of bare-metal stents has increased marginally from Rs.7,400 to Rs.7,660.
- The move comes a year after the NPPA slashed stent rates by nearly 85%.
- The NPPA also decided against the request of multinational stent makers for a new category for advanced stents.

#### **need for this move**

- In India there is a very high incidence of coronary artery disease (CAD) associated with high morbidity and mortality and CAD has become a major public health problem.
- The CAD drug market in India was an exploitive market system characterised by exorbitant, irrational and restrictive trade margin especially for stents.
- The NPPA's analysis proved that profit margins for stents are as high as 400% and thus made an intervention for cost optimisation.
- The NPPA held meetings with eminent cardiologists, and found that its earlier move to reduce the price has led to an increase more angioplasties and reduction in bypass surgeries.
- Thus NPPA made this move to fix the ceiling prices of coronary stents in order to protect public interest.

#### **benefits**

- Bare-metal stents have a significantly higher rate of restenosis (the recurrence of abnormal narrowing of an artery or valve after corrective surgery).
- It will help more people opt for DES that are technologically better and more advanced.
- This Price capping will minimize the expenditure in the health sector and allow more people to benefit from it.
- The new order also allows transparency and better government control and audit ease.
- Patients will have the option to get a stent and accessories from outside the establishment, and manufacturers are allowed only 8% trade margin.
- It encourages people to opt for better treatment plans and most importantly break the nexus of unethical pricing.

## **TECHNOLOGICAL AFFAIRS**

### **Prospects of 5G Technology**

**Context:** The global roll-out of 5G commercial services is expected by 2020.

- India government is taking various measures for the sooner deployment of the technology.

#### **5G technology**

- 5G promises ultra-reliable, very fast speeds and high bandwidth mobile connectivity, which provides peak speeds of 20 times, compared with 4G.
- It is expected to provide 10-plus Gbps speeds, which allow access to high-bandwidth multimedia and data services for various industry applications.
- 5G is intended to support mission-critical applications such as financial transactions and healthcare, and latency and high speed will be achieved through the use of Fibre optic cables.

#### **Prospects for 5G in India**

- High-speed broadband remains the top priority for telecom service providers, the government and the citizens alike.
- 5G will significantly contribute in transforming everyday lives of Indians by resolving real issues within e-healthcare, e-education, infrastructure and e-governance.
- This technology would entail accelerating the BharatNet programme for deploying connectivity infrastructures.

#### **measures taken by India**

- **Bharat Net** - BharatNet project was established in 2017, to provide digital infrastructure on a non-discriminatory basis by an affordable broadband connectivity of 2 Mbps to 20 Mbps for all households.
- The objective is to facilitate the delivery of e-governance, e-health, e-education, e-banking, Internet and other services to the rural India.

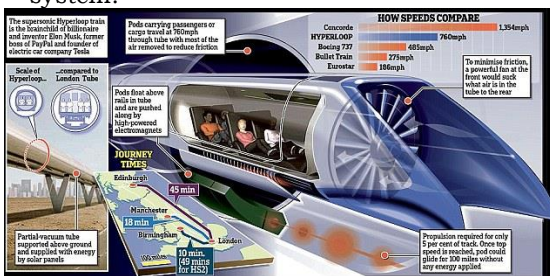
- **National Optical Fibre Network (NOFN)** - National Optical Fibre Network (NOFN) is an ambitious initiative to trigger a broadband revolution in rural areas.
- It aims to connect all the Gram panchayats in the country and provide 100 Mbps connectivity to all gram panchayats (GPs).
- **NTP**- Union government has initiated measures to introduce 5G technology in India via the National Telecom Policy (NTP), from March 2018.
- It aims to achieve 100% tele-density, high-speed internet highways and delivery of citizen-centric services electronically.
- **Forum to develop 5G roadmap** - Recently, the Department of Telecommunications set up a high-level forum to develop the roadmap for operationalizing 5G services in India by 2020.
- **Waivers for Private telecoms** -The government also announced a subsidy of ₹3,600 crore to private telecom players such as BhartiAirtel, Vodafone India and Reliance Jio to set up Wi-Fi in rural areas as part of the second phase of the BharatNet project.

## Maharashtra's Hyperloop Plan

**In News:** Maharashtra government has signed an agreement with Virgin group to build a Hyperloop.

### What is Hyperloop?

- Hyperloop is a proposed system of transport that would see pods or containers travel at high speeds through a tube that has been pumped into a near-vacuum.
- The train pods would either float using magnetic levitation technology.
- The pods would be able to travel at immense speeds with a projected top speeds of 760mph.
- The pod would initially launch using an electric motor before levitation takes place and the pod can glide at cruising speed in the low-pressure environment.
- Hyperloop One is the company which is working on this technology, has proposed routes in UK, Netherlands, Finland and Dubai, where it has backing from the governments to explore the potential of the system.



### What was the proposed Hyperloop route in India?

- The proposed Hyperloop route in India will be connecting Mumbai and Pune in Maharashtra.
- The proposed system will cut travel time between Mumbai and Pune to 25 minutes from the 3 hours it now takes by road.
- Mumbai-Pune Hyperloop is estimated to connect 26 million people, support 150 million passenger trips per year, and reduce greenhouse gas emissions by up to 86,000 tonnes over 30 years.



- It is expected that the project will have operational systems in service by 2021.

### What are the advantages of Hyperloop?

- The system is fully autonomous and sealed, so no driver-related error is anticipated.
- In a sealed environment with almost no air resistance, the pods are expected to reach very high speeds.
- Motion will not involve contact, so the vehicle will be virtually noiseless.
- The capital and operational costs of Hyperloop will be two-thirds that of high-speed rail.
- Tunnels for the Hyperloop would be built either above or below ground, taking up a smaller ground footprint than traditional rail and road.

- Hyperloop is “energy-agnostic”, drawing from whichever source is available, if that’s solar or wind, the system will be carbon-free.

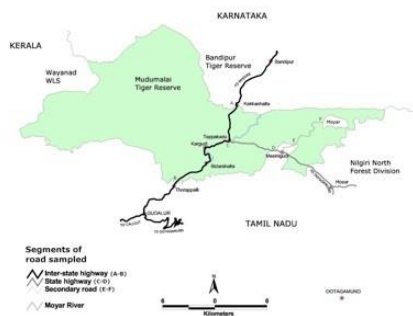
## IN-SHORT

### **Enforcement Directorate**

- Enforcement Directorate has registered a money laundering case against the fraudulent transaction of Rs.11, 500 crores in one of the branches of PNB.
- Enforcement Directorate is a specialized financial investigation agency under the Department of Revenue, Ministry of Finance.
- It enforces Foreign Exchange Management Act (FEMA) and Prevention of Money Laundering Act (PMLA).
- Its headquarters is situated in New Delhi and headed by the Director of Enforcement.
- The director is appointed by the Appointments Committee of the Cabinet headed by Prime Minister.

### **Mudumalai Tiger Reserve**

- Mudumalai Tiger Reserve (MTR) is situated at the tri-junction of Tamil Nadu, Karnataka and Kerala.
- The reserve straddles the Ooty -Mysore interstate national highway.
- It is contiguous with Wyanaad Wildlife Sanctuary on the west, Bandipur Tiger Reserve on the north.



- The Moyar river flows downstream into the Mudumalai Tiger Reserve and is the natural line of division between Mudumalai and Bandipur Sanctuary.
- The MTR also forms part of the Nilgiri Biosphere Reserve
- The Reserve has tall grasses, commonly referred to as “Elephant Grass”, Bamboos of the giant variety, valuable timber species like Teak, Rosewood.
- Fauna found in the region are Tiger, Elephant, Indian Gaur, Panther, Barking Deer, Malabar Giant Squirrel and Hyena etc.,
- Sathayamangalam, Kalakkad Mudunthurai and Anamalai are the other tiger reserves in the state of Tamil Nadu.

### **Whip**

- The issue of expulsion of Member of Legislative Assembly of Tamil Nadu for violating the party’ whip is before the Madras High Court.
- Whip in general denotes an official of a political party appointed to maintain parliamentary discipline among its members, especially so as to ensure attendance and voting in debates.
- The office of Whip is not mentioned in the constitution but it is based on parliamentary convention.
- In the 14<sup>th</sup> All India Whips Conference, 2008, the former Vice President Mohd. Hamid Ansari outlined the functions of whip as follows,
  1. Facilitate the functioning of the legislature and optimize its output.
  2. Be the channel for communicating party policy, on a day to day basis, to the rank and file of the party in the legislature
  3. Act as counselors to their Members and advisors to party leadership
  4. Function as the channel for dispensing favors and for enforcing discipline.

### **Maramon Convention**

- Maramon Convention is the Asia's largest weeklong annual Christian meet.
- The convention is organized in the vast river bed of Pampa near the Kozhencherry Bridge.
- The ongoing 123<sup>rd</sup> convention at Maramon, Pathanamthitta, Kerala began with a call to conserve the river Pampa and the environment.

#### Clean Air Campaign

- The 'Clean Air for Delhi' was launched on February 10, 2018 jointly by the Central Government and the Government of Delhi to address all sources of pollution in Delhi.
- Joint teams of officials of Ministry of Environment, Forest & Climate Change, Central Pollution Control Board, Delhi Government, and Municipal Corporations were constituted.
- These teams will visit every administrative division of Delhi, monitor causes of pollution and initiate remedial measures, including penal actions against serious polluters on the spot.
- The campaign will also include enforcement of pollution-control measures for vehicles, driving discipline, inspection of power plants in Delhi.

#### Shell Fish Reef

- Virtually all of Australia's shellfish reefs have disappeared, making them the country's most threatened ocean ecosystem.
- Shellfish reefs are made up of oysters & mussels.
- They accrete dead shell material such that the reef grows in size and mass over time.
- Just like coral reefs, they support the growth of important fish species whilst also helping to improve **water quality** and increase **biodiversity**.
- The shellfish reef plays a crucial role in water filtration, increased local fish production, bank stabilization and sustaining biodiversity.
- Shellfish reefs have declined by up 99% since British colonization.
- The reason behind the decline are
  1. Early destruction for lime for mortar used in the construction of roads,
  2. Overharvesting of shellfish for food and oysters,
  3. Destructive fishing practices,
  4. Introduction of non-native shellfish and
  5. Habitat loss from coastal development.

#### Noro Virus

- The ongoing 23<sup>rd</sup> Olympic Winter Games at the South Korean city of Pyeongchang, has been hit by an extraordinary outbreak of disease caused by Norovirus.
- Noro virus is similar to rota virus that induces **diahorrea**.
- It infects people across all age groups and is highly contagious.

TRANSMISSION	<ol style="list-style-type: none"> <li>1. Primary route is oral-faecal</li> <li>2. Also through contaminated food, water and surface</li> </ol>
SYMPTOMS	<ol style="list-style-type: none"> <li>1. Sudden onset of vomiting and/or diarrhea</li> <li>2. Nausea and abdominal pain headaches</li> <li>3. Body aches and fever</li> <li>4. Extreme cases, loss of fluids could lead to dehydration.</li> </ol>
VACCINE	At present not available.
	<ol style="list-style-type: none"> <li>1. Precautionary hand washes after using lavatory and before cooking and eating</li> <li>2. Disinfecting the surfaces are the ways to prevent it.</li> </ol>

#### World Sustainable Development Summit 2018

- The Prime Minister will soon inaugurate the World Sustainable Development Summit (WSDS 2018) in New Delhi.
- WSDS is the flagship forum of The Energy and Resources Institute (TERI).
- The theme of the 2018 Summit is **'Partnerships for a Resilient Planet'**.
- The 'Greenovation Exhibition' at WSDS 2018 will showcase the latest technological advancements to meet Sustainable Development Goals.
- The summit seeks to bring together on a common platform, global leaders and thinkers in the fields of sustainable development, energy and environment sectors.
- The Energy and Resources Institute (TERI) is a leading think tank dedicated to conducting research for sustainable development of India and the Global South.
- TERI's key focus lies in promoting clean energy, water management, pollution management, sustainable agriculture and climate resilience.

#### Pension Fund Regulatory and Development Authority (PFRDA)

- PFRDA is a statutory regulatory body established by an Act of Parliament in 2013.
- The mandate of the body is to promote, develop and regulate pension sector in India.

- PFRDA appoints the Board of Trustees that takes care of National Pension Scheme (NPS).
- The amount collected under Atal Pension Yojana (APY) is managed by Pension Funds appointed by PFRDA. PFRDA recently identifies 21 Banks as Makers of Excellence under Atal Pension Yojana Outreach Programme.

#### **Atal Pension Yojana**

- The Centre and the pension regulator PFRDA are hopeful of bringing at least one crore subscribers by March 2018 under the Atal Pension Yojana platform.
- APY will be focussed on all citizens in the unorganised sector, who join the National Pension System (NPS) administered by PFRDA.
- It is open to all bank account holders who are not members of any statutory social security scheme.
- It mainly targets on unorganised sector workers.
- Under the APY, the subscribers would receive the fixed pension ranging from Rs. 1000 - Rs. 5000 per month, at the age of 60 years, depending on their contributions.
- The age of joining APY is 18 years to 40 years. Therefore, minimum period of contribution by the subscriber under APY would be 20 years or more.
- The Central Government would also co-contribute 50% of the subscriber's contribution or Rs. 1000 per annum, whichever is lower for a period of 5 years upto 2020.

#### **C-Section**

- Over-Medicalization of childbirth is growing problem in the healthcare industry.
- Obstetrician involvement and unnecessary medical interventions in normal childbirth, without evidence of effectiveness, is called Over-Medicalization.
- The World Health Organization (WHO) has recently said it has revised a benchmark used by health professionals worldwide in caring for women during childbirth as there was a surge in interventions in recent times.
- According to National Family Health Survey 2015-16 the total percent of mothers who underwent c-section stands at 17.2% from 8.5% in 2005-06 (NFHS3).
- Especially private facility delivery stands at 40% compared to 11% in the public facility.

#### **Article 363**

- Article 363 bars the interference of the court in the disputes arising out of any treaties or agreements which was entered into or executed before the commencement of our Constitution by any Ruler of an Indian State and to which the Government was a party.
- The two agreements of 1892 and 1924 executed between the Governments of Madras and Mysore on the apportionment of water to Tamil Nadu.
- Karnataka had argued that according to Article 363, the judiciary has no power to intervene in these agreements as they were signed before the commencement of the constitution.
- Supreme Court rejected the argument of the state as the agreements were not political arrangements but based on public interest.

#### **Article 262**

- The article 262 of the constitution is an enabling clause that paves the way for Parliament in adjudication of disputes relating to waters of Inter- State Rivers or river valleys.
- Article 262 states that 'Parliament may by law provide for the adjudication of any dispute or complaint with respect to the use, distribution or control of the waters of, or in, any inter-state river or river valley.'
- In exercise of the power conferred by article 262 of the Constitution, Parliament has enacted the Inter-State Water Disputes Act, 1956.
- Interstate water disputes Act provide for establishment of separate Tribunal for each Inter State River Water Dispute.
- Under the provision of the 1956 Act, a request to the Central Government has to be made by a State Government, not by a citizen.
- Article 262 enables the Parliament to oust and exclude the jurisdiction of all courts, including the Supreme Court.
- Article 131 is about Centre-State or inter-State disputes in general, whereas Article 262 is specifically about inter-State river water disputes.
- The interstate river water dispute doesn't come under the Supreme Court's Original Jurisdiction.
- So, in this case, the final order of the tribunal was contested under the Special Leave Petition (Article 136) provision.

#### **Chandrayan 2 Mission**

- ISRO planning to launch Chandrayaan-2 mission around April, 2018.
- It is the first time India attempts to land a rover on the moon's South Pole.
- Only **USA Russia and China were able to soft land** successfully on the lunar surface and these landings were near the lunar equator.
- The components of the mission are – **Orbiter, Lander and Rover.**

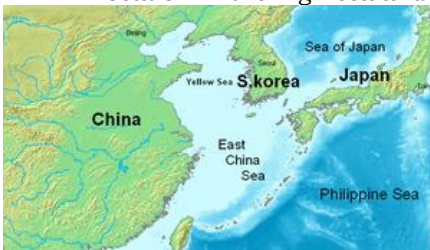
- The purpose of the mission is to collect data on the lunar topography, mineralogy, elemental abundance, lunar exposure and signatures of water-ice.
- India's Chandrayaan-1 mission was its first mission to moon where India was the captain and carrying the payloads built in UK, USA, Bulgaria Germany and Sweden.
- The mission comprised an orbiter and an impactor launched by ISRO's workhorse PSLV.
- Chandrayaan-1's greatest discovery was the widespread presence of water molecules in the lunar soil.

#### Raman Effect

- Raman Effect deals with the change in the wavelength of light that occurs when a light beam is deflected by molecules.
- The method can provide key information easily and quickly by characterizing the chemical composition and structure of a sample.
- Raman Effect has a wide range of application in fields such as geology, material science, forensic science, nuclear science and pharmacology.
- The effect is named after the Indian Physicist Sir C.V.Raman who observed the same.
- He was awarded Nobel Prize in Physics in 1930.
- To mark the discovery of Raman Effect, February 28 is celebrated as the National Science Day in the country.

#### Invisible oil spill

- The collision in the **East China Sea** that sank an Iranian tanker gave rise to an odd environmental disaster.
- It is the largest oil spill in the decades yet hasn't attracted the global attention as it happened in a remote location in the high sea and also due to the type of petroleum spilt – **condensate**.



- Condensate is a toxic, liquid byproduct of natural gas production and does not clump into black globules that can be easily spotted.
- Absorbed into the water, it will remain toxic for a time; its exposure is extremely unhealthy to humans and potentially fatal.
- The East China Sea area produced five million tons of seafood of up to four dozen species for China including crab, squid, yellow croaker, mackerel and hair tail.
- The only real solution is to let it evaporate or dissolve.
- The condensate may find its way in to the rich Japanese Fisheries source.

#### Green Good Deeds Campaign

- The campaign is launched by the Union Ministry of Environment, Forest and climate change.
- Its aim is to sensitize the people and students, in particular, about climate change and global warming.
- The Union minister for Environment and forest emphasized the crucial role of 'Green Sainiks' in the Green Good Deeds Campaign.
- The plan is to broad-base it with the involvement of teachers, students and other voluntary organizations.

#### Surajkund- Lake of the sun

- The place where SurajkundMela takes place has an ancient connection to Tomar Dynasty.
- Surajkund (the lake of the sun) is the oldest-surviving monument of Delhi.
- Suraj Pal Tomar, in the 10th century, built Surajkund, the huge water reservoir along with a sun temple on the western bank.
- The reservoir was constructed around 686 AD, as said by Syed Ahmed Khan in his book Asar-us-Sanadid.
- The reservoir is built against the backdrop of Aravalli Hills forming a semi-circular shaped embankment.
- It is designed in the shape of a rising sun with an eastward arc.

#### Forest owlet

- The century old debate on forest owlet's genetic relationship with spotted owlet is resolved.
- The bird belongs to the same genus as spotted owlet (Athene).
- The Heteroglauxblewetti is endangered under IUCN classification.
- Also the bird is endemic to the central Indian forests.
- It is sedentary resident with recent sightings from fairly open dry deciduous forest dominated by teak.
- The species faces a number of threats such as forest loss and degradation as a result of illegal logging and human encroachment, forest fires and minor irrigation dams.
- The birds is included under CITES Appendix 1.

#### Sunderbans Mangrove forest

- Unique mangrove ecosystem that hosts a sizeable tiger population is unable to expand due to developmental pressures and sea level rise.
- The Indian Sunderbans that comprise almost 43% of total mangrove cover.
- 'State of Art Report on Biodiversity in Indian Sundarbans' published by World Wide Fund for Nature, India, outlines the threats facing the ecosystem.
- The threats are climate change, habitat degradation due to industrial pollution and human disturbance, fuel-wood collection.
- If the present rate of change prevails, the Sunderbans may disappear due to sea level rise.
- Its natural response to retreat further inland is blocked by geographical features and man-made obstructions.
- The population density of the Indian Sunderbans outside the Tiger Reserve area is 1,000 people per sq km.
- Rehabilitation of former mangrove areas and creation of new mangrove habitations through intensified afforestation program are the only way out.

#### **Jatan and Darshak**

- Centre for Development for Advanced Computing (C-DAC), has developed software named "Jatan" that is set to revolutionize museum experience.
- The latest technology will help online visitors get a 3-Dimensional (3D) view of hundreds of artifacts displayed at the museums.
- The software will enable virtual tours to museums.
- The group has developed "Darshak", a mobile-based application, aimed at improving the museum visit experience among the differently-abled.
- It allows real-time museum visitors gather all details about objects or artifacts simply by scanning a QR code placed near the object.
- C-DAC is the premier R&D organization of the Ministry of Electronics and Information Technology (MeitY) for carrying out R&D in IT, Electronics and associated areas.

#### **AtalBhoojalYojana**

- AtalBhoojalYojana is an ambitious plan aimed at efficient management of available water resources.
- AtalBhoojalYojana will focus on demand side management (how to meet requirements by minimum use of water).
- The emphasis of the scheme will be on recharge of ground water sources and efficient use of water by involving people at the local level.
- The half of the fund of 6000 crore will be supported by a world bank loan of 3000 crore and the rest will be funded by central government.
- It would initially be implemented with community participation in Gujarat, Maharashtra, Haryana, Karnataka, Rajasthan, Uttar Pradesh and Madhya Pradesh.

#### **Enhanced Oil Recovery Program –ONGC**

- The program plans to introduce carbon dioxide injection in oil field to recover an extra 20 million barrels of crude oil.
- It is carried out by Oil and Natural Gas Corporation in its Gandhar field.
- The plan is carried out under enhanced oil recovery (EOR) program, whose objective is to improve India's energy security.
- It will be the first large scale CO<sub>2</sub> injected project in South Asia.
- Injected gas is miscible with residual oil and reduces its viscosity, making it easier to displace the oil from the rock pores.

#### **Society for Worldwide Interbank Financial Telecommunication (SWIFT)**

- India's City Union Bank suffered a cyber-attack via the SWIFT financial platform.
- It is a messaging network that financial institutions use to securely transmit information and instructions through a standardized system of codes.
- SWIFT is headquartered in Belgium.
- It also brings the financial community together – at global, regional and local levels – to shape market practice, define standards and debate issues of mutual interest or concern.
- For money transfers, SWIFT assigns each participating financial organization a unique code with either eight or eleven characters

#### **Swami Ramakrishna Pramahansa's Birth Anniversary**

- Ramakrishna Pramahansa's birth anniversary was on February 18<sup>th</sup>.
- His spiritual movement indirectly aided nationalism, as it rejected caste distinctions and religious prejudices.
- Ramakrishna's religious and spiritual philosophy was centered on Shakto, Advaita Vedanta and universal tolerance.
- Foremost among his innumerable disciples was Swami Vivekananda, who was instrumental in establishing the philosophy of Ramakrishna at a global stage.
- Vivekananda established the Ramakrishna Mission in 1897 to carry out the visions of his Guru Ramakrishna.



### Assam- Wildlife Protection

- In a major initiative for wildlife protection, the forest guards in Assam were given modern weapons to check poaching of rhinos, tigers and other wild animals.
- Also for the first time wildlife fast-track courts have been set up to exclusively deal with poaching and wildlife crimes.
- Assam has five national parks and 19 wildlife sanctuaries and is home to 91% of Indian rhinos.
- The five national parks in Assam are
  1. Kaziranga
  2. Manasa
  3. Nameri
  4. Rajiv Gandhi Orang
  5. Dibrusaikhowa



- Manas and Dibrusaikhowa are the Biosphere reserve in the state.

### Global Antimicrobial Resistance Surveillance System (GLASS)

- GLASS was developed by WHO to foster standardized AMR surveillance globally.
- It released the first set of surveillance data on anti-microbial resistance recently.
- Key Findings of GLASS are
  1. AMR is widespread in both high and low income countries.
  2. The most commonly reported resistant bacteria were Escherichia coli (E. coli), Klebsiellapneumoniae, Staphylococcus aureus, Streptococcus pneumonia, and Salmonella spp.
  3. There is an alarming spike in the cases resistant to penicillin and ciprofloxacin.

### Sambandh Initiative

- Western Naval Command hosted the Sambandh exercise last year.
- Participants were from the 10 Indian Ocean Littoral countries Maldives, Myanmar, Indonesia, Sri Lanka, Bangladesh, Oman, Qatar, United Arab Emirates, Malaysia and Mauritius.
- Naval officers and cadets from smaller countries that do not have big navies were welcomed aboard INS Vikramaditya -India's aircraft carrier as a part of the initiative.
- Apart from the Sambandh initiate, the Indian Navy sent its **Mobile Training Team (MTT)** to these countries.
- Training teams of the Indian Navy were sent to neighboring countries to train other countries cadets at their home base.

### Map: Myanmar-Manipur border

- A dam being constructed by Myanmar across river close to the boundary with India has stoked fears of submergence and water scarcity in Manipur's Chandel district.
- The Indian states that border Myanmar are:

**Arunachal Pradesh, Nagaland, Manipur, Mizoram**



- Tip to remember easily: **Myanmar MMAN.**

### Red Sanders

- Pterocarpussantalinus occurs in the **Tropical Dry Deciduous Forests.**
- It has a highly restrictive distribution in the South Eastern portion of Indian peninsula to which it is endemic.
- It is generally found at altitudes of 150 - 900 m.
- It prefers lateritic and gravelly soil and cannot tolerate water logging.

- It is said to be used in the making of oriental musical instruments like Shamisen, Koto and Erhu and of high demand internationally especially in China.
- Pterocarpussantalinus (Red sanders) is a species of Pterocarpus with a common name red sandalwood, and saunders wood.
- It is endemic to the southern Eastern Ghats mountain range of South India.
- It is listed in the category of “Endangered” by the IUCN because of overexploitation for its timber in South India.
- It is also listed in the appendix II of the CITES.
- This tree is valued for the rich red color of its wood and it is highly in demand in China.
- The wood is not aromatic and it is not to be confused with the aromatic Santalum sandalwood trees that grow natively in South India.

#### **Nagarjunasagar-Srisaïlam Tiger Reserve**

- The reserve is situated in the Nallamalais - an offshoot of Southern Eastern Ghats of Andhra Pradesh.
- River Krishna forms northern most boundary of the Tiger Reserve.
- The nomadic, shy, food gathering and hunting primitive tribe "Chenchus" of these hill ranges live in groups called gudems amidst forests of this sanctuary.
- The reserve primarily comprises of southern tropical dry mixed deciduous forest.
- The Nagarjunasagar- Srisaïlam wildlife Sanctuary attained the Project Tiger status in 1983, then in 1992, it was renamed as Rajiv Gandhi Wildlife Sanctuary.
- Post bifurcation of the state ,the northern part of the reserve in Telgana state which is called Amrabad Tiger reserve.

#### **Amrabad Tiger Reserve**

- Telangana Forest department has created a new ecotourism spot “Octopus View Point” at Amrabad Tiger Reserve.
- Amrabad Tiger Reserve in the districts of Mahabubnagar and Nalgonda, is the largest tiger reserve in the country.
- Earlier, it was part of 'Nagarjunasagar-Srisaïlam Tiger reserve'.
- But post-bifurcation, the northern part of the reserve is vested with Telangana state and renamed as 'Amrabad Tiger Reserve'.
- The multipurpose reservoirs Srisaïlam and Nagarjunasagar are located in the reserve.

#### **National Large Solar Telescope**

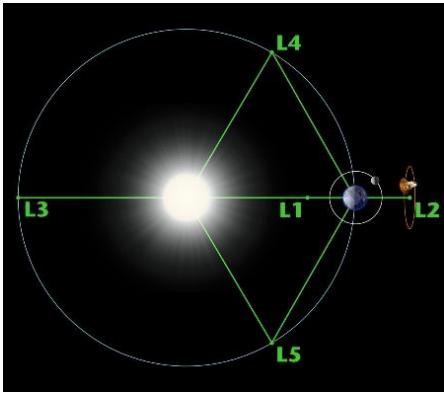
- National Large Solar Telescope (NLST) is a proposed ground based 2-m class optical and near infra-red (IR) observational facility in the country.
- It is designed to address the scientific issues related to origin and dynamics of solar magnetic fields.
- The instrument has a broad scope to support and substantiate the solar atmospheric observations from space-based ADITYA mission and ground based MAST telescope (Udaipur).

#### **Aditya-L1 Mission**

- It is the first Indian mission to study the Sun.
- It is expected to be launched in 2019 by the launch vehicle PSLV-XL with six payloads from Sriharikota.
- The main aim of the solar mission is to do coronal and near UV studies.
- It will be launched into the halo orbit around the Lagrangian point 1 (L1) of the Sun-Earth system.
- This orbit has the advantage of allowing continuous monitoring of the sun.

#### **Lagrange Points**

- A Lagrange point is a location in space where the combined gravitational forces of two large bodies, such as Earth and the sun or Earth and the moon, equal the centrifugal force felt by a much smaller third body.
- The interaction of the forces creates a point of equilibrium where a spacecraft may be "parked" to make observations.
- The first point, L1, lies between Earth and the sun and gets an uninterrupted view of the sun and free from the occurrence of eclipses.



### Lagrange Points

- L2 with the Earth, moon and sun behind it, a spacecraft can get a clear view of deep space and it has a protection for radiation field from sun.
- The James Webb Space Telescope will move into L2 point in 2018.
- The third Lagrange point, L3, lies behind the sun, opposite Earth's orbit. For now, science has not found a use for this spot.
- Points L4 and L5 are stable and lie along Earth's orbit at 60 degrees ahead of and behind Earth and dust and asteroids tend to accumulate in these regions due to its stability.
- Asteroids that surround the L4 and L5 points are called Trojans and Earth's only known Trojan asteroid, 2010 TK7 is found in the region.

### The birds and the coffee beans

- In India, coffee acreage has increased by 150% between 1990 and 2015.
- Though Arabica variety of coffee is more flavorful, the planters prefer the Robusta variety which is less resource intensive.
- Arabica is generally grown in shaded, low-intensity areas, while full sun monocultures are common for Robusta cultivation
- To test the differential impact of Robusta and Arabica coffee cultivation on the local ecology, researchers carried out a survey of bird species in the plantation areas.
- The survey points out that Robusta farms generally had the same abundances of bird species as Arabica farms.
- The reason behind it was the dense canopy, landscape-level forest cover and less use of pesticide.
- Arabica plantations were more avian species-rich, bird communities in the Robusta agro forests included many fruit-eating species.
- The survey results suggest that coffee cultivation in the Western Ghats has not been inimical to the ecosystem or the endemic avian population.

### Khadi and Village Industries Commission (KVIC)

- The Khadi and Village Industries Commission (KVIC) is a statutory body established by an Act of Parliament 1956.
- In 1957, it took over the work of former All India Khadi and Village Industries Board.
- The broad objectives that the KVIC has set before it are
  1. Social objective: providing employment.
  2. Economic objective: producing saleable articles.
  3. Creating self-reliance amongst the poor and building up of a strong rural community spirit.
- Khadi and Village Industries Commission (KVIC) is the nodal implementing agency for Prime Minister Employment Generation program (PMEGP) at the national level.

### Prime Minister's Employment Generation Programme (PMEGP)

- Ministry of MSME is implementing PMEGP which is a major credit-linked subsidy programme aimed at generating self-employment opportunities through establishment of micro-enterprises in the non-farm sector.
- Khadi and Village Industries Commission (KVIC) is the nodal implementing agency at the national level.
- KVIC, Khadi & Village Industry Boards (KVIB) and District Industry Centres (DIC) are the implementing agencies in the States.
- The maximum cost of projects is Rs. 25 lakh in the manufacturing sector and Rs. 10 lakh in the service sector.

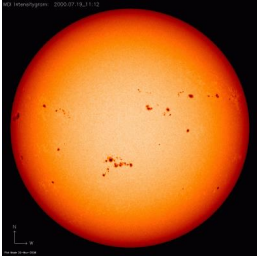
### Hubble Space Telescope

- Hubble Telescope has tracked the Neptune's Mysterious Shrinking Storm.
- It is the world's first large, space-based optical telescope, named in honor of astronomer Edwin Hubble.
- The Hubble is a joint project between NASA and the European Space Agency.

- Sun is the energy source of this space based telescope.
- Some of the interesting Hubble Discoveries are
  1. Creating a 3-D map of mysterious dark matter.
  2. Discovering Nix and Hydra, two moons of Pluto.
  3. Helping determine the rate of the universe's expansion.
  4. Discovering that nearly every major galaxy is anchored by a black hole.
  5. Helping refine the age of the universe.

### Solar Cycles and Sun spots

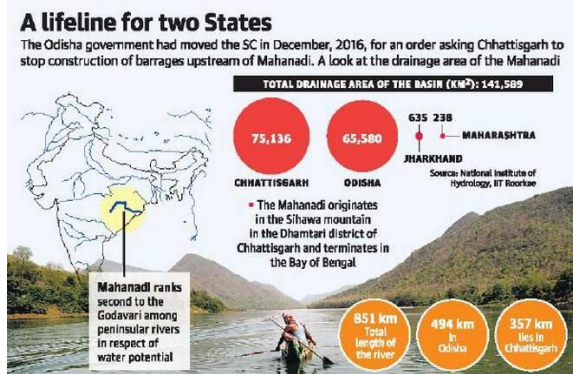
- The amount of magnetic flux that rises up to the Sun's surface varies with time in a cycle called the solar cycle, which lasts 11 years on average.
- This cycle is sometimes referred to as the sunspot cycle.
- Sunspots are regions where the solar magnetic field is very strong.



- In visible light, sunspots appear darker than their surroundings because they are a few thousand degrees cooler than their surroundings.
- They are usually concentrated in two bands, about 15 - 20 degrees wide in latitude, that go around the Sun on either side of the solar equator.

### Mahanadi Tribunal

- The Union Cabinet approved the setting up of Mahanadi Water Dispute Tribunal.
- The tribunal will settle the row between Odisha and Chhattisgarh on sharing the waters of the Mahanadi River.
- The tribunal is expected to determine water sharing among basin States on the basis of the
  1. overall availability of water in the complete Mahanadi basin,
  2. contribution of each State,
  3. present utilization of water resource in each State
  4. potential for future development
- The tribunal will be setup as per the provisions of the Inter-State River Water Disputes (ISRWD) Act, 1956.



- The Tribunal shall consist of a Chairman and two other Members nominated by the Chief Justice of India from amongst the Judges of the Supreme Court or High Court.

### National Urban Housing Fund

- The Union Cabinet has given approval for creation of National Urban Housing Fund (NUHF) for Rs.60, 000 crores.
- The motive of fund is to finance the government's Housing for All Program, which aims to build 12 million affordable housing units in urban areas by 2022.
- The newly created fund will be placed under the aegis of the Building Materials and Technology Promotion Council (BMTPC).
- BMTPC is an autonomous body registered under the Societies Registration Act, 1860, The newly created fund will be placed under the aegis of the Building Materials and Technology Promotion Council
- The fund will be raised from non-budgetary sources and help in plugging the budgetary shortfalls.

### Underwater Cave in Yucatan peninsula

- Recently a biggest flooded cave was found in the Yucatan Peninsula, Mexico, by scuba divers.
- Archaeologists explored that cave and found fossils of giant sloths and an elaborate shrine of the Mayan god of commerce.

- The Yucatan peninsula is studded with monumental relics of the Maya people, whose cities drew upon an extensive network of sinkholes linked to subterranean waters known as **cenotes**.



- Researchers believe that the water level in the caves has fluctuated over time, and that they were a source of water in times of severe drought.
- Some of the animals and humans who ventured inside never made it out alive, whose remains are a treasure trove for scientists,
- It enables to piece together bits of the cave's history dating all the way back to the Pleistocene epoch (2.6 million to 11,700 years ago).
- The artifacts left inside by humans are burnt human bones, ceramics, wall etchings and more.
- Similarly the animal remains include gomphotheres — an extinct elephant-like animal — as well as giant sloths and bears, archaeologists told a press conference.

### UNICEF Report- Neonatal Deaths

- The released UNICEF report states that over 6, 00,000 children died within the first month of their birth in 2016.
- The country's neonatal mortality rate at 25.4 deaths per 1,000 live births makes it 12th worst among 52 "lower middle-income countries" that pose risk for newborns.

### BEST AND WORST IN BABYCARE

#### Riskiest nations for newborns

Newborn deaths per 1,000 live births

Pakistan	45.6
Central African Republic	42.3
Afghanistan	40
Somalia	38.8
Lesotho	38.5

#### Safest nations for newborns

Japan	0.9
Iceland	1.0
Singapore	1.1
Finland	1.2
Slovenia	1.3

**2.6mn**

babies die globally before turning a month old

**6,40,000** of these deaths take place in India

**25.4/1,000** live births is India's newborn death rate

- Even among states the difference is stark. For instance, Kerala and Goa's neonatal mortality stands at 10/1000 live births, whereas Bihar and Utrakhand neonatal mortality rate is 44.
- The causes for the death are preventable and treatable as 80% of these fatalities happen for no serious reason.
- India is currently not on track to meet the Sustainable Development Goal target for neonatal mortality of 12 by 2030.
- The study also points out that India had made positive stride in Under-5 mortality rate (under-five mortality fell to 39 from 43 in the previous year).

### Buried Pyramid City- Mexico

- An Ancient pyramid city was discovered underground in heartland of Mexico.



- They discovered the lost city known as Angamuco which contained 40,000 buildings by using by using lasers to sends beams of light from an aircraft to the ground in order to construct a map of the area (LIDAR Technology).
- The lost city was built by Purépecha who were rivals to the Aztecs around 1,000 years ago.
- The Purépecha are a group of indigenous people from the northwestern region of Michoacán, Mexico
- Around 100,000 people are thought to have lived in the ancient city between 1000 and 1350AD.

- The findings have implications for understanding the region's history of migration, land use and conservation and even early climate changes.

### **Restructured Funding Mechanism of NRDWP**

**In News:** Union Government has given its nod to restructure funding mechanism of National Rural Drinking Water Programme (NRDWP).

#### **NRDWP**

- The National Rural Drinking Water Programme (NRDWP) a successor to the Accelerated Rural Water Supply Programme, was started in 2009.
- This is a Centrally Sponsored Scheme, with funding on a 50:50 sharing basis between the Centre and the states.
- Union government had invested about Rs 1.2 trillion on rural water between years 2009 and 2017.
- Until now, NRDWP funds were allocated from the Centre to the states on a "formula" basis, mainly using population, water scarcity and water quality as criteria.

#### **challenges with the programme**

- The efficacy of government spending and real outcomes and results on the ground are yet to be achieved through public funding.
- Centrally sponsored also face challenges with strengthening implementation, monitoring and, more fundamentally, linking funding to performance.
- The provision of rural drinking water under the NRDWP was no exception to the usual "formula" based approach to releasing the Central share of funds, leading to a sense of entitlement among states and little incentive to improve performance.

#### **new approach**

- In the spirit of cooperative, competitive federalism, the Union Cabinet recently decided that a significant proportion of Central resources for rural water supply should be used to incentivise performance by the states on a competitive basis.
- Three key reforms have now been introduced:
  1. **Reimbursement mode** - Funds released by the Centre are being done on a reimbursement basis, with the states having to pre-finance implementation.
  2. **Challenge mode** - if a state does not pre-finance, its notional funding envelope under the second instalment goes into a common pot to be shared among other "performing" states (that is, those who successfully pre-finance and implement).
  3. **Sustainability mode** - Funds will be distributed among states based on their performance with respect to the functionality of their completed rural drinking water schemes as assessed through an independent, third party survey.
- This reform agenda is expected to lead to speedier implementation and better and more sustainable rural drinking water services across the country

#### **need for this move**

- The key rationale underpinning these sector reforms was to incentivise states to take more direct responsibility under their Constitutional mandate (water being a state subject) for the service delivery of drinking water.
- Some states, like Telangana, are already doing this by providing piped water supply with household connections to all rural households with most of the funding being arranged by the state itself.
- Bihar is also planning to provide piped water supply through tap connections to rural households with its own resources.
- It would be a moral hazard of sorts if the Centre continues to apply the earlier funding formula to all states, without acknowledging the self-financing initiatives taken by some states.

#### **Way Forward**

- Institutional and financing reforms should go hand in hand with the new approach.
- The Public Health Engineering Departments in states responsible for implementation of rural water supply services need to shift from a construction-centric approach to a consumer-centric approach.
- Management of drinking water services in rural areas also need to be increasingly devolved to the lowest appropriate level of gram panchayats.
- User fees for drinking water, ideally at least covering the operation and maintenance cost, should be encouraged.

### **Administrative Breakdown in Delhi**

**Context:** Delhi administration faces a chaos due to a rift between political executive and Chief Secretary.

#### **duties of a Chief Secretary**

- The CS is a bureaucrat who is the head of the civil administration in the state or union territory.
- He represents his own service and all services within the civil administration.
- His word in sorting out contending arguments and dissension among officers is final.
- CS has to show leadership while overseeing that public interest is preserved in letter and spirit.
- It is his duty to run an efficient administration and give the CM fair and impartial advice.
- Thus for a good reason CS has a commanding presence in the administration.

#### **role of Chief Secretary in democracy**

- Democracy and participatory governance is preserved through rule of law and the authority to administer has to be integral to governance.
- This the reason the symbols of authority is given to every CS, in states and UTs.
- In Delhi, the CS has a more challenging role he has to report simultaneously to the CM and the lieutenant governor (LG).
- He needs to walk a tightrope between the vision and concerns of both, even when they are not always on the same page.
- CSs face challenges due to immense authority vested on them to organise and get things done.
- CS's authority will work only as long as both the CM and the LG understand and respect the role of the CS.
- If that is whittled down, the tremors will be felt across the services and an insult to the CS is seen as an insult to the official brotherhood.

#### challenges before CS in UTs

- In the states, the CS is invariably the choice of the CM and there is understanding and mutual trust between them.
- If the CS is unbending or difficult, it is easy to make a change quietly and elegantly.
- In the UT cadre or the AGMUT cadre as it is officially known, that is not so.
- By and large, the Ministry of Home Affairs (MHA), the authority controlling the cadre serving the NCT of Delhi as well as Goa, Arunachal Pradesh, Mizoram, Daman and Diu, Puducherry, Chandigarh and the Andaman and Nicobar administration, does not stand in the way of the CM having a CS of his choice.
- The officer knows his career is largely to be decided by the MHA and not by the CM of Delhi or elsewhere.
- Therefore, it is not necessary for the CS to always find a way to meet the demands of the CM, which is a point of difference with other state cadres.
- CMs recognise this and make the best use of what they have been given.

#### Way Forward

- Delhi government is known for its history of conflict and confrontation with the police and the bureaucracy.
- Delhi's political administration is embarrassed with the bureaucracy has a result of having to deal with officers who report directly to the Lt. Governor, who is not bound to act on the aid and advice of council of ministers of the state assembly.
- To feel that this is a restrictive administrative environment and seek greater powers for Delhi under the Constitution is one thing.
- But until Delhi is a full State, Delhi's administration need to understand that they have to work within the existing institutional arrangement.
- Proper demand for the constitutional changes to give Delhi full statehood rather than targeting police officers and civil servants is need of the hour.

### Supreme Court's Power to Overrule Itself

**Context:** Three land acquisition cases have brought a constitutional question involving the powers of a SC bench to overturn previous verdicts.

- The core contention involves whether a 3 member bench of the Supreme Court can overrule another 3 member bench's order.

#### Pune Municipal Corporation (PMC) case

- "PMC & ArsvsHarakchandSolanki case" was related to proceedings for acquisition of 43.94 acres for the development of a "Forest Garden".
- The landowners challenged the acquisition proceedings before the Bombay High Court, which ruled in their favour.
- Subsequently, a 3 member bench of the Supreme Court upheld the High court order, in **January 2014**.
- This was with reference to the "Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013".

#### Indore Development Authority Case

- **High Court ruling** - Indore Development Authority (IDA), wanted to acquire land for the construction of a link road on the outskirts of Indore city.
- While IDA had deposited the compensation with the Land Acquisition Collector, the landowners simply refused to take it and approached the HC.
- Madhya Pradesh High Court ruled that the claimants had **not received** compensation and the acquisition has hence lapsed.
- This ruling was with the citation of the 2014 SC judgement in the PMC case.
- **The Appeal** – Indore Development Authority (IDA) proceeded with an appeal against the Madhya Pradesh HC order to the Supreme Court.
- This time, a 3 member bench, overturned the High Court order and unanimously ruled in favour of IDA's claim.
- The Bench observed that once the amount of compensation had been unconditionally tendered, it would imply that payment has been made.

- Hence, claimants/landowners who've refused compensation can't approach the court with the view that they've not been compensated.
- Further, it stated that the previous SC decision in the 2014 PMC case was not correct and that it could be reviewed in future through appropriate cases.

#### **Haryana Land Acquisition case**

- Haryana had acquired land belonging to G.D.Goenka Tourism Corporation Ltd and others in 2003.
- A case in this regard was filed in the Punjab and Haryana High Court in 2016, by those whose land had been acquired.
- The High Court found that compensation was never paid to the parties, and held that the land acquisition proceedings were deemed to have lapsed.
- Haryana government appealed against this ruling in the Supreme Court, which can be heard recently (Feb 21<sup>st</sup> 2018).
- **The problem** - The Bench that is hearing the Haryana government's appeal, was informed of the Feb 8<sup>th</sup> IDA Case ruling.
- This left the bench wondering on how a three-judge Bench could overturn the 2014 decision, which too, had been delivered by a three-judge Bench.
- The bench has hence requested all HCs and other SC benches to defer their proceeding in cases that will be impacted by the Feb 8<sup>th</sup> order.
- This has virtually stayed the operation of the February 8 order until a decision on whether to refer this issue to a larger bench is taken.
- The current position is that any subsequent SC bench can overrule a previous SC bench order only when the number of judges in the latter is more.

#### **The Unwanted Girl**

**Context:** The 2018 economic survey has come up with a new metric called "Unwanted Girls" that seeks to highlight "Gender Bias" in the country.

##### **"Missing Women"**

- 'Missing women' are the number of girls and women below the age of 25, who would've been alive today if they weren't aborted as foetuses.
- Girls who happened to die early due to gender based neglect in terms of nutrition and healthcare are also added up to the "missing women index".
- The population census enumerates everyone in a country, and the missing women number is estimated based on the sex ratio.
- India's missing women numbers stands at a whopping 63 million.
- This means that, if no gender bias existed in India, we would have recorded 63 million more women in our census.

##### **"Unwanted Women"**

- The 2018 Economic Survey has tried to more accurately quantify gender bias through a new number called "Unwanted Girl Index".
- Unwanted girls account for "live females", who haven't received the deserving healthcare and schooling, due to the gender related partiality.
- These are daughters that parents gave birth to when they were really hoping for a son, and were disappointed and dejected hence.
- The 2018 economic survey notes that India has 21 million 'unwanted (or) less wanted girls' (who aren't favoured by parents) in the less than 25 age group.
- Notably, this index does not capture the number of parents would've preferred not having the baby at all if they knew it was girl.

##### **Detection of Unwanted girls**

- The common pattern is that couples intend to have two children, which ideally is one son and one daughter – but having at least one son is mandatory.
- This essentially implies that if both their 1<sup>st</sup> and 2<sup>nd</sup> child are girls, they'll go for the 3<sup>rd</sup> kid or maybe even 4<sup>th</sup> to get a son.
- Contrarily, if they have two sons in a row, they might regret having no daughter but yet they might not consider having more children.
- Hence, if the matrix of families having more than 2 children looks like - "girl, girl, boy" or "girl, girl, girl, boy" (last kid is a boy), it is usually a case of gender biased attitudes.
- Here, every girl born instead of the expected boy is counted as unwanted, which means the 2<sup>nd</sup> and all other successive girls are unwanted.
- The aggregate data of all families in India when collated clearly captures that the "sex ratio of the last child" (SRLC) is male-skewed.
- Hence, SRLC is thus quantifies the desire for having sons, and the number also seems lesser sensitive to economic status of the parents.
- An important point to be noted is that this "boy oriented reproduction" does reduce the overall sex ratio as it contributes more girls (although unwanted).



- Further pondering reveals that even Kerala and Assam (which look problem-free in the “missing women index”) have a male-skewed SRLC.

### Meaning of an unwanted girl

- If a girl is born instead of the expected boy and she nonetheless gets treated equally, then there is no problem, but unfortunately that’s not the usual case.
- Girls get fewer resources in comparison to boys in general and moreover, parents who passionately want sons, unsurprisingly, favour them once born.
- Also, the previously discussed reproduction pattern would inherently imply that more girls grow up in larger families.
- Here, even if parents treat all their children equally, girls are disadvantaged by being in families with fewer resources to spend per child.
- Boys have been found to get better immunisation and nutrition, which is also reflected in India’s stunting data that displays a visible gender gap.
- More noticeably, when a corrective heart surgery is advocated, 70% of the recommended boys undergo surgery whereas the number is only 44% for girls.

### way forward

- The Economic Survey has rung the alarm bells by bring out this crucial data point and it is imperative for us to chart a remedy soon.
- While a decline in “unwanted girls” is necessary, it won’t be progress if it leads to the increase in “missing girls” (girls aborted in foetuses or who died early).
- Hence, focus should be on bringing both numbers down – which is not possible unless the preference for the male child is brought down.
- The way forward is to improve earnings opportunities for women, as this would lower dowry and increase their say in family decision-making.
- Better options for people to support themselves in old age, such as a good pension system, would also make having a son less paramount to couples.
- Other generic and cultural aspects that reinforcing patriarchy also need to be targeted to achieve a gender neutral society.

## Laws to Prevent Damage to Public Property

**Context:** The J & K government has recently proposed legislation, seeking monetary recovery for damages to public property, from protestors of the 2016 unrest.

- This consequently saw the opposition protesting against the alleged draconian clauses in the bill.

### Need for such legislations

- J&K had witnessed violent, sustained street protests, in the Valley after the killing of HizbulMujahideen commander BurhanWani in 2016.
- While several police stations and other public buildings were damaged, no official estimate of total damage has been presented yet.
- However, according to National Crime Records Bureau data, only eight cases were registered under the 1985 law that year.
- A new law for amending the “Jammu and Kashmir Public Property (Prevention of Damage) Act, 1985”, was introduced in the Budget session.
- It was subsequently referred to a Select Committee of the House due to opposition protests, who claimed that it had draconian provisions.
- Notably, an ordinance to that effect is already in place.

### About the law

- **Original law** - The J&K public property (Prevention of Damage) Act, 1985 - contains penal provisions against individuals who damage public property.
- The maximum sentence is five years in prison, along with a fine, which can extend up to 10 years in case of damage by fire or explosive substances.
- Bail is possible only after the prosecution gets a chance to oppose it in court.
- **Amendment** - The new law seeks to recover the market value of public or private properties damaged during the protests from protestors.
- It also states that all persons participating in protests would face imprisonment, even if they weren’t directly involved in damaging properties.
- It also increases the minimum punishment from six months in jail to two years imprisonment and non-recovery of damages could extend the term further.
- **Why** - The amendment is aimed at deterring protesters from indulging in violence and damaging property.
- Notably, the pelting of police stations with stones during the wave of protests were a strong provocation for bringing these clauses.
- **Prosecution** - Situations where damage to property is anticipated, can be videographed and submitted as proof in the court.
- For establishing a person as a protest organiser, additional proof is required.

- **Opposition** - The separatists and the opposition parties in the J&K assembly protested against the legislation, as it could be misused.
- They have stated that such laws have been opposed even in the parliament and other state assemblies as this could stifle even reasoned dissent.
- Additionally, it has been stated that J&K already has a multitude of laws in the same domain like - AFSPA and Public Safety Act.

#### **Other significant developments**

- Punjab and Haryana High Court recently ruled to recover damages from the “Dera”, whose followers were involved in vandalism.
- In 2007, the Supreme Court took suo motu cognizance of issues related to damage to properties during public protests.
- Two committees were constituted to look into the matter - headed by retired SC judge K T Thomas, and the eminent jurist Fali S Nariman respectively.
- **Thomas Committee** – It recommended an amendment to the parliamentary law “Prevention of Damage to Public Property (PDPP) Act, 1984”.
- The recommendation was to hold leaders of the agitating group guilty of abetment – but the parliament hasn’t tabled such amendment yet.
- **Nariman Committee** – It had asked the apex court to “evolve a principle of liability, punitive in nature, on account of vandalism and rioting.
- The liability should lie with the actual perpetrators of the crime as well as organisers of the event giving rise to the liability.

## **ECONOMIC AFFAIRS**

### **Recalibrating to Uncertain Remittances**

**Context:** Migrant remittances from the West and West Asia have been displaying uncertain trends lately, due to various factors.

- Indian policymakers would have to decipher this trend early to appropriately deal with the fallouts.

#### **Economic Benefit**

- After the global financial crisis in 2008, the developing countries have become the prime engines driving global economic growth and recovery.
- Emerging economies like India and China have become increasingly influential in determining global economic policies.
- Notably, these economies have benefited from increasing globalisation and the growing movement of goods and people between countries.
- Consequently, they are among the largest recipients of global remittances.
- Notably, 23 countries, led by India and followed by China, Philippines, Mexico, Pakistan and Nigeria, receive over 80% of global remittances.
- **Impacts** – Remittances has helped lift millions out of poverty and unemployment in the above mentioned low to middle-income countries.
- It has also enhanced their standard of living and human development.
- The positive impact of migration on economic growth and development through increased remittances is hence well established.
- The experience of Kerala, which receives remittances equalling 36.3% of its state GDP, is a testimony to this.

#### **India’s remittance profile**

- India has witnessed sharp remittance growth since 1991, which grew from \$2.1 billion in 1991, and touched \$70.4 billion in 2014.
- Since then, the value of remittances to India has seen modest declines - \$68.9 billion in 2015 and \$62.7 billion in 2016, although 2017 closed at \$65.4 billion.
- However, considering the cranky debate on migration around the world, considerable uncertainties about remittances remain.
- Notably, India receives about 56% of its remittances from migrants in West Asia, with the remainder from mainly North America and Europe.
- But rapid changes in the economy and the socio-political climate in emigrant destinations have had an impact on remittances.

#### **Churn in West Asia**

- Arab Spring in 2010 and subsequent counter-revolutionary moves by states had a drastic impact on its immigration policies.
- Declining oil prices and sluggish regional economies, especially in the Gulf Cooperation Council (GCC) countries, aggravated the situation.

- Consequently, most governments decided to prioritise filling their workforce with their nationals, which meant stricter visa norms.
- **Visa Regime** - Notably, only UAE continues with its pre-2008 liberal visa regime, whereas, Oman has had a strict immigration policy since 1998.
- The other countries (Bahrain, Kuwait, Qatar and Saudi Arabia) have now started looking increasingly inwards since the spring.
- This move was clearly to appease its increasingly restless youth, many of whom were unemployed and participated in protests.
- **Actions** - Saudi government enacted “Saudi Nationalisation Scheme” in 2011 with a view to reducing unemployment among Saudi nationals.
- This included incentives for companies performing in accordance with this system and regularisation of over 5 million temporary workers.
- Crackdown on illegal migrants, increased control over foreign workers and the apathy to curtail harassment of foreign labourers has also become common.
- It is evident that the younger natives of West Asia, who are increasingly becoming educated, will replace migrants in the coming years.

### Impact on Kerala

- Since the 1970s, the Gulf region has attracted millions of Malayalis, and their remittances charted a unique economic growth path for the state.
- With remittance accounting to almost a third of the state GDP, Kerala presents a unique case as no other large State in India depends so much on remittances.
- **The decline** - Kerala Migration Surveys, conducted by the Centre for Development Studies, has studied migration from Kerala since 1998.
- Its 2016 report notes that the Malayali migrant community had for the first time shrunk by 10% from the previous and currently numbers 2.2 million.
- This was on account of two aspects - nationalisation policies in destination countries and enhanced aspirations of the now richer and educated Malayalis.
- Unskilled and semi-skilled Malayalis in the Gulf are now being replaced by Philipinos, Nepalis and other Indian migrants from Bihar, Rajasthan and UP.
- While the more skilled Malayalis now seem to be eyeing better jobs, the 10% decrease in migration for sure will dent the remittance significantly.
- **Economic Implications** - Remittances to Kerala exceeded Rs. 71,000 crore in 2014 and a migrant typically supports 3 to 4 family members back home.
- A third of the population directly benefits from migration and another third benefit indirectly through multiplier effects.
- If the State does not identify alternative means of employment and revenue generation, it will turn out to be problematic.
- Notably, returned emigrants account for 1.2 million of Kerala’s population and the State thus faces the huge challenge of reintegrating them into the economy.
- This demands innovative policies targeted at equipping the workforce to find jobs and also promoting entrepreneurship and investments.
- **The Hope** - Lower migration may not necessarily be a disaster for the State if local resources are channelized properly for enhancing opportunities.
- This new trend might, in fact, lead to bettering the total scenario as migration comes with a lot of social costs and emotional costs.
- Notably, while a migrant worker might make more money, he/she also has to leave a family behind, and live a life of hardship in a foreign land.
- Also, women, children and elderly parents are left back to fend for themselves and deal with loneliness, anxiety and inadequate care.

### Way Forward

- North America, which is currently a major remittance sending regions of the world, is expected see dampened migration due to the Trump presidency.
- Europe, which surpasses even the Gulf region in remittance, is currently facing its worst refugee crisis since the days of the 2<sup>nd</sup> world war.
- This has already fuelled xenophobic and anti-immigration sentiments across the continent and has resulted in the rise of rightist parties.
- It seems obvious that migration and remittances will take on a more prominent role in internal and international politics in the near future.
- This is in striking contrast to the latter part of the last century, which was commanded by liberal ideas on migration and open borders.
- As the richer nations start relying more on its own workforce and tightly controls borders, the poorer nation will have to rely less on remittances.
- Therefore, it is imperative that developing nations that have relied on remittances to recalibrate strategies go ahead.

## Privatizing Commercial Coal Mining

**Context:** The union government is considering opening up the commercial mining of coal to the private sector – a move that was long overdue.

- This is expected to ramp up investments and help in meeting the surging local demand for coal.

### coal sector in India

- India's coal industry was predominantly driven by the private sector in the early years after Independence.
- Indira Gandhi government in 1973 transferred all coal holdings to public sector company "Coal India Ltd" through the Coal Mines (Nationalisation) Act.
- The key reason cited for nationalising was that it was essential to meet the growing need for coal to feed the critical power sector.
- Currently, the sector is a virtual monopoly of the public sector behemoth "Coal India Ltd", which accounts for over 80% of indigenous coal production.
- Another public sector firm, "Singareni Collieries Company" account for the majority of the rest.
- Private players have been allocated some "captive coal mines" to cater to fixed specific end-use domains such as the steel sector.
- Commercial coal mining is currently not open to private players at present.

### current demand scenario

- Despite an aggressive push for renewable and nuclear sources, India has a high dependence on coal for power generation.
- Currently, 70% of electricity generation is through coal-fired thermal plants.
- Despite its rich coal-bearing belts and increased output, and Coal India Ltd is unable to keep pace with demand from new power plants.
- Consequently, there has been a significant surge in coal imports lately.

### recent developments

- The present government has moved swiftly in this domain to fix the inherited irregularities in coal block allocation (coal scam).
- In 2014, Supreme Court cancelled the allocation of 204 coal mines to various parties as irregularities were discovered by the CAG.
- An ordinance was brought in quickly and a transparent auction process was evolved for the affected mines.
- The intention was to ensure that there are no supply shocks for power producers on account of abrupt disruptions in mining operations.

### moves towards privatising

- **The initiatives** - Enabling provisions for commercial mining and sale of coal were already included in the Coal Mines (Special Provisions) Act of 2015.
- Cabinet Committee on Economic Affairs (CCEA) has now allowed their implementation by approving the methodology for auctioning rights.
- The government holds that the move will boost energy security, make coal affordable and enable more job creation.
- It remains to be seen if the government will open up valuable coal blocks for bidding or merely the lesser profitable ones of Coal India.
- **The concerns** - For genuinely generating private interests, a considerable chunk of the valuable mines needs to be opened up.
- It is also important to ensure the integrity of the auction process and the checks needs to be placed to dissuade unviable bids.
- These are highly critical to ensure that a reliable and continuous coal supply is ensured for the power sector.
- Also, India has for long had a poor record on miner's safety, and these major reform initiatives should also have provisions concerning these.

## GOBAR-Dhan Scheme

**In News:** Union government has announced GOBAR-Dhan scheme.

### GOBAR-Dhan scheme

- Galvanising Organic Bio-Agro Resources-Dhan (GOBAR-Dhan) has been announced during budget.
- Under this scheme Cattle dung, kitchen waste and agricultural waste can be tapped to create biogas-based energy
- The objectives of this initiative is to make villages clean and to generate wealth and energy from cattle and other waste.
- The Swachh Bharat Mission-Gramin will pilot this initiative.
- The GOBAR-Dhan initiative is expected to create opportunities to convert cattle dung and other organic waste to compost, biogas and even larger scale bio-CNG units.

- This programme, expected to be launched in April, aims at the collection and aggregation of cattle dung and solid waste across clusters of villages for sale to entrepreneurs to produce organic manure, biogas/bio-CNG.

#### prospects of this initiative

- India's cattle population is at 300 million, putting the production of dung at about 3 million tonnes per day, this will help to tap the full economic potential of such waste.
- A major thrust is now underway to promote general cleanliness and effective solid and liquid waste management in rural India.
- With the largest cattle population in the world, rural India has the potential to leverage huge quantities of GOBAR into wealth and energy.
- According to a 2014 ILO study, the productive use of dung could support 1.5 million jobs nationally, there is a significant potential for farmers to generate income from the sale of cow dung.
- The value of one kg of cow dung multiplies over 10 times, depending on whether the end product is fresh dung or as input for a one megawatt biogas plant along with compost output.

#### Few successful insights

- One of the challenges for operating biogas plants, and even related higher value chain operations like bio-CNG plants, is the aggregation of cattle waste and maintaining a regular supply to plant operators.
- Much can be learned from rural communities who have aggregated cattle dung to operate biogas plants.
- These plants which typically supply cooking gas at a cost lower than the conventional LPG gas cylinder.
- A Cooperative Service Society in Punjab, does this by aggregating cattle dung and other organic waste to run the biogas plant and providing metered cooking gas to members.
- Likewise, the Gram Vikas Trust started the GOBAR Bank initiative in Surat, Gujarat, where members bring fresh cow dung to the community biogas plant.
- The dung is weighed and accounted for in their passbooks, In return they get cheap cooking gas as well as bio-slurry, the residue from the biogas plant which is used for vermicomposting and organic farming.
- Different business models are being developed, incorporating both small and large-scale operations at all ranges of the bio-energy value chain.

#### Way Forward

- Generating wealth from waste in rural areas will require the involvement of all actors and sectors, Investments from the private sector and local entrepreneurs will be needed.
- Panchayats and village communities will have to play key roles to leverage the animal and organic waste that goes into water bodies, dumping sites and landfills.
- Informal sanitation service providers can be integrated into the system by training and licencing them.
- With appropriate policy interventions the sector can be scaled up into opportunities for growth, leading to increased incomes, long-term livelihoods and, of course, more Swachh villages.

#### KYC Norms for e-Wallets

**Context:** RBI has devised guidelines for "prepaid payment instruments" (PPIs) are to be complied with by end of February 2018.

- As the norms are very restrictive this may stifle competition in the digital wallet landscape.

#### norms

- PPIs include mobile wallets such as Mobikwik and Paytm as well as other enablers of digital transactions.
- Under these new norms, these will have to fulfil a much larger slate of "know your customer" (KYC) requirements.
- PPIs operators will now have to force their customers to undergo a paperwork submission process that will be on a par with that of a formal bank account.
- The RBI has also prohibited transactions between wallets, and it has prohibited the transfer of money from semi-KYC accounts to e-wallets.
- Such measures are bound to affect new entrants and put the incumbents to comply at an advantage as it involves more paperwork.
- The anti-competitive nature of the proposed norms has hence got "Payments Council of India" upset.

#### Way Forward

- The RBI is concerned about laundering and leakage through the new digital payments infrastructure.
- But considering that more than 90% of e-wallet transactions are only small-ticket, stringent norms clearly seem uncalled for.
- The stringency of KYC norms should be proportional to risk perception and the current RBI proposal clearly seems to be overdoing it.
- These norms needs to be withdrawn as such stringent requirements will greatly set back the cause of digital payments and transactions.
- Notably, about a decade ago, the RBI had come down strongly against the mobile payments infrastructure.
- This killed the development of mobile payments back then in India, while it had flourished over the years in other parts of the world.

#### Considering Privatisation of Public Banks

**Context:** The multiple frauds that have been unearthed recently have reopened the debate on privatising Public Sector Banks (PSBs).

### **contributions of the PSBs**

- Since nationalisation of major banks in 1970s, the contributions of PSBs have been widely acknowledged.
- PSBs led the drive towards opening more bank branches, particularly in hitherto unbanked and rural areas.
- PSBs expanded agricultural credit, short term agricultural credit ('crop loans'), both of which in 2017-18 is projected to total Rs 622,685 crores.
- Notably, PSBs pioneered the concept of 'priority sector lending', which opened up many sectors deprived of banking credit to access loans.
- Differential Rate of Interest (DRI) loans to the very poor was also the brainchild of public sector banking.
- PSBs extended loans to women's self-help groups that totalled to Rs. 61,600 crores per annum, which is significant for women empowerment.
- Liberal education loans are another category of importance, for which as much as Rs. 70,400 crores have been issued by PSBs annually.
- PSBs funded rural infrastructure through the Rural Infrastructure Development Fund and pioneered financial inclusion.

### **banking policy over the years**

- From a sole PSB (State Bank of India) in the 1950s to bank nationalisation in the 1970s to open competition in the post liberalisation era, Indian banking has come a full cycle.
- Notably, diluting the government's holding to not less than 55% to completely privatising PSBs (UTI Bank was converted to Axis Bank), have also been done.
- In comparison to private banks, PSBs fall short on many financial ratios, market capitalisation, and management competence.
- Yet, there is a widely held view, especially among the middle classes and the poor that PSBs must be nurtured, a notion that indeed holds logic.

### **Current Crisis**

- The scandal involving the Punjab National Bank (PNB) has revived the demand for privatisation as part of comprehensive banking sector reforms.
- As a general proposition, a scam has nothing to do with ownership and much larger bank scams have occurred in private banks in many countries.
- In the last ten years alone, private banks such as Lehman Brothers, Royal Bank of Scotland and Merrill Lynch have collapsed due to scandals.
- PSBs in India have multiple layers of supervision like - Board of Directors, RBI (regulator-cum-Supervisor), and department of financial services.
- Also, the recently created "Bank Board Bureau" has also joined the fray.
- Also, a PSB branch is "subject to seven audits namely - internal, concurrent, snap, recovery, statutory, external and stock audit.

### **Government measures**

- Soon after assuming office, the NDA government separated the offices of Chairperson and MD of a PSB.
- Arbitrary and whimsical transfers among the chairpersons, new rules were made and two outsiders were also appointed as MDs of important PSBs.
- These were subsequently changed in a short time and the old practice of promoting Executive Directors as Managing Directors was restored.
- In 2015, amidst great fanfare, the government announced the "Indradhanush" plan to reform PSBs.
- Notably, post of the chief of the "Department of Banking Supervision" has been lying vacant for almost six months now.

### **Way Forward**

- The government fussed over recapitalisation of banks and declared that it would give funds only to those banks that undertook reforms.
- But Punjab National Bank was given Rs 4,714 crores since 2014-15 and was promised Rs 5,473 crores more, which seems inexplicable.
- The massive fraud in PNB and perhaps in other banks too, indicates that little has changed in the systems of PSBs.
- Other banking schemes like - EASE (Enhanced Access and Service Excellence) and 'Seven-pronged Approach', were nothing more than mere acronyms.
- A reform is a plan that is conceived, well-designed and implemented with a clear focus on the intended outcomes.
- While 4 years of the current government's tenure has lapsed with little progress, announcing big ticket reforms now won't be impactful.

### **Government Savings Promotion Act**

**In News:** The Centre has proposed the Government Savings Promotion Act to merge some existing small savings schemes.

### Proposal

- The Centre has proposed to merge two Acts with the Government Savings Banks (GSB) Act, 1873.
- These are the Government Savings Certificates Act, 1959 and Public Provident Fund (PPF) Act, 1968.
- The Government Savings Certificates Act, 1959 covers National Savings Certificates and KisanVikasPatra.

### Significance

- **Governance** - The merger is to remove existing ambiguities due to multiple Acts and rules for small savings schemes.
- The merger will strengthen the objective of “Minimum Government, Maximum Governance”.
- It will make implementation easier for the depositors and introduce certain flexibilities for the investors.
- **Investment** - The salaried class contributes to Employees’ Provident Fund (EPF), which gives higher returns than PPF.
- However, the self-employed do not have a similar recourse.
- Popular schemes like Public Provident Fund (PPF) remain the most sought after investment option.
- Small savings schemes’ interest rates have been falling since April 2016.
- At present, interest rate on PPF is 7.6%.
- However, despite the cut in rates, investing in PPF is beneficial.
- This is because it builds a tax-free retirement corpus.
- Deposits in PPF qualify for deduction from income under Section 80C, where the ceiling is Rs 1.5 lakh a year.

### Effect of merger

- There are apprehensions that certain Small Savings Schemes would be closed.
- Clearly, there are no proposals to withdraw the protection against the attachment of PPF account.
- The existing and future depositors will continue to enjoy protection from the attachment under the amended umbrella Act as well.

### Existing shortfalls

- **Early withdrawal** - Under the existing Act, PPF account cannot be closed prematurely before completion of five financial years.
- This is a limitation, even if there is any urgent need for funds.
- At present, one can withdraw money every year from seventh financial year from the year of opening the account.
- However, under the proposed amendment, investors can withdraw their money from PPF account in case of exigencies.
- These include medical emergencies, higher education needs, etc.
- **Account for minors** - At present, a resident Indian can open a PPF account and the subscriber can even open another account in the name of minors.
- But the maximum investment limit will be Rs 1.5 lakh by adding balance in all accounts.
- The existing Act has no clear provision regarding deposits by minors in small savings.
- Under the proposed Act, new Investment in Small Savings Schemes can be made by Guardian on behalf of minor(s).
- The Guardian may also be given associated rights and responsibilities.
- If the minor dies and there is no nomination, the balances shall be paid to the Guardian.
- Also, provisions will be made to promote a culture of savings among children.
- **Special persons** - There are no clear provisions in all the three Acts for operating accounts in physically infirm and differently abled persons’ name.
- The proposed Act will address these issues.
- **Nominee** - There was some inconsistency with the provisions of the Acts and an earlier verdict of Supreme Court.
- As per existing provisions, if a depositor dies and nomination exists, the outstanding balances will be paid to the nominee.
- But, the SC had stated that a nominee is merely empowered to collect the amounts as trustee for the benefit of legal heirs.
- Hence, rights of nominees have now been more clearly defined in the new Act.
- **Grievance redressal** - The existing Acts are silent about grievance redressal.
- The amended Act allows the Government to put in place mechanism for redressal of grievances.
- It also provides for amicable and expeditious settlement of disputes relating to Small Savings.
- The provisions proposed will add to the flexibility in operation of the Account under Small Savings Schemes.

### Controversial “Base Year Revision” Plans

**Context:** Presently the base year for most national statistics calculations is 2011-12.

- The Union ministry of statistics and programme implementation (MoSPI) has proposes to change the base year to 2017-18.

**parameters likely to be rebased**

- MoSPI plans to rebase the calculations for the GDP, Index of Industrial Production (IIP), and the consumer price index (CPI) to the year 2017-18.
- These changes will be implemented in 2018-19 after the latest Employment Survey and Household Expenditure Survey are tabulated.
- Fiscal and monetary policies are both tied to changes in GDP, which provides the reference for all other variables such as revenue collections and deficits.
- IIP measures factory and mining output while the CPI is the official benchmark used by the RBI for assessing inflation.
- It is only normal practice to revise base years regularly for indexing key macroeconomic statistics to accurately reflect the changes in the economy.

#### **challenges with rebasing**

- **Continuity** - Base year revisions and changes in calculation methodology must be accompanied by backward calculations for better analysis.
- Without the back series (based on older methods), it becomes difficult to make substantial and meaningful assessments about the changes.
- However, the back series for the previous base year revision was not released, which made credible trend analysis difficult for a while.
- **Stable Referencing** - If base year changes are brought about too frequently, they can also cause confusion and make it very hard to read economic trends.
- As this will distort our analysis of policy impact, there needs to be a rational and an apolitical logic in changing base years for better analysis.
- But the current proposal seems too early a revision, considering that many metrics were revised only recently.
- **Recently Revised Metrics** - The base year for GDP and wholesale price index (WPI) calculations was last revised in 2014-15 from 2004-05 to 2011-12.
- In fact, even the calculation methodology for GDP was radically changed and the data sample was greatly expanded to include more companies.
- The proportional weights of sectors and base year for IIP was revised even more recently, in 2017 (from 2004-05 to 2011-12).
- A new integrated Consumer Price Index (CPI) was also introduced to make it possible for the central bank to shift its focus for targeting inflation.

#### **problem with year 2017-18**

- Traditionally, only normal years are identified for basing macroeconomic parameters, in order to avoid anomalies in trends and ensure credible analysis.
- Hence, while 2014-15 would've been an ideal year for such calculations, MoSPI's proposal has chosen 2017-18, which is contentious.
- Notably, data for 2017-18 hasn't even been finalised yet and it is also a year that had the lingering effects of demonetisation and GST disruptions.
- Hence, instead of making more changes to the base year, MoSPI should prioritise restoring credibility and comparability, through back series data.

## **INTERNATIONAL AFFAIRS**

### **Israel's Dwindling Options in Syria**

**Context:** Israel got itself involved in the Syrian war in order to contain increasing Iranian influence in Syria.

- But the tide seems to be against it and its option is limited at present.

#### **Israel - Syria Hostility**

- In the 1967 war, Israel captured the strategic "Golan Heights" on the Israeli-Syria border from Syria and continues to occupy the region even now.
- In the 1980s, Syria intervened in Lebanon and helped militants like Hezbollah who were resisting Israeli occupation of Lebanon.
- While Syria and Israel do not have formal diplomatic ties, they've not had a direct confrontation for more than 50 years now.
- Additionally, despite the hostility towards the current longstanding Assad regime, Israel's border with Syria has been very calm for years.
- When the crisis broke in Syria in 2011, Israel was a fence sitter as it didn't want to displace the stable secular dictatorship of Assad.
- Notably, this was more because the possible replacement was an uncertain bunch of militant religionists.
- But as the Syrian civil war evolved into a regional conflict over the years, and Israel's strategic calculations seem to have changed too.

#### **Ground situation**



- Eastern Ghouta, is a locality on the outskirts of the capital city of Damascus, with an estimated population of 4 lakh.
- It was taken over by the rebels during the early phase of the civil war (7 years ago) and is currently one of the last significant areas held by them.
- A wide range of militant groups are believed to be active here, which including the Saudi and Qatar funded groups, and the Syrian branch of al-Qaeda.
- While the areas were under a government blockade for years, it now appears to have been surrounded by ground forces who are preparing for the final assault.
- The government says the city is occupied by terrorists from these groups and that the few civilians remaining there are used as human shields.
- But despite the government's assertions, the rebels appear to have largely lost their momentum in the war and are on the run.
- Nonetheless, the government narrative is problematic as it seems to be pinning the blame on all the residents for the rebel occupation.

#### **deephumanitarian crisis**

- The recent airstrikes and bombardments launched by government forces to wash out the rebels from here saw at least 270 die in the past 3 days.
- Significantly, it was also here that chemical weapons were used in 2013, killing hundreds of people and highlighted the brutality of the war.
- Also, the years-long blockade has deprived Eastern Ghouta of food and medicines, and the bombing is only expected to worsen the plight further.
- While it is a certainty that Eastern Ghouta will fall to the regime's assault, the cost in terms of lives is proving to be morally unacceptable.
- Notably, from very early in the war, strategic considerations have dominated the narrative and there has been very less concern for human lives.
- After 7 years of war and over 4 lakh deaths, the Syrian regime seems to be parading to victory with little worry about the devastation it had co-precipitated.

#### **Israel's intervention into the Syrian war**

- The Syrian war is very complex and multiple players have aligned with each-other for strategic reasons even if their end goals were non-compatible.
- As the Syrian regime's position weakened, Iran sent in trained Shia militants from various counties to fight for saving the regime.
- Notable among them is Hezbollah, which is a Lebanese Shia militia that is backed by Iran, which sent thousands of its troopers to fight in Syria.
- Besides the government army, these militias fought the war on the ground on behalf of the regime, and also received technical support from Iran.
- The growing role of Hezbollah and Iran in Syria alarmed Israel, as Hezbollah and Israel have had multiple direct confrontations in the past.
- Notably, it was Hezbollah's guerrilla resistance that forced the Israel withdrawal from Lebanon in 2000 after 18 years of occupation.
- Also, Israel's 2006 bombardment on Hezbollah's weapons infrastructure in Lebanon and the subsequent month offensive failed in its stated objectives.
- Notably, Hezbollah now has a heavy military presence along southern Lebanon which is across Israel's northern border.

#### **Israeli strategy**

- To counter the Iranian activities, Israel had adopted a two-pronged strategy.
- **1<sup>st</sup> strategy** - The plan was to deter Hezbollah and other Iranian proxies from taking control of its Golan border region (Israel - Syria border).
- Israel hence decided to strengthen anti-regime rebels in southern Syria, which is closer to the Golan border.
- While initially, Israel offered mere medical aid and humanitarian assistance to the rebels, it has lately acquired military and logistical dimensions.
- Tel Aviv is said to be offering support to seven different rebel groups in the region, that also includes a faction of the US-backed Free Syrian Army.
- Besides providing money, weapons and intelligence, Israel also supported the advances by these groups on the ground with air cover.
- Notably, one such aerial mission saw Israel bombing regime positions in as the local rebel groups backed by it came under heavy attacks from the regime.
- **2<sup>nd</sup> strategy** - For its own strategic reasons, Russia intervened directly in the Syrian war in 2015 to support the regime.
- As this seems to be pitting Israeli backed forces in conflict with Russian endeavours, Israel commenced active war diplomacy with Russia.
- This ultimately helped Israel gain Russia's tacit acceptance to not interfere in Israeli offensive against Hezbollah positions within Syria.

- Hence, despite Russia controlling most of Syria's airspace since 2015, Israel retained the freedom to aeri ally strike Hezbollah positions at will.
- Notably, in 2017 alone Israel claims to have struck suspected weapons shipments to Hezbollah around 100 times.

#### Success of intervention

- It wasn't regime change but the growing Iranian influence in Syria that concerned Israel, for which it was supporting rebel elements.
- Israel hoped that Russian intervention on the Syrian regime's behalf would reduce its dependence on Iran.
- But Russia remained ambiguous, and neither stopped Israeli assault on Hezbollah nor stopped the expansion of Iranian footprint in Syria.
- Hence, even as the government is recovering its control back, the regime-friendly Iranian presence is only growing in Syria.
- The networks of rebels, who are being backed by Israel are currently losing ground rapidly and international support is also correspondingly dwindling.
- While the US was rock solid behind these rebel groups in the initial years, it has wanted to withdraw since Trump administration took over.
- Late last year, the regime regained a foothold near the Israeli border by washing out the rebels in some areas, which has also spooked Israel.
- Also, recently, Israel carried out an aerial assault in Syria against "Iranian targets", and an Israeli jet was subsequently downed by Syrian fire.
- On the whole, the entire episode looks like a comprehensive failure.

#### Way Forward

- Israel has strengthened its bombing campaign in Syria this month and has also issued a sternly warned Iran of dire consequences.
- But beyond rhetoric, Israel's capacity to shape reality in Syria is limited, as Iran's clout has been established strongly over the war years.
- Hezbollah has also been emboldened and looks too strong to be eliminated by mere areal rides, at a time when full-scale intervention is not an option.
- As the regime gains further strength, it will begin its onslaught on the Israeli backed rebels in the south, which will make things murkier for Tel Aviv.

### Khalistan Movement and Indo-Canada Relations

**Context:** An Indian-origin businessman with ties to the Khalistan movement has become the new thorn in the relationship between India and Canada.

#### Historical Background

- **1947 Partition of India** -Independence of India was not a joyful event for Sikhs, partition left Sikhs in a lot of discontentment with regard to their traditional lands being lost to Pakistan.
- **Punjabi Suba movement** - A movement was initiated in 1955 under Akali Dal a Sikh dominated political party.
- It seek re-organisation of Punjab along linguist lines, seeking division of the state into Punjabi and non-Punjabi speaking areas.
- However, the division acquired communal overtones, with Sikhs voting for Punjabi as mother-tongue (even if they spoke Hindi) and Hindus voting for Hindi as mother-tongue (even if they spoke Punjabi).
- The State reorganisation commission made its recommendations and it rejected AkaliDals demand which seeks separate statehood.
- The movement resulted in trifurcation of Punjab into Punjab, Haryana and Himachal Pradesh.
- The disputes of Chandigarh and Sharing of waters of Ravi-Beas and Sutlej between the two states, Punjab and Haryana were the foundation on which the Khalistan dispute was created.

#### course of Khalistan Movement

- The Khalistan movement is a Sikh nationalist movement that wants to create an independent state for Sikh people, via armed struggle or political, inside the current North-Western Republic of India Such a state existed in Punjab from 1709 to 1849.
- The idea of Khalistan was an idea first created in 1940s, remained idle but was revived by an NRI seeking a separate homeland for Sikhs.
- In early 1980s, the movement had emerged as a major separatist movement, fed mostly by bias of Indian Government against Punjab in the case of Chandigarh and sharing of Ravi-Beas waters.
- There was intense political rivalry between Congress Party and the Akali Dal, Akali Dal was gradually gaining ground as the political representative of the Sikh community.
- Congress leadership of that time tried to divide the Akalis by propping up diverse groups of people within the Akali Dal.
- Jarnail Singh Bhindranwale led the Khalistan as an extremist movement, he was initially used by Congress to counter Akali Dal but later he was inspired by the Khalistan ideology and turned against Indian government.

- The movement was fed on arms under the patronage of Pakistan's ISI who was seeking revenge for creation of Bangladesh.
- Bhindranwale emerged as the extremist voice of Sikhs, over-ruling the moderate voices of leaders declared himself as the protector and arbiter of Sikh rights and acquired arms.
- Demands for separate nation-hood for Punjab was carried out through violent protests and killings of high profile persons in Indian government.

#### **Intensification of Khalistan movement**

- Operation Blue star was conducted to capture Bhindranwale in Harmandir Sahib Complex, but the operation resulted in a strong anti-India sentiment.
- The then PM Indira Gandhi was seen as an enemy of the Sikhs and two Sikh guards of her killed her in 1984.
- Her killing was followed by wide-spread riots against the Sikhs across India; the genocide of Sikhs across India fuelled more anti-India sentiment.
- From early 1980s to early 1990s, Punjab went through a phase of wide-spread terrorism.
- Manifold extremist groups like the Khalistan Liberation Force, Khalistan Commando Force, BabbarKhalsa and umpteen others gained prominence and roamed around freely across Punjab.
- Sikhs being a patriotic group started to act against the protracted terrorist struggle and chose to side with the Indian nation, the then Punjab Police department succeeded in defeating the movement in 1990s.

#### **present status of the movement**

- At the present, Khalistan movement is a dormant movement in India.
- It does not hold much traction in the urban or local populace of Punjab. .
- But the movement gets ideological support from Sikhs living in Canada, UK or USA.
- They pump money, ideological support to the struggle; ISI of Pakistan is still pumping money and effort in reviving the movement.

#### **recent tremors in Indo-Canadian relationship**

- An Indian-origin businessman JaspalAtwal was involved in shooting Punjab Minister as part of Khalistan movement was claimed to be in Canadian delegation to India.
- He was formerly associated with the banned Sikh separatists outfit International Sikh Youth Federation (ISYF), It seeks to establish a separate country for the Sikhs of India called Khalistan.
- India declared the ISYF as a terrorist outfit and banned it under the Unlawful Activities (Prevention) Act in 2001.
- The outfit is also banned in Canada, United Kingdom and USA, which have sizeable Sikh populations.
- Recently he visited Canadian Prime Minister office and the Indian PMO as a part of the delegation's events in Mumbai and he was personally invited to a reception by the Canadian High Commission in Delhi.
- The Ministry of External Affairs has not responded yet on how Mr.Atwal was granted a visa, despite being charged with a former State Minister's murder attempt.

#### **clarification from Canadian side**

- The Canadian PMO clarified that Mr.Atwal was not part of official delegation to PM's visit to India, nor was he invited by the Prime Minister's Office.
- It also claimed that as is the case with international trips, individuals sometimes travel on their own to the location of the visit.
- Mr.Atwal he himself clarified that he travelled to India on his own on February 11.
- Canadian PMO said the invitation to JaspalAtwal was sent by a member of the Canadian parliament and the invitation was sent by mistake.

#### **Khalistani Issue Clouds the Canadian PM's Visit**

- The Khalistan issue has become a big irritant in the India – Canada relations.
- Issues concerning this dominated the Canadian PM Justin Trudeau's recent visit to India, and it is in the interest of both countries to course correct.

#### **Indo-Canadian relations over the years**

- The previous decade saw Indo-Canada bilateral relationship going strong and co-operation across multiple sectors were established.
- This included agreements on - energy, trade, civil nuclear cooperation and a commitment from Canadian pension funds to invest in India.
- India and Canada have much in common as two pluralistic, diverse democracies with very strong people-to-people ties.
- Besides this, Indian Diaspora accounts for over 1.3 million in Canada, and an 100,000 Indian students pursue their studies there.
- Despite these overwhelming commonalities, as the recent visit of Mr. Trudeau showed, the relationship seems to be turning sour.

#### **Indo-Canadian tensions**

- Liberal Party shepherded a resolution recently in the Ontario provincial legislature calling the 1984 anti-Sikh violence "genocide".
- Canadian PM Justin Trudeau was even attended a rally in Toronto, which was organised by pro-Khalistani Sikh groups.

- Such attitudes of Canada's ruling dispensation didn't go down well with the Indian authorities who had expressed their apprehensions.
- Hence, tensions were simmering in the underneath, long before the Canadian PM's arrived for an eight-day state visit to India.
- Considering these, New Delhi had preferred to keep Mr Trudeau's state visit a shorter, formal and more business-like.
- But Ottawa opted for a five-city tour, with a bilateral meeting with Prime Minister Narendra Modi on the penultimate day.

#### stress points

- As a symbolic snub, a junior minister was delegated to welcome the Canadian PM, in clear contrast to how other heads of governments had been received.
- **Punjab CM** - The Indian government wanted Mr. Trudeau to reach out to the Punjab Chief Minister Amarinder Singh during the visit.
- Notably, this was to make up for the Canadian government's action in 2016, when it had snubbed Mr. Singh, when he had requested for an official visit.
- But as Mr. Trudeau's office did not confirm a meeting with the Punjab CM till after his arrival in India, this too accentuated the tensions.
- **Khalistani elements** - To India's annoyance, the Canadian delegation also had members suspected of sympathising with extremist Sikh groups.
- Notably, Mr. Japal Atwal, who was part of the Canadian delegation, is a suspected Khalistani and is said to have attempted assassinating an Indian minister in 1986.
- While the courts in India have acquitted him due to lack of evidence, his presence has caused severe embarrassment during the bilateral meet.
- **Overall** - Expect for the final meet with Mr. Modi, throughout the trip, the Canadian PM was unaccompanied by suitably ranked officials.
- Ottawa had been insensitive to Indian concerns all along, which seems to have forced the India to be this vocal about displeasure.
- Considering the criticality of the bilateral relationship, both sides could've handled the visit better.

### Pakistan in Watch List for Terror Financing

**In News:** Financial Action Task Force (FATA) included Pakistan on watch list for terror financing.

#### FATA

- The Financial Action Task Force (FATF) is an inter-governmental body established in 1989 by the Ministers of its Member jurisdictions.
- The objectives of the FATF are to set standards and promote effective implementation of measures for combating money laundering, terrorist financing and other related threats to the integrity of the international financial system.
- The FATF is a "policy-making body" which works to generate the necessary political will to bring about national legislative and regulatory reforms in these areas.
- In collaboration with other international stakeholders, the FATF works to identify national-level vulnerabilities with the aim of protecting the international financial system from misuse.
- The FATF's decision making body, the FATF Plenary, meets three times per year.

#### demands before Pakistan

- Pakistan in co-operation with the FATF, will have to finalise an action plan by June to counter deficiencies in its financial system with respect to the financing of terrorism.
- If this is not completed, then Pakistan will be put on a watch list by the FATF.
- This will significantly increase regulatory scrutiny of Pakistan-related transactions and increase transaction costs for the external sector in that country.
- An increase in costs and in the risk profile of Pakistan-related transactions will impose significant economic pain, and raise incentives to fix terror financing within the Pakistani system.

#### recent decision on Pakistan

- The Financial Action Task Force (FATF) Plenary on decided to put Pakistan back on the "grey list".
- By this Pakistan will subject to direct monitoring and intense scrutiny by the International Co-operation Review Group (ICRG) on terror financing, pending further review in June 2018.
- The FATF decision was by consensus, after days of closed-door discussions within the 37-member group.
- US piloted a resolution against Pakistan to put it in the global terror finance watch list.

#### reason behind this move

- The move was pushed by four nominating countries: the United States, United Kingdom, Germany and France.
- In mid-January, they had written to the FATF stating that even though Pakistan had an anti-money laundering/anti-terror funding regime in place, effectiveness of the implementation was inadequate.

- Some countries said Pakistan's actions only followed recent FATF pressure, and it would be counter-productive to let it off the hook just when the pressure was yielding results.
- Earlier this week, Pakistan had claimed victory in the ongoing FATF meeting, as a preliminary discussion in the ICRG failed to build a consensus on putting it again on the watch list, after China, Turkey, Saudi Arabia and GCC countries objected to Pakistan's nomination.
- The U.S. worked hard to bring Saudi Arabia around, Germany worked on the GCC, while India was able to speak to Russia.
- China may have been incentivised to help because it had become Vice-Chair of the FATF committee, and would like to play a responsible role at the international grouping.

#### **implications**

- International financial institutions and banks will now find it difficult to conduct business in Pakistan.
- The list would make it harder for foreign investors and companies to raise funds overseas.
- It would also make it more expensive to get and repay loans from international lenders like the IMF and the World Bank.
- Under a "Compliance Document," Pakistan required to furnish to the ICRG regarding its full action plan to crack down on terror groups banned by the UNSC that operate on its soil.
- The terror groups include the Jaish-e-Mohammed, the Lashkar-e-Taiba and affiliated groups.

#### **role of India in this move?**

- According to Initial reports Pakistan's usual backers China and Saudi initially supported Pak in FATF.
- But this support petered out when a second and unscheduled vote was called by the US.
- Even though the move has been led by the US, India made a strong diplomatic efforts through its sustained pressure on leading countries to act on terror.
- India's diplomatic offensive has progressively demanded greater accountability from Pakistan for its actions, or lack of them, against the spread of terror.
- India also plans to use its moves to ensure China and Saudi Arabia do not abandon their current position on Pak over demands of FATF.

#### **India's diplomatic initiatives**

- Indian government has claimed success to its efforts with regard to addressing terrorist threats to national security.
- India announced an Indo-Canada bilateral framework on countering violent extremism, as was an institutionalised dialogue between the national security advisors of the two countries.
- India included the crucial clause that no country should allow its territory to be used for terrorist and violent extremist activities.
- Peace and reconciliation in Afghanistan also a goal of India alongside the "dismantling of infrastructure of support to terrorism from across borders of Afghanistan".

#### **Multi-Pronged Diplomacy in South Asia**

- An international agreement to curtail terror financing by Pakistan was recently reached in United Nations with strong Indian backing.
- Almost simultaneously, the cross border TAPI pipeline project was celebrated in a joint ceremony - symbolising cooperative diplomacy.
- This "Stick and Carrot Approach", opens up interesting trends in the subcontinent, which simmers hope.

#### **economic cooperation angle**

- Facilitating regional economic cooperation would enhance mutual interdependence and ensure lasting peace in the region.
- Notably, India and Pakistan currently have very small and restricted trade due to problems over the Kashmir question.
- Despite these problems, all countries have been showing keen interest in the TAPI pipeline project, which is hoped to be highly beneficial.
- Surprisingly, even non-state actors like Taliban who continue to hold significant clout over regions in Afghanistan have welcomed the project.
- While project is expected to cost \$10 billion, no international bank or government appears willing to risk investments in this troubled region.
- Here too, China could prove crucial, as it is already betting massively in the region through its Belt and Road Initiative.
- These new dynamics imply that the past might not constrain the future and that structural changes in international relations are inevitable over time.

### **Blacklist and Look Out Circular**

**In News:** Jaspal Atwal, an earlier blacklisted Khalistani militant, was invited to a dinner honouring Canadian PM Trudeau.

#### **blacklist**

- It is a list of persons against whom a "look out circular" (LOC) has been issued.
- It could contain the names of both Indian citizens and foreigners.
- The blacklist is maintained by the Foreigners Division of the Ministry of Home Affairs (MHA).

- It is sent to all Indian diplomatic missions across the world, as well as to immigration checkpoints within the country.
- The list is reviewed from time to time, with name of individuals being added or deleted.
- This is done on the recommendations made by central agencies or state police.
- At present, there are nearly 30,000 individuals, including foreign nationals, in the blacklist database, pruned from 38,000 in 2016.

#### LOC

- A “look out circular” (LOC) is a coercive measure used by the investigating agencies and the courts.
- It is used to compel the suspects who are awaiting trial to surrender.

#### Procedure

- **Authorities** - The authorities on whose request an LOC can be issued include the:
  - Ministry of External Affairs
  - Customs and Income-Tax departments
  - Directorate of Revenue Intelligence (DRI)
  - Central Bureau of Investigation (CBI)
  - regional passport officers
  - police authorities in various states
  - International Criminal Police Organisation, commonly known as Interpol.
- **Procedure** - The agencies are supposed to follow a process before requesting an LOC.
  - The investigators must submit a written request to an **officer notified by the Ministry of Home Affairs**.
  - The request should provide details regarding the individual’s involvement in a crime.
  - The officer, among others, should not be below the rank of:
    - deputy secretary to the Government of India
    - joint secretary in a state government
    - superintendent of police at the district level or in CBI/NIA
    - zonal director in NCB
    - deputy commissioner in DRI
    - assistant director of Intelligence Bureau or bureau of immigration
    - deputy secretary in R&AW
    - assistant director of Enforcement Directorate
- LOCs can also be issued on the direction of any **criminal court** in India.
- In a 2010 Delhi High Court verdict, it was observed that a **request** for issuance of LOC **cannot emanate from a statutory body**.
- **Validity** - Unless specified, an LOC is valid for one year.
- However, agencies concerned are allowed to make a request to immigration authorities for the extension of an LOC before its expiry.

#### Cases eligible for LOC

- Investigating agencies can approach immigration authorities for issuance of an LOC in certain cases.
- These include offences recognised by the Indian Penal Code (IPC) or other penal provisions.
- Also, when the accused/suspect is deliberately evading arrest or not appearing for trial in court.
- The evasion should be in spite of a non-bailable warrant and similar coercive measures.
- LOC can also be issued when there is a likelihood of the suspect leaving the country to evade trial or arrest.
- However, in cases where the offence is not recognised by the IPC, LOC cannot be issued to prevent the individual from leaving the country.
- In such cases, the agencies can only ask to be informed about the arrival or departure of these individuals.

#### legal remedies

- The blacklisted individuals can approach a court or the competent officer, who issued the LOC, for its withdrawal.
- However, according to legal experts, it is more advisable to cooperate with investigating agencies.
- **Role of a subordinate court** - An LOC can be issued on the basis of a non-bailable warrant by a subordinate court.
- In this case, a cancellation of that warrant by the court will make it invalid.

## ENVIRONMENTAL AFFAIRS

### **Garbage Disposal - Mysore model**

**Context:** India has a poor garbage disposal and collection mechanism, which leads to various problems.

- Innovative solutions and behavioural change based on Mysore model will address the concerns.

### **garbage collection mechanisms**

- In India 'Reduce, reuse, recycle' mechanism lags people's commitment, a certain level of awareness.
- Source segregation method to separate the bio-degradable from the non-bio-degradable garbage (usually packaging) continues to see patchy success for various reasons.
- Coercive methods of penalties and fines are also not easily implementable in a democratic polity.
- The result is many of our cities are often eyesores with garbage strewn around and our waterways heavily polluted with floating junk, causing enormous problems for citizens and animals alike.

### **Mysore model**

- Karnataka government is following an innovative solution in Mysore Zoo to address the garbage disposal concerns.
- Mysore Zoo collects a fixed amount for the plastic bottles and other disposable items at the entrance.
- At the exit the money is returned if the empty bottle or other disposable items are turned in.
- This model is very successful and rarely came across a case where a person threw away garbage not caring for the amount that he would get back on surrendering it.

### **Behavioural Aspects**

- Consumers need to be ensured that the discards have a value attached to them that is assuredly 'redeemable' in the immediate future.
- When a person thinks twice about the worth of their junk before throwing it away simply, they will try to monetize it anyhow.
- Consumers rarely throw old newspapers into the garbage bin, they would rather sell them to old paper shops because we know that they will fetch some returns.
- In the same way consumers must be made aware that used cans, polythene bags, etc. which generate tonnes of garbage can also be monetized.
- Some institutions, cities and countries across the globe have tried this quite successfully.

### **Methods need to be followed**

- **Polluter Pays** - Some municipal bodies have tried to 'purchase' recyclable junk but this needs funds and then there are the logistics involved.
- This can be addressed through the principle of 'polluter pays' in this case both the producer and consumer of the good are the polluters and so both should pay or be held responsible for its disposal.
- **Refund Method** - In the era of e-commerce, every single delivery will entail expensive packaging that is virtually useless to the buyer, Packaging comprises a large volume of garbage.
- If the value to packages in general has assumed people would take to keep the packages safe and they won't simply litter with the packages.
- The producer of the good would have to cough up this money that would be mandatorily payable to anyone who returns the packaging.
- If every single packaging material or container cardboard boxes, plastic packages and bags, sachets etc. need to come with manufacture will pay the compensation if the packs are returned.
- For non-branded goods and packaging a separate dispensation is needed.
- **Regulatory framework** - Assigning a 'monetary value' to garbage, cannot be arbitrary, it has to have proper institutional arrangements.

### **Concern's Over KPME Act**

**Context:** Karnataka has made draft rules over Private Medical Establishments (Amendments) Act.

- Several concerns have been felt over these draft rules.

### **KPME Act**

- The Karnataka Private Medical Establishments Act was passed in 2007 to "bring a comprehensive legislation in place of the Karnataka Private Nursing Home (Regulation) Act, 1976.
- This act will be the legal control over private medical establishments (PMEs) in the State.
- Among other things, the Bill made the registration of PMEs mandatory and laid down guidelines to ensure their quality.
- Initially amendments made to Karnataka Private Medical Establishments (Amendment) Bill 2017 intend to bring the PMEs under the purview of the government.
- This paved a way for the Karnataka government fixing the rates for each class of treatment, and will provide grievance redressal systems.
- It also aimed to put a stop to the practice of demanding advance payment in case of emergency treatment, and not releasing dead bodies to relatives till all dues have been settled.

- After a series of protest made by private health sector entities a recent amendment made has been made which allows inclusion of pro-corporate entities on various expert committees.

#### **Significance**

- Looking at the larger interests of the community, most of our concerns have been addressed.
- The rules show the importance of private health sector participation in providing affordable and quality healthcare services to people.

#### **concerns over the act**

- In the initial amendments said the government would notify fixed charges for various procedures, the rules did not indicate that the government had any control.
- Many health activists claims that government is leaning towards private hospitals.
- Inclusion of pro-corporate entities will skew both standards and costing in favour of large corporate hospitals.
- It will also escalate costs that will only push citizens into pauperisation and destitution.

### **Increasing Plantation Forest Cover**

**In News:** Forest Survey of India (FSI) has released the 2017 State of Forest Report.

#### **FSI**

- Forest Survey of India (FSI) is an organisation under the Ministry of Environment & Forests.
- Its principal mandate is to conduct survey and assessment of forest resources in the country.
- The Forest Survey of India organize the training programmes to state sponsored forest personnel.
- FSI releases State of Forest Report biennially based on satellite imageries.
- According to the State of Forest Report, the definition of forest cover includes all lands more than 1 hectare in area with a tree canopy of more than 10 per cent, irrespective of land use, ownership, and legal status.

#### **recent findings**

- This report has found that the forest cover is by and large stable, between 2015 and 2017, a mere 0.21 per cent change is noted.
- Forests cover is around 21.54 per cent of the land area of the country, this area includes trees growing in the government's forestland and in private lands.
- Out of 21.54 per cent of the land that is under forest cover, only 3 per cent can be classified as very dense, the tree canopy density of 70 per cent or more.
- The report also finds that between 2015 and 2017, the category of forests classified as "very dense" has increased by some 9,000 square km.
- While moderately dense forests have decreased and there is some increase in open forests.

#### **insights from the report**

- According to government estimate, the annual production of timber from recorded forestlands is 4 million cubic metres.
- Timber-growing potential in the country in lands outside recorded forests, comes to some 74.5 million cubic metres.
- Which makes it clear Private players are growing forests for monetization.
- In fact, almost 30 per cent of the growing stock an indicator of forest health and productivity is outside the "recorded" forests and this is increasing, faster than the growing stock in the lands controlled by forest department.
- The difference is the "nature" of tree species, while the growing stock in forests is mainly Sal, teak, or pine, timber species, outside it is mango, coconut, Neem, and bamboo horticulture and plantation species.

#### **concerns with classifying forests**

- It is not possible to say how much the area under forests in the "recorded" forests is, because not all state governments have completed digitising the boundaries of these lands.
- In fact states have "lost" substantial areas previously recorded as forests and are not "found" when the records are digitised.
- Though it would seem that the quality of forest cover has improved and "moderately dense" has been converted into "very dense", the increase in coverage is not of natural forest cover.
- Almost 70,000 square km of forestland, roughly 12 per cent of the recorded forest area, has been wiped out in India for plantation.

### **Super critical carbon dioxide (S-CO<sub>2</sub>)**

**In News:** Scientists from Indian Institute of Science (IISc Bengaluru) have indigenously developed country's first super critical carbon dioxide (S-CO<sub>2</sub>) Brayton Test Loop facility.

- The facility was inaugurated at the IISc campus is first test loop technology coupled with solar.
- The source in world that will generate clean energy from power plants, including solar thermal.

#### **Key Facts**

- The facility is part of Indo-US consortium- Solar Energy Research Institute for India and United States (SERIUS).
- It was developed by research group inter-disciplinary center for energy research of IISc as part of consortium.



- Funding was provided by Department of Science and Technology (DS&T under Indo-US Joint Clean Energy Research and Development Cent programme.
- This facility uses supercritical CO<sub>2</sub> (SCO<sub>2</sub>) instead of steam to generate more power.
- Supercritical refers to state of CO<sub>2</sub> above its critical temperature of 31 degree C and critical pressure of 73 atmospheres, which makes it twice as dense as steam.
- SCO<sub>2</sub> operated in closed loop Brayton cycle increases efficiency energy conversion by as much as 50% or more.

#### Significance

- This next generation, efficient, compact, waterless super critical CO<sub>2</sub> Brayton cycle test loop for power generation will be useful for meeting energy needs of the country.
- It has potential to replace steam based nuclear and thermo power plants, thus reducing the carbon footprint significantly.
- Beside increasing power generation and making process more efficient, the new technology will make power plants cheaper with lower operating costs.
- It will be indigenous initiative for setting up next generation of solar thermal power plants.
- This gives India opportunity to become world leader in the technology, and fulfill major objective of National Solar Mission which emphasizes indigenous manufacturing.

### Light transport aircraft SARAS

**In News:** India's indigenous developed light transport aircraft SARAS PT1N has successfully completed second test flight.

- It was the second of the 20 test flights planned for SARAS PT1N, before it is frozen to production version.
- The first successful test was carried out in January 2011 Indian Air Force (IAF) has committed to induct 1 aircrafts initially.

#### SARAS PT1N

- SARAS PT1N is first Indian multi-purpose civilian aircraft in light transport aircraft category as designed by the CSIR-National Aerospace Laboratories (NAL).
- its development is seen as culmination of efforts of CSIR-NAL, IAF ASTE, Centre for Military Airworthiness and Certification (CEMILAC), HA and Directorate General of Aeronautical Quality Assurance (DGAQA).
- SARAS PT1N upgraded version of envisioned Saras aircraft program aircraft.
- It is 14-seater and the production version aircraft will have 19-seat capacity.
- It weighs 7-tonne and has been designed to travel at 425 km/h.
- It has maximum continuous flight time of around 8 hours.
- The upgraded version of plane is equipped with more modern avionics system improved radar, linear wing flap actuator, engine flap actuators, environment control, better flight control system, larger metallic rudder for enhance control, redesigned landing-gear actuators, brand-new brake system, and for resistant design for aircraft's nacelle.

#### Background

- The aircraft programme is named after Indian crane Saras.
- It was for conceptualized in 1990s to establish short-haul civil aviation market.
- The original design of plane included maximum take-off weight of 6,100kg and maximum payload of 1,232kg.
- SARAS PT1N is upgraded version of plane, after second prototype of SARAS that has crashed during test flight killing all three crew members on board in March 2009.

### AtalBhujalYojana

**In News:** The Union Government has formulated ambitious water conservation scheme AtalBhujalYojana (ABY) to tackle ever-deepening crisis of depleting groundwater level.

- The Rs 6,000-crore will be piloted under the Ministry Water Resources, River Development & Gang Rejuvenation.

#### AtalBhujalYojana

- The objective of scheme is to recharge ground water and create sufficient water storage for agricultural purposes.
- It also focuses on revival of surface water bodies so that ground water level can be increased, especially in the rural areas.
- It will give emphasis to recharging ground water sources and ensure efficient use of water by involving people at local level.
- The scheme after Cabinet's clearance will soon be launched in water-stressed states: Gujarat, Haryana, Karnataka, Maharashtra, Uttar Pradesh, Rajasthan and Madhya Pradesh.
- It will cover 78 districts, 193 blocks and more than 8,300 gram panchayats across these states.
- Centre will support half of the total project cost and rest of the budgetary cost will be shared by the World Bank.

#### Significance

- This scheme will help those who are in need for constant ground water supply especially farmers who have been hard impacted by acute shortage of ground water for past several years.

- Its focus is primarily on involvement of communities and convergence with different water schemes.
- Its major component is making society responsible and bringing about behavior change to manage groundwater resource.
- It will help improve overall outlook towards water resource.
- Background
- The current status of groundwater is alarming, primarily due to non-uniform ground water development and its over-exploitation.
- According to report published by the Central Ground Water Board (Ground Water Assessment 2011),
  - Out of 6,607 assessed administrative units 1,071 units are over ground water exploited,
  - 217 units are critical, 697 units are semi-critical,
  - 4,53 units are safe.
  - Moreover, there are 92 units are completely saline.
- The number of over-exploited and critical administrative units is significant higher in Delhi, Haryana, Punjab, Rajasthan, Uttar Pradesh, Himachal Pradesh Karnataka and Tamil Nadu and also in Union Territories of Puducherry Daman and Diu.
- The declining ground water levels have resulted in failure of wells or deepening of extraction structures, leading to additional burden of farmers.

## BIO/ HEALTH ISSUES

### **UNICEF's Neonatal Mortality Report**

**In News:** A recent UNICEF report, titled "Every Child Alive", gives a country-wise ranking of neonatal mortality rates (NMR).

- NMR is the probability of dying during the first 28 days of life, expressed per 1,000 live births.

#### **highlights of the report**

- **India** - India ranks 12th among 52 low-middle income countries having the highest infant mortality rates.
- Neonatal mortality rate is recorded at 25.4 deaths per 1,000 live births in India in 2016.
- A small mortality rate can translate to numerous deaths when the birth-rate is high.
- It thus translates to death of over six lakh children within the first month of their birth in India in 2016.
- Worryingly, this is more than any other country.
- With this, India is ranked below Sri Lanka (127), Bangladesh (54), Nepal (50) and Bhutan (60).
- **Global** - Globally, 2.6 million children died in the first month of life in 2016.
- The average newborn mortality in low-income nations is nine times the rate of high-income countries.
- In low-income countries, the average newborn mortality rate is 27 deaths per 1,000 live births.
- In high-income countries, it is 3 deaths per 1,000 live births.
- Newborns in Pakistan, the Central African Republic and Afghanistan face the worst odds.
- Babies born in Japan, Iceland and Singapore are said to have the best chance of survival.

#### **concern with India**

- India has more than halved the number of deaths among children under the age of five in the last quarter century.
- India is nearly meeting its MDG target, with a 66% reduction in under-five deaths during 1990 to 2015.
- However, it has not made similar progress in ending **deaths among children less than one month old**.
- Notably, India is ranked behind poorer countries such as Bangladesh, Nepal and Rwanda.

#### **Functional Requirement**

- **Political will** - A majority of these deaths are preventable.
- The report has stressed that financial resources were not the biggest constraint in improving this health indicator.
- It is rather the political will that is essential now to ensure better newborn survival.
- Evidently, Rwanda, which falls in the lowest income group, has reduced its mortality rates from 41/1000 in the 1990s to 16.5.
- This is achieved through programmes targeted at poor and vulnerable mothers.
- **Health care** - Addressing gaps in quality of health care is the need of the hour in India.
- Hospitals should ensure that the critical products to save the newborns are available.
- It ranges from a piece of cloth to keep the baby warm to antibiotics and disinfectants to stave off killers like sepsis and meningitis.
- **Mother's health** - The biggest cause of death is premature birth.
- The second is complications like asphyxia during delivery.
- Preventing these would mean paying attention to the mother's health during pregnancy.
- It should be ensured that she delivers in a hospital attended by trained doctors or midwives.
- Programmes such as the JananiSurakshaYojana should be expanded to reach the poor and vulnerable in remote areas.

- **Gender gap** - The issue of neglect of the girl child is much broader and needs interventions beyond health.
- The associated concerns with social norms and cultural practices should also be addressed.
- Focussing on factors outside the healthcare system, like female literacy rates is also essential.
- States like Kerala and Tamil Nadu have focussed on these factors, bringing down newborn deaths to fewer than 15 per 1000.
- It is time for the rest of India to take lessons from these successful states.

**UNICEF**

- The United Nations Children's Fund (UNICEF) is special program of the United Nations.
- It is devoted to aiding national efforts to improve the health, nutrition, education, and general welfare of children.

**TECHNOLOGICAL AFFAIRS**

**MISCELLANEOUS**

**INSHORT**

**Global Corruption Index**

- India's rank on the Corruption Perception Index fell two notches to 81 in 2017 from 79 in 2016.
- The Berlin-based non-government body Transparency International ranked 180 countries in 2017.
- New Zealand was the least corrupt and Somalia was the most.
- The 2017 index revealed — despite attempts to combat corruption, most countries were moving too slowly with their effort.

**HOW INDIA FARES**

Nations	Rank in 2016	Rank in 2017
India	79	81
Brazil	79	96
Russia	131	135
China	79	77
South Africa	64	71
Pakistan	116	117

**TOP, BOTTOM ONES**

Top nations	Bottom nations
New Zealand	Syria
Denmark	South Sudan
Finland	Somalia

Source: Transparency International  
Corruption Perceptions Index

**ICGS Vajra**

- The Indian Coast Guard ship 'Vajra', was decommissioned in Paradip.
- The Indian Coast Guard ship rendered three decades of service in maritime security along the northeast coastal waters.
- The ship monitored the coastal activities along with Odisha and West Bengal.
- It was built by Mazagon Dock, named 'Vajra', after the weapon of Lord Indra, and commissioned on 1988.

**Eravikulam National Park**

- Eravikulam National Park is located in the KannanDevan Hills of the Southern Western Ghats in the Idukki District, Kerala State.
- In the local language, Eravikulam denotes streams and pools.
- The highest peak in peninsular India, Anamudi (2695 m), is situated in this park.
- Three major types of plant communities found in the park are: Grasslands, Shrub Land and Shola Forests.
- Neelakurunji, a plant endemic to the Western Ghats, blooms once every 12 years is found in this national park.
- It also is home to and the sanctuary of the Nilgiritahr, an endangered goat species.

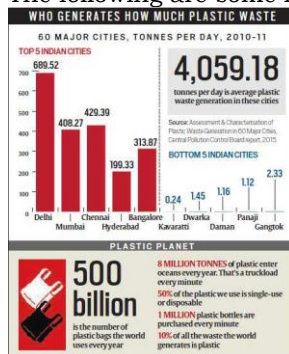
- The catchment area of three important rivers, Periyar, Chalakudy and Pambar is located in this area.
- The Muthuvans are the indigenous people, who have traditionally been associated with the management of the park.

### Rare Fish Species from Australia

- Scientists hauled up thousands of fish in an attempt to examine life at abyssal depths along Australia's vast coastline.
- Life at such depths is one of crushing pressures, no light, little food and freezing temperatures, with animals that call it home evolving unique ways to survive.
- As food is scarce, they are usually small and move slowly and others are jelly-like and spend their lives floating about.
- Some species have ferocious spines and fangs and lie in wait until food comes to them.
- Over 42,000 fish and invertebrates were caught, some of which are potentially new species.
- Scientists gathering in the Tasmanian capital Hobart to examine them which is a first in its nature.
- It is the first systematic attempt to examine life at abyssal zone depths anywhere along Australia's vast coastline.

### Plastic pollution

- India will host the official global World Environment Day celebrations on June 5.
- The Theme of this year Environmental day will be "Beat Plastic Pollution".
- The following are some insights into the plastic pollution in the country.



1. The average production and consumption of plastic products between 2011-12 and 2015-16 at 707 million metric tons (MMT) per year.
2. A report by Central Pollution Control Board in 2015 estimated that around 4,059 tons per day of plastic waste is generated from major cities.
3. In 2015, the government had approved a scheme for "setting up of need-based **plastic parks** with requisite state-of-the-art infrastructure to assist the sector move up the value chain.
4. Ockhi Cyclone resulted in agglomeration of plastic debris along the coasts of Maharashtra, Kerala, Karnataka, Goa and Gujarat.

### DaraShukoh

- An exhibition was conducted to showcase the forgotten Mughal Prince DaraShukoh, at Indira Gandhi National Centre for the Arts, in New Delhi.
- He was the eldest son of Emperor Shah Jahan and heir apparent to the Mughal throne.
- The religious insight of the Mughal prince marks him out from most other Mughal rulers.
- DaraShukoh leaned towards the Chishti order of Sufism that is known to have promoted tolerance.
- He commissioned the translation of all the Upanishads from Sanskrit to Persian for Muslim scholar to learn.
- He wrote the Majma-ul-Bahrain (The confluence of two seas).to elaborate upon the syncretism between Sufism and Vedic philosophies.
- Prince DaraShukoh was defeated by Prince Aurangzeb in the battle of Samugarh.

### Press Freedom-Corruption Perception Index

- India is a worst regional offender of press freedom in Asia Pacific, according to Corruption Perception Index.
- Transparency International finds crackdowns on NGOs and media are associated with higher levels of corruption in the world.
- On average, every week at least one journalist is killed in a country that is highly corrupt.

## DEATH ON THE JOB

At least eight journalists died in line of duty in India this century

Name	Organisation	Date	Cause of death
Asiya Jeelani Masoom	Freelance	Apr 20, 2004	Dangerous assignment
Jagendra Singh	Freelance	Jun 8, 2005	Murder
Ashok Sodhi	Daily Excelsior	May 11, 2008	Dangerous assignment
Javed Ahmad Mir	Channel 9	Aug 8, 2008	Dangerous assignment
Anil Majumdar	Ajit	Mar 24, 2009	Murder
Dwijamani Singh	Prime News	Dec 23, 2012	Dangerous assignment
Karun Misa	Jansandesh Times	Feb 13, 2016	Murder
Gauri Lankesh	Gauri Lankesh Patrike	Sept 5, 2017	Murder

Source: Committee to Protect Journalists

- The analysis by Transparency International showed that in the last six years, more than 9 out of 10 journalists were killed in countries that score 45 or less on the Corruption Perceptions Index.
- Transparency International is a Berlin-based non-government organization.

## Echindas

- Echidnas, also called spiny anteaters, are mammals
- Echidnas are one of the world's oldest surviving mammals.
- They are egg-laying mammals.
- It is listed as 'least concern' in IUCN classification.
- However, the short-beaked echidna found only in Australia and Papua Guinea is threatened.
- The main threats are land clearing and habitat loss, traffic, feral cats and potentially the rapidly changing climate.

## Humanoid Robot- Sophia

- Sophia is the world's first AI powered humanoid robot
- It was a part of the World Congress on Information Technology (WCIT), 2018, held in Telegana, India.
- A Humanoid may be defined as something that resembles or looks like a human and having their characteristics like opposing thumb etc.
- A Humanoid robot is fully automated as it can adapt to its surroundings and continue with its goals, as the case with Sophia.
- Sophia with her incredible human likeness and expressiveness is an evolving genius machine.
- Sophia, with a perfect skin and soft facial muscles, can give as many as 66 facial expressions.

## GobarDhan

- During the budget, the finance minister announced the launch of "GOBAR-Dhan" (Galvanising Organic Bio-Agro Resources-Dhan).
- The initiative has two objectives:
  1. To make villages clean and generate wealth
  2. Energy from cattle and other waste.
- The GOBAR-Dhan initiative is expected to convert cattle dung and other organic waste to compost, biogas and even larger scale bio-CNG units.
- The Swachh Bharat Mission-Gramin will pilot this initiative.

## PM's Awards for Excellence in Public Administration, 2018

- Government of India has instituted the scheme to acknowledge, recognize and reward the extraordinary and innovative work done by Districts / organizations of the Central and State Governments.
- The Award aims to bring about transparency, improvement in approaches, systems and processes in the delivery of public services.
- Following four priority programmes have been identified for the awards this year:
  1. PradhanMantriFasalBimaYojana,
  2. Promoting Digital Payments,
  3. PradhanMantriAwasYojana - Urban & Rural, and
  4. DeenDayalUpadhyayGrameenKaushalyaYojana (DDUGKY).
- The awards will be presented on Civil Services Day, 2018 function to be organized by Department of Administrative Reforms and Public Grievances, Ministry of Personnel, Public Grievances and Pensions.
- Every year on 21<sup>st</sup> of April (Civil Services Day) the awards for excellence in Public Administration are given.

## SARAS

- India's indigenous light transport aircraft SARAS has been successfully test flown for a second time recently.
- The design and development of the aircraft is being done by CSIR-National Aerospace Laboratories, NAL.
- Hindustan Aeronautics Limited, HAL has been identified as the production agency for the military version of SARAS.
- SARAS Mk 2 will be ideal for commuter connectivity under Government of India's UDAAN Scheme.
- It can be used for variety of applications like air taxi, aerial search/survey, executive transport, disaster management, border patrol, coast guard, ambulance and other community services.

### ChardhamMahamargPariyojana

- The Cabinet Committee on Economic Affairs has given its approval to the construction of 4,531 km long 2-Lane Bi-Directional Silkyara Bend - Barkot Tunnel with escape in Uttarakhand.
- The project will be built under Engineering, Procurement and Construction (EPC) Model which will provide all weather connectivity to Yamunotri, one of the dham on ChardhamYatra.
- It will encourage regional socio-economic development, trade and tourism within the country.
- The project will be implemented by the Ministry of Road Transport & Highways (MoRTH), through National Highways & Infrastructure Development Corporation Ltd. (NHIDCL).

### World Congress on Information and Technology (WCIT)

- The World Congress on Information Technology (WCIT) 2018 was concluded recently in Hyderabad, India.
- The First edition held in 1978 and is conducted by WITSA (World Information Technology & Services Alliance).
- India hosted the congress for the first time.
- The theme of the conference was 'Future Enterprises.'



- The congress is held every two years, during which senior global business, government and academic leaders discuss emerging markets, legal and policy issues, political and economic trends.

### International Mother Tongue Day 2018

- The United Nations' (UN) International Mother Language Day annually celebrates language diversity and variety worldwide on February 21.
- This year theme is 'Linguistic diversity and multilingualism count for sustainable development'.
- At least 43% of the estimated 6000 languages spoken in the world are endangered.
- It encourages people to maintain their knowledge of their mother language while learning and using more than one language
- International Mother Language Day also supports target 6 of Goal 4 (Literacy) of the Sustainable Development Goals (SDGs)

### Operation Greens

- Our Finance minister in his budget speech announced the 'Operation Greens' on the lines of Operation Flood.
- The main objective of the project, according to the finance ministry, is to reduce price volatility in agro commodities such as vegetables.
- Operation Greens aims to promote farmer producers organizations, agro-logistics, processing facilities and professional management.
- Operation Flood was launched in 1990 by National Dairy Development Board (NDDB), India to boost the milk production and income of cattle owners.

### Artificial Intelligence – Pwc India Report

- The impact of artificial intelligence (AI) on employment is expected to be severe, but the benefits outweigh its concerns, says the Pwc India report.
- Some of its findings
  1. 68% of Indian business decision-makers believe AI will help their business in boosting productivity, generating growth and addressing societal issues.
  2. AI will open up opportunities for people to do more value-added work.
  3. Will allow for greater flexibility and work-life balance.



- In the budget speech finance minister said that NitiAayog would set up a national program to direct efforts in research and development of different AI applications.
- Artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems.

### Antarctic Krill

- The krill population in the Antarctic is under threat, due to a combination of factors including industrial-scale fishing and climate change.
- Antarctic krill are one of the most abundant and successful animal species on Earth.

- The loss of krill could endanger the entire Antarctic ecosystems, with predators, especially penguins, in potential danger.
- Krill are essential feed for whales, penguins and seals.
- Modern trawlers that suck in large quantities of water at a time are a primary cause of their demise.
- Krill oil is a scientifically proven to be a super source of omega-3 fatty acids.
- Krill numbers have declined by as much as 80% since the 1970s.

#### **National Conference on e-Governance**

- The Department of Administrative Reforms and Public Grievances (DARPG) with the Ministry of Electronics & Information Technology and in association with Government of Telangana is organizing the conference.
- The theme of the Conference this year is, 'Technology for accelerating Development'.
- The awards are given for excellence in various fields such as Government Process Reengineering, Citizen-Centric Service Delivery.
- The Conference is a forum to showcase best practices, innovative technologies and ICT solutions.

#### **New Plant species – West Bengal**

- Scientists from the Botanical Survey of India have identified a new plant species from Buxa and Jaldapara National Parks in West Bengal.
- The plant is named after former President Abdul Kalam as **Drypetes kalamii**.
- It is a small shrub adding to the rich floral wealth of India.
- The newly described plant is unisexual in nature, which means they have separate male and female plants.
- The new species is found in wet, shaded areas of subtropical moist semi-evergreen forests, at a height ranging 50-100 meters.
- Being exclusive to these two parks, the plant is classified as critically endangered.

#### **Rustom-2**

- DRDO successfully flew its Medium Altitude Long Endurance (MALE) RUSTOM-2, unmanned aerial vehicle (UAV) at its Aeronautical Test Range (ATR) at Chitradurga.
- Rustom 2 is developed on the lines of predator drones of the US to carry out surveillance and reconnaissance (ISR) roles for the armed forces.
- The significance of this flight is that this is the first flight in user configuration with higher power engine.
- Rustom 2 is capable of carrying different combinations of payloads like synthetic aperture radar, electronic intelligence systems and situational awareness payloads
- The UAV is designed and developed by Aeronautical Development Establishment (ADE) of the DRDO, and aerospace major Hindustan Aeronautics Ltd and Bharat Electronics Ltd are its production partners.

#### **International Conference on Sustainable Biofuels, ICSB 2018**

- International Conference on Sustainable Biofuels is jointly being organized by Department of Biotechnology, Govt. of India on behalf of Mission Innovation and Biofuture Platform.
- Mission Innovation (MI) is a global initiative of 22 countries and the European Union to dramatically accelerate global clean energy innovation.
- The Sustainable Biofuel is one of the Seven Mission Innovation Challenges and India Co-leads this along with other countries Brazil, Canada and China.
- The event will bring together experts from Biofuels sector to take stock of current knowledge, share information and best practices, and build consensus on the actions most needed to move forward.
- A "New Delhi Declaration on Sustainable Biofuels" will be endorsed during this International Conference

#### **The RTE (Second Amendment) Bill, 2017**

##### **Highlights of the Bill**

- The Right to Education Act, 2009 prohibits detention of children till they complete elementary education i.e., class 8.
- The Bill amends this provision to state that a regular examination will be held in class 5 and class 8 at the end of every academic year.
- If a child fails the exam, he will be given additional instruction, and take a re-examination.
- If he fails in the re-examination, the relevant central or state government may decide to allow schools to detain the child.

##### **Key Issues and Analysis**

- There are differing views on whether children should be detained for failing examinations in elementary school.
- Some argue that automatic promotion reduces incentive for children to learn and for teachers to teach.
- Others argue that detaining a child leads to drop outs and does not focus on the systemic factors that affect learning such as quality of teachers, schools, and assessment.
- Provisions of the Bill regarding assessment and detention are at variance with what most states have demanded.
- In this context, the question is whether these decisions should be taken by Parliament or left to state legislatures.
- It is unclear as to who will conduct the examination (which may lead to detention): centre, state, or the school.

##### **Overview of School Education in India**

- This Bill revisits the no-detention provision. In this context, we present some data on school education (class 1-12).

##### **Enrolment and Attendance**

- Consequent to the enactment of RTE, enrolment for elementary education (class 1-8) has crossed 100% and is now at 96.9% as of 2014-15.
- The above-100% enrolment rate in 2007-08 till 2010-11 indicates that students enrolled included the nonage appropriate enrolments.
- Between 2008-09 and 2014-15, the proportion of students enrolled in class 1-8 in government schools declined from 71% to 62%, implying an increasing preference for private schools.
- The attendance for both boys and girls falls as the level of education rises in school education. There is hardly any difference between the attendance of boys and girls.
- **Gross Enrolment Ratio (GER)** is the student enrolment as a proportion of the corresponding eligible age group in a given year.
- **Attendance** is the ratio of the number of persons in the official age group attending a particular class-group to the total number persons in the age-group.

#### Dropouts

- The dropout rate peaks at the secondary level (class 9-10) at 17% as compared to 4% in elementary school (class 1- 8) and 2% in upper secondary school (class 11-12).
- This is also reflected in the transition rates in school education where the lowest transition rate is at the secondary level (class 10 to 11) at 69%.
- A transition rate below 100% indicates that the students are held back or have dropped out of school.
- Under the RTE Act, a child cannot be expelled or detained until the completion of elementary education (until class 8).
- This may explain the differential trends between the enrolment, dropout, and transition rates for elementary education and secondary education.

#### Female's Dropout

- According to NSSO data, the key reasons for females dropping out are to engage in domestic activities (30%), lack of interest in education (16%), and marriage (14%).
- On the other hand, the key reasons for males dropping out are to engage in economic activities (31%), lack of interest in education (24%), and financial constraints (24%).
- Other reasons include unfamiliar language/medium of instruction, inadequate number of teachers, and unfriendly atmosphere at school.

#### Learning Outcomes

- In 2015, Class 5 students in 34 states/ UTs were able to correctly answer 45% of reading comprehension items, and 46% of the mathematics items in the National Achievement Survey.
- Performance of students in 2015 was poorer than in 2012.
- For reading comprehension, 19 states have scores in 2015 that are lower than the scores in 2012.
- Only in two UTs, the average achievement scores in 2015 were significantly above those of 2012.
- For mathematics, 20 states have scores in 2015 that are lower than 2012. Only in 3 states/UTs, the average achievement scores in 2015 were significantly above those of 2012.

#### Triple Talaq Bill

**In News:** The Muslim Women (Protection of Rights on Marriage) Bill, 2017 popularly known as 'Triple Talaq' bill has passed in Lok Sabha and laid in Rajya Sabha.

- The Bill is abounding with a number of internal contradictions raising questions on the very purpose and intent.

#### Key Features of the Bill

- The Bill makes all declaration of talaq, including in written or electronic form, to be void (i.e. not enforceable in law) and illegal.
- It defines talaq as talaq-e-biddat or any other similar form of talaq pronounced by a Muslim man resulting in instant and irrevocable divorce.
- **Talaq-e-biddat** refers to the practice under Muslim personal laws where pronouncement of the word 'talaq' thrice in one sitting by a Muslim man to his wife results in an instant and irrevocable divorce.

#### Offence and Penalty

- The Bill makes declaration of talaq a **cognizable and non-bailable offence**. A cognizable offence is one for which a police officer may arrest an accused person without warrant.
- A husband declaring talaq can be imprisoned for up to three years along with a fine.

#### Allowance

- A Muslim woman, against whom talaq has been declared, is entitled to seek subsistence allowance from her husband for herself and for her dependent children.
- The amount of the allowance will be decided by a First Class Magistrate.

#### Custody of Minor Children

- A Muslim woman, against whom such talaq has been declared, is entitled to seek custody of her minor children.
- The determination of custody will be made by the Magistrate.

#### Anomalies

- **SC judgement** - The Supreme Court, earlier, invalidated the triple talaq practice by calling it arbitrary and unconstitutional.



- Logically, the pronouncement of talaq-e-biddat does not dissolve the marriage, and this is the law of the land under Article 141.
- Contradictorily, the Bill presumes that the “pronouncement” of talaq can instantaneously and irrevocably dissolve the marriage.
- The bill thus seems to be misreading the SC’s judgment on talaq.
- **Offence** - After rendering talaq-e-biddat inoperative, considering it a cognizable and non-bailable offence seems illogical.
- It raises questions on the validity of the law that criminalizes an act after conceding that it does not result in a crime.
- **Post-divorce issues** - Making provisions on post-divorce matters like subsistence allowance and the custody, when the pronouncement (instant talaq) itself does not dissolve the marriage appear baseless.

#### Case of Over-Criminalization

- **Necessity** - Criminal law is not necessarily a choice but a necessity.
- It should be used only as a “last resort” and only for the “most reprehensible wrongs”.
- Excessive use of criminal law for purposes it is ill-suited to tackle is the harsh reality of a modern state.
- **Morality** - The realm of private morality and immorality falls more within the individual and social sphere.
- Regulating it should largely come from the deliberations of the society and, making it the law’s business may not bring in the desired effect.
- In this context, criminalizing triple talaq would hardly help in building the moral commitments of Muslim husbands.
- It is not the function of a civilized legal system.

#### Removing Deadwood from the Law Books

**Context:** Voluminous statutory books and democratic progress call for simplifying the existing laws and repealing the outdated ones.

##### Current Status

- The government has identified around 1,800 laws that require to be removed from the statute books.
- In the past three years, Parliament has repealed about 1,200 obsolete and unnecessary laws.
- A remaining of about 600 irrelevant laws still occupies the statute books.

##### What is the need?

- With changing social, economic and legal conditions some pieces of legislation may have lost their relevance and utility.
- Failing to tune with the progress of democracy since Independence, they may have now become archaic.
- In the absence of a periodic review they continue to burden the statutory corpus.
- Besides this, some obsolete concepts, notions, perceptions that underlie law-making also require an overhaul with development.
- There is also a concern that these archaic laws could be invoked suddenly against unsuspecting and otherwise law-abiding citizens.
- A rationalizing process is thus necessary to decongest the statute books and promote ease of governance.

##### Initiatives Taken

- There are concerted efforts since 2014 for cleaning up the law books.
- The PMO set up the **Ramanujam Committee** to identify central government statutes that are ready for repeal.
- The Ramanujam Committee identified around 1,700 old statutes that were ready for repeal.
- This means that around 63% of central legislation could be repealed without affecting governance adversely.
- Also, there are four reports by the **Law Commission** on obsolete laws “warranting immediate repeal”.
- Besides, the **Repealing and Amending Bill 2017** and the Second Repealing and Amending Bill 2017 are pending in Parliament.
- In addition, a **100 Laws Repeal Project** by the Centre for Civil Society (CCS) was launched.

##### Limitations

- **States** - The Ramanujam Committee brought out a database of around 2700 existing Union-level statutes.
- Of these, a considerable number of laws were enacted between 1834 and 1949 i.e. before the Constitution came into being.
- These may be identified as “Central” laws, but after the Constitution, the subject matter may have moved to the states under the Seventh Schedule.
- State-level statutes are not part of the India Code listing (Central Acts of Parliament from 1836 onwards).
- Notably, in such cases, amendment or repeal can only be done by the state legislatures.
- Accordingly, the Ramanujam Committee and the Law Commission identified a total of around 150 old statutes that could only be repealed by states.
- Sadly, only a few states have done something about eliminating such outdated laws.
- **System** - A system of desuetude is where statutes, similar legislation or legal principles lapse and become unenforceable with lapse of time or non-enforcement.

- However, India does not have such a system in place.
- Notably, unless specifically identified and repealed, statutes are open-ended and remain on the books.

### Way Ahead

- Unmaking existing laws is as equally an arduous task as law-making.
- The role of State Assemblies is also significant and thus a permanent mechanism is needed in this regard.
- It is better to have a permanent commission in place to review the existing body of law and identify those that require repeal.

### Updated NRC for Assam

**In News:** The first draft of an updated National Register of Citizens (NRC) for Assam was published recently by the Assam government.

#### Significance

- Assam is the only State that had prepared an NRC in 1951. It has also now become the first State to get the first draft of its own updated NRC.
- The Register is meant to establish the credentials of a bona fide citizen as distinguished from a foreigner.
- This is to detect Bangladeshi migrants who may have illegally entered Assam after the midnight of March 24, 1971.
- This cut-off date was originally agreed to in the 1985 Assam Accord.

#### Assam Accord

- Assam witnessed a range of law and order problems and political turbulence driven by the anti-foreigners movement, in the early 1980s.
- Responding to this, the Assam Accord (1985) was signed by the Centre and the All Assam Students' Union (AASU).
- Accordingly, those foreigners who had entered Assam between 1951 and 1961 were to be given full citizenship, including the right to vote.
- The entrants between 1961 and 1971 were to be denied voting rights for ten years but would enjoy all other rights of citizenship.
- Anyone who entered the state without documents after March 24, 1971 will be declared a foreigner and were to be deported.
- Besides, the Accord had a package for the economic development of Assam.
- It also had assurance to provide safeguards to protect the cultural, social, and linguistic identity and heritage of the Assamese people.

#### After the Assam Accord

- The successive governments in the State failed to effectively detect and deport foreigners as set out in the Assam Accord.
- In 2005, another agreement was signed between the Centre, the Assam government and the AASU.
- Accordingly, it was decided to update the NRC that was first published after the Census data of 1951.
- The NRC update though started as a pilot project in some districts was stopped after violence broke out in some parts of the State.
- In 2009, Assam Public Works (APW), an NGO filed a petition in the Supreme Court.
- It called for identification of Bangladeshi foreigners in the State and deletion of their names from the voters' list.
- The recent publication of updated NRC comes as a result of the Supreme Court order to complete the exercise by December 31, 2017.

#### Challenges Lie Ahead

- **Claims** - The list published is the first draft, and with verification of the remaining applicants subsequent draft would be published.
- However, if a citizen's name is missing, he/she can file an objection (with requisite documents) and request that the name be included.
- A security challenge could possibly emerge when the process of updating the NRC gets completed, given the further claims.
- **Post Marriage Migration** - Nearly 29 lakh women, who have migrated after marriage, have claimed for residency status.
- Their claim is supported by certificates issued by gram panchayat secretaries and executive magistrates.
- The Supreme Court has clarified that while these documents could be allowed, it could by no means taken as proof of citizenship.
- The challenge lies in verifying the authenticity of the certificates for establishing the link between the claimant and the legacy person (who has to be a citizen).
- **Citizenship Bill** - The Centre is pushing for the Citizenship (Amendment) Bill, 2016.
- It seeks to grant citizenship to Hindu Bangladeshis, who have entered Assam illegally post-1971.
- Various groups have opposed identification of illegal migrants on the basis of religion.
- This unresolved citizenship related issue could pose a challenge for the positive outcome of the NRC, even if completed.

## **National Medical Commission (NMC) Bill 2017**

### **Context**

- There is nationwide opposition to the proposed National Medical Commission (NMC) Bill 2017.
- With Lok Sabha sending it to the Parliamentary standing committee on health, the provisions need a serious rethink.
- The new bill seeks to **repeal the Indian Medical Council Act, 1956** and provide for a medical education system which ensures:
  - Availability of adequate and high quality medical professionals.
  - Adoption of the latest medical research by medical professionals,
  - Periodic assessment of medical institutions, and
  - An effective grievance Redressal mechanism.

### **Key Features of the Bill**

- Constitution of the National Medical Commission: The Bill sets up the National Medical Commission (NMC).
- Within three years of the passage of the Bill, state governments will establish State Medical Councils at the state level.

### **National Medical Commission**

- **Commission** - The NMC bill seeks to replace the Medical Council of India with National Medical Commission as the top regulator of medical education.
- The 25 members **National Medical Commission** will be at the top of a four-tier structure for regulation.
- The remaining four shall be nominees from three ministries viz. Health, Pharmaceuticals, HRD and one from Director General of Health Services.
- A Search Committee will recommend names to the central government for the post of Chairperson, and the part time members. These posts will have a maximum term of four years.
- The Search Committee will consist of seven members including the Cabinet Secretary and three experts nominated by the central government (of which two will have experience in the medical field).
- Members of the NMC will include
  - The Chairperson
  - The President of the Under-Graduate Medical Education Board,
  - The President of the Post-Graduate Medical Education Board
  - The Director General of Health Services, Directorate General of Health Services,
  - The Director General, Indian Council of Medical Research, and
  - Five members (part-time) to be elected by the registered medical practitioners from amongst themselves from the prescribed regional constituencies under the Bill.

### **Functions of the National Medical Commission:**

- Framing policies for regulating medical institutions and medical professionals
- Assessing the requirements of healthcare related human resources and infrastructure,
- Ensuring compliance by the State Medical Councils of the regulations made under the Bill,
- Framing guidelines for determination of fees for up to 40% of the seats in the private medical institutions and deemed universities which are regulated as per the Bill.
- **Autonomous Boards** - The Bill sets up under the supervision of the NMC certain autonomous boards which are:
  - the Under-Graduate Medical Education Board (UGMEB) and the Post-Graduate Medical Education Board (PGMEB)
  - the Medical Assessment and Rating Board (MARB)
  - the Ethics and Medical Registration Board
- Each board will consist of a President and two members, appointed by the central government.
- **Medical Advisory Council** - It will be a platform for the states/union territories to put forth their views and concerns before the NMC.
- Essentially, the Council will advise/make recommendations to and oversee the functions of the NMC.
- **Exam** - Students have to clear the common entrance exam NEET for MBBS.
- Besides, the **National Licentiate Examination** will be mandatory for medical graduates before practicing/pursuing PG.
- Under specified regulations, the NMC can also permit a medical professional to perform surgery or practice medicine without qualifying the licentiate (exit) exam.
- **AYUSH Practitioners** - On completion of a **bridge course**, practitioners of Indian systems of medicine, including Ayurveda and homoeopathy would be allowed to practice allopath.
- The rationale is to address the shortfall of rural doctors by creating a new cadre of practitioners.
- **Private College** - The government, under the NMC, can dictate guidelines for fees up to 40% of seats in private medical colleges.
- This is aimed at giving students relief from the exorbitant fees charged by these colleges and is a standout feature of the bill.

### **Contentions**

- **Registry** - Graduates of Bachelor of Ayurvedic Medicine and Surgery, and Bachelor of Homeopathic Medicine and Surgery are already registered with their respective councils.

- The NMC registry, in addition to this, could result in dual registration, which is neither open nor permissible.
- **Corruption** - The bill aims to overhaul the corrupt and inefficient Medical Council of India.
- This is sought to be accomplished through an independent Medical Advisory Council.
- However all members of the Council are members of the NMC as well, thereby undermining the council's independence and its very purpose.
- **Bridge Course** - The provision has created widespread resentment among allopath doctors.

#### Way Forward

- The government could empower existing doctors before integrating alternative-medicine practitioners into modern medicine.
- Notably, MCI regulations prevent even experienced MBBS doctors from carrying out procedures like caesarians and ultrasound tests.
- Also, nurses are barred from administering anesthesia.
- An alternative would be to have a three-year diploma for rural medical-care providers, as earlier practiced in Chhattisgarh.
- Graduates from such diploma courses could be allowed to provide basic care in under-served regions, to meet out the shortfall.

## ECONOMIC AFFAIRS

### Market Assurance Scheme

**In News:** Central government proposes to launch the new “market assurance scheme” (MAS). Given the shortfalls with similar systems already in place, the proposal needs a relook.

#### Market Assurance Scheme

- It is a **new price support scheme** under which states would be free to procure from farmers all crops for which MSP is announced.
- States can procure any quantity of coarse grains, millets, pulses and oilseeds, except rice and wheat.
- As, rice and wheat are already being procured by the center for the public distribution system.
- Under MAS, the center will compensate states for any losses due to procurement, capped at 30% of the procurement cost.
- For hill states and those in the north-east, the ratio of compensation will be 40%.
- It will be the concerned states' responsibility to dispose of the procured crops.

#### Need for the Scheme

- The proposal comes in the backdrop of protests and demands by farmer groups for remunerative crop prices and loan waivers.
- Currently MSPs are announced for 23 crops but only paddy and wheat procurement is effective.
- Procurement by the center of pulses and oilseeds in small quantities calls for a better system in place to address farmer distress.
- Under MAS, states are given the freedom to choose which crop to procure and in what quantities, when wholesale prices drop below MSPs.
- States will also be free to use the procured crops for targeted nutrition support programmes or sell them in the open market.
- The scheme proposes to strengthen the procurement mechanism by ensuring farmers do not suffer from marketing inefficiencies.
- The **price deficiency payment mechanism** is another novel way to address price distress.

#### Concerns

- **Markets** - Poorly functioning agriculture markets with lack of competition, cartelization and opaque price discovery which are causes of price distortions stand unaddressed.
- **Infrastructure** - The scheme will require the deployment of huge manpower and creation of massive infrastructure for purchasing, transporting and storing.
- Ensuring these may not be affordable for the state governments.
- **Agri practices** - The earlier physical market intervention-based system of price assurance in the case of wheat and rice has not been without its own disadvantages.
- It has resulted in:

- distortion of the cropping pattern
- alienation of the private trade from the grain market
- unwarranted accumulation of stocks on the government account
- Replicating the same in other crops would be ill-advised.
- **Fiscal** - There is a concern that the scheme could place fiscal pressures on the Union government.
- There are also some unfulfilled preconditions in place for the successful functioning of a scheme that spends public money.

#### Price Deficiency Payment System

- Under this, farmers will be compensated for the difference between the MSPs for select crops and their actual market prices.
  - For crops such as rice and wheat where MSP is effective now, the same will continue.
  - For other targeted crops, price deficiency payments system will be introduced.
  - However, notably there may be a cap on the extent to which the Centre will bridge the gap between MSP and market price.
  - A farmer would have to register with the nearest APMC mandi and report the total area sown, to avail this benefit.
  - The subsidy would be paid via Direct Benefit Transfer (DBT) into the farmer's Aadhaar-linked bank account.
- Note:** To know more about price Deficiency Payment System refer our September- 4 issue

#### Way Forward

- A lasting solution lies in making farming profitable by reducing production costs and improving returns on the produce.
- In this context, MAS is a more temporary measure and an eventual solution is to bring in greater competition in agricultural markets.
- Agricultural marketing reforms wooing private investment in setting up crop mandis to enhance competition must be expedited.
- There is also a need to put in place stable policies for agricultural pricing and trade, both external and domestic.
- In all, the Centre should take lead to put a proper system in place instead of passing on the responsibility to the states.

#### Concerns with FPI

##### Context

- Singapore stock exchange and Dubai Gold and commodities exchange are planning to expand their portfolios in India.
- These decisions are taken in a backdrop of uncertain environment for Foreign Portfolio Investments in India.

##### About Recent Portfolios Decisions

- A portfolio is a grouping of financial assets such as stocks, bonds and cash equivalents, as well as their funds counterparts, including mutual, exchange-traded and closed funds.
- Portfolios are held directly by investors and/or managed by financial professionals.
- Usually investors should construct an investment portfolio in accordance with risk tolerance and investing objectives.
- Recently Singapore Exchange (SGX) has decided to offer single-stock futures (SSF) on Indian stocks.
- The Dubai Gold and Commodities Exchange (DGCX) is also considering expanding its portfolio of Indian SSF.
- Volumes in India's derivatives trading segment is expected to be adversely affected by these decisions.

##### Effect on India

- Unlike the National Stock Exchange (NSE) and the BSE, the SGX and the DGCX are open 24x7 and these are hard-currency environments.
- There are no transaction taxes akin to India's securities transaction tax (STT) and the local regulators also place no restrictions on foreign portfolio investors (FPIs).
- Given that the SGX and the DGCX offer comfortable regulatory environments, a lot of the derivatives trading volume will likely shift to these offshore centres.
- India will lose out on tax revenue and brokerage income and traders will face disadvantage of being responsive.

##### Barriers for FPI in India

- In July, SEBI banned trading in derivatives via P-Notes and demanded direct registration of FPIs carrying out derivatives trades.
- The regulator said derivatives trading via P-Notes would be allowed only to hedge underlying cash positions.
- At the time of the ban, P-Note holders had open positions of over Rs 40,000 crore in the futures and options segment of the NSE, all of them were closed out after this move .
- A further barrier for US-based funds was that they cannot take direct exposure to derivatives offered by Indian exchanges, which are not approved by America's Commodity Futures Trading Commission (CFTC).

- Many used P-Notes to bypass that requirement, as both SGX and DGCX are CFTC-approved and Indian exchanges are not.
- High Securities Transaction Tax (STT) in India is being another source of friction for FPIs, which are being significant cost for high-volume traders.

#### **FPI**

- Foreign portfolio investment (FPI) consists of securities and other financial assets passively held by foreign investors.
- It does not provide the investor with direct ownership of financial assets and is relatively liquid depending on the volatility of the market.
- Foreign portfolio investment is different from foreign direct investment (FDI).

#### **Participatory Notes (P-Notes)**

- These are financial instruments used by investors or hedge funds that are not registered with the Securities and Exchange Board of India (SEBI) to invest in Indian securities.
- Any dividends or capital gains collected from the underlying securities go back to the investors.
- Indian regulators are against participatory notes because they fear that hedge funds acting through participatory notes will cause economic volatility in India's exchanges.

#### **Single Stock Futures**

- Single Stock Futures (SSF) are derivatives instruments that give investors exposure to price movements on the underlying share.
- A futures contract is a legally binding agreement that gives the investor the ability to buy or sell an underlying listed share at a fixed price on a future date.

#### **Securities Transaction Tax**

- Securities Transaction Tax is levied on every purchase or sale of securities that are listed on the Indian stock exchanges.
- This would include shares, derivatives or equity-oriented mutual funds units.
- The rate of tax that is deducted will vary with different types of transactions and securities.
- STT is deducted at source at the time of the transaction itself, the net result is that it pushes up the cost of the transaction done.

### **Re-imposing LTCG taxes**

**In News:** The Union government is planning to re-impose a (Long term capital gains)LTCG tax on equity investments.

#### **Taxes Levied in Equity Market**

- **LTCG** -Long term capital gains taxes are levied on profits on sale of shares after a holding period of at least a year.
- In India LTCG is tax-exempt on the sale of listed securities, since 2005, It is aimed at encouraging long-term equity investments.
- **STCG** - Short Term Capital Gains (STCG) taxes are levied on profits on sale of shares held for less than 12 months, these are taxed at a flat 15 per cent.
- **STT** -Securities Transaction Tax is levied on every purchase or sale of securities that are listed on the Indian stock exchanges.
- This would include shares, derivatives or equity-oriented mutual funds units.
- STT is deducted at source at the time of the transaction itself.
- In India equity investors are required to pay a securities transaction tax of just 0.10 per cent of the trade value.

#### **Government's Plan**

- Government is considering of removing the distinction between long-term and short-term gains.
- It is considering of stretching the definition of 'long-term' for equity investments from one to three years.
- There are also proposals to prospectively impose a moderate LTCG tax on equities after a three-year holding period.

#### **Needs for this Move**

- Tax exempt of returns on equity investments, usually owned by the creamy layer of investors enjoy concessional tax rates.
- While those on post office instruments or bank deposits by non-creamy investors are taxed at the income-tax slab rates, which is discriminative.
- It is also unfair that equities enjoy a lower rate of short-term capital gains tax 15 percent; at the same time with just a one-year holding treated as 'long-term' (it is three years for other assets).
- Many corporates have used LTCG on penny stocks and shell companies to launder their unaccounted wealth.
- STT was introduced to avoid tax discrimination has significantly upped transaction costs in the Indian market.
- It has raised costs for pass-through vehicles such as mutual funds and pension funds, and not yielded very impressive tax collections.

- Thus re-imposing of LTCG taxes will address tax discrimination issues and also improves tax revenues

### Prospects

- Unlike the STT (Security transaction taxes) regime, where the investor shells out tax irrespective of profit or a loss, an LTCG regime taxes investor only if his trades prove profitable.
- LTCG tax can also help long-term investors set off their losses in one year against gains in another, a facility not available with STT.
- LTCG for equities could yield better revenues in a bull market, but it would depend on market conditions.
- Any change in LTCG taxation, may trigger some short-term market upheaval, but it is unlikely to drive away domestic or foreign investors from Indian equities.

### Capital Gains Tax

- Capital gains tax is a tax that is charged on the profits that is made by selling capital asset.
- For making it easy for taxation, the capital assets are classified to 'Short-Term Capital Asset; and 'Long-Term Capital Asset'.
- Short-Term Capital Asset: If the shares and securities are held by the taxpayer for a period not more than 12 months preceding the date of its transfer will be treated as a short-term capital asset.
- Long-Term Capital Asset: If the taxpayer holds the shares and securities for a period exceeding 12 months before the transfer will be treated as a long-term capital asset.
- Equity shares which are listed in a recognized stock exchange, units of equity oriented mutual funds, listed debentures and Government securities, units of UTI and Zero Coupon Bonds' period of holding will be considered for 12 months instead of 36 months.
- In India, the long-term capital gains on stocks and equity mutual funds are not taxed. But, the short term gains will be taxed at 15 percent.
- In case of debt mutual funds, both short and long term capital gains are taxed.
- The short-term capital gain on debt mutual fund is added to the income and taxed as per the individual's Income Tax Slab.
- Long-term capital gains on debt mutual funds are taxed at 20 percent with indexation and 10 percent without indexation. Indexation is adjusting the purchase value for inflation.
- Capital Gains include any property held by the assessee except the following:
  - Stock in trade.
  - Consumable stores or raw materials held for the purpose of business or profession.
  - Personal effects that are movable except jewellery, archaeological collections, drawings, paintings, sculptures or any art work held for personal use.
  - Agricultural land. The land must not be located within 8kms from a municipality, Municipal Corporation, notified area committee, town committee or a cantonment board with a minimum population of 10,000.
  - 5 percent Gold Bonds, National Defence Gold Bonds and Special Bearer Bonds.
  - Gold Deposit bonds under Gold Deposit Scheme.

### Slippage in Fiscal Targets

#### In News:

- The government has breached its annual fiscal deficit target in just 8 months of the fiscal year.

#### Current Status

- Fiscal deficit is the difference between the government expenditure and revenue.
- Fiscal deficit target is fixed at 3.2% of the gross domestic product (GDP).
- Accordingly the Budget Estimate (BE) was Rs 5.5 lakh crore target for the current fiscal year.
- However, fiscal deficit for April-November 2017 has reached Rs 6.12 lakh crore.
- This means that the fiscal target for the current year has already reached 112% of the Budget Estimate.
- This is the highest deviation from the Budget Estimates (BE) for the first eight months since the 2008 global financial crisis.

#### Causes

- The main causes for the widening deficit are
  - drop in RBI's profits
  - lower GST collections and non-tax revenues
  - higher expenditure
- The Centre is facing a considerable tax revenue shortfall, and shortfall due to low indirect tax revenue is expected to occupy a larger portion.
  - Notably, GST collections were also far below the government target.
  - Further, irrespective of the planned disinvestment revenue, the shortfall in the non-tax revenues is considerably worrying.
- The only positive for the government is that the direct tax collections are optimistic with the target.

#### Implications

- **Fiscal** - The government needs to have a net fiscal surplus in the next four months if it has to meet its fiscal target, which is a difficult, ask.

- Significantly, the government plans to borrow Rs 50,000 crore additionally, which will only add to the problem.
- Notably, for the same period, the 'Revenue Deficit' stood at 152% of the total target.
- This indicates that even the quality of the fiscal deficit is poor as much of the money is not going into asset creation.

#### **Policy challenges**

- For the deficit target to be met, capital outlay and net lending would have to contract for the rest of the fiscal year.
- This would have negative implications for investment as well as overall economic activity.
- This could further potentially affect the tax revenues.

#### **Draft Law on Contract Farming**

**In News:** Union government has proposed a law on contract farming.

#### **Contract Farming**

- Contract farming can be defined as agricultural production carried out according to an agreement between a buyer and farmers.
- It establishes conditions for the production and marketing of a farm product or products.
- Typically, the farmer agrees to provide agreed quantities of agricultural product with required quality standards at pre-determined time.
- In turn, the buyer commits to purchase the product and, in some cases, to support production through, for example, the supply of farm inputs, land preparation and the provision of technical advice.

#### **Government Recent Move**

- Union agriculture ministry has drafted a model contract farming act that states can adopt as per their needs.
- It aims to protect farmers from price risks and provide incentives to buyers to procure produce directly from farmers.
- The act bars the transfer of ownership of the farmer's land to companies under all circumstances.
- It allows these contracts to be governed outside the purview of state agriculture produce marketing committees (APMCs).
- This essentially means companies can purchase produce directly from farmers and save the 5-10% usually spent in market fees.
- The contracts are meant to be registered with a State-level agency called Contract Farming (Development and Promotion) Authority.
- It can levy a fee of no more than 0.3 per cent on the contracted produce and it acts as a dispute resolution body.
- Besides there will be local-level recording committees to register these contracts and implement them effectively.

#### **Prospects of Contract Farming**

- It can potentially link Indian farmers to global supply chains, particularly in high-value horticulture produce where wastage can be significantly reduced.
- Food-processing will get a boost as an employment generator.
- It lays the foundation for the entry of large players in food retail, upping the gains for both the producer and the consumer.
- It also gives farmers an alternative in cases where the procurement mechanism is ineffective.
- This large-scale shift from subsistence to contractual farming is likely to improve yields and incomes.

#### **Challenges Need to be Addressed**

- The center had earlier drafted a model agriculture marketing act which states have been reluctant to adopt and the new model act on contract farming may see the same response.
- The model act allows for direct purchase from farmers and therefore states have to amend their APMC acts to make this happen.
- If prices rise sharply compared to the contracted price, it will be difficult to force the farmer to sell the produce and such challenges needs a proper solution.
- The tendency of sponsors to opt for middle and large farmers with a large asset base needs to be addressed, as it may create socio-economic distortions.
- In order to create a level playing field between small farmers and sponsors, the former should enter into 'group contracts' with the latter.

#### **The Idea of Gross Receipts Taxation**

##### **Context**

- In India there no similar mechanism is followed in taxing an Individual and a corporate entity.
- India need to tax corporate revenues instead of taxing profits.

##### **Individual Taxation System**

- In India income tax is a direct tax levied on the income earned by individuals, apart from few approved deductions for some savings, mortgage interest and pensions.



- The Income Tax Act provides that in respect of the total income of the previous year of every person, income tax shall be charged for the corresponding assessment year at the rates laid down by the Finance Act for that assessment year.
- But individuals tax collections represents only less proportion of the Government's revenues.

### **Corporate Taxation in India**

- Depending upon the type of company, domestic or foreign and depending upon the income earned in one financial year, corporate tax rates vary for different companies.
- In order to compute corporate tax on the income of a company following factors are considered
  1. Profits from business
  2. Income from property
  3. Capital gains
  4. Income from other sources such as foreign dividends, interests etc.
- A flat rate of 25% corporate tax is levied on the income earned by a domestic corporate that has its base location in India and is of Indian origin.
- A foreign company means an enterprise that has operations and origin in any other country except India.
- Corporate tax on foreign companies depends a lot on the taxation agreements made between India and other foreign countries.

### **Discriminatory Structures of Taxation**

- There is a basic problem with Indian Tax strategy by defining income incorrectly and indiscriminately.
- The definition of income for a salaried employee is the total income earned during a tax year which is on a pay slip.
- But Companies attracts taxes for every imaginable expense, including those that are normally required for operations such as the cost of indirect labour, rent, utilities, travel expenses, information technology, advertising and legal.
- Corporations which benefit from government contracts pay for government services regardless of whether they make a profit or not which has serious implications on ease of doing business.
- This also makes few companies to carry over its losses to future years to further lower its tax bill.

### **Gross Revenue Taxes Will Be a Viable Solution**

- Corporate income should simply be redefined as a company's gross revenue, a number that is easy to obtain.
- A public company needs to report their revenues to SEBI for better accountability.
- For private companies, it is simple to compute the top line revenue from the new GST system.
- Once a company's gross revenue number is known, tax laws should be changed to simply require companies to pay a flat tax on revenue.
- These "Gross Receipts" taxes are simple, effective, transparent, fair and efficient which would eliminate the need for corporate tax departments.
- A tax on revenue would also rid of an important source of corruption and would control CBDT officials from "exaggerated" tax demands which were recently pointed out by CAG.

### **Universal Exchanges**

**In News:** SEBI has finalized norms for universal exchanges.

#### **Equity vs. Commodity Trading**

- **Equity trade** - The market in which shares are issued and traded, mostly through exchanges, this is also known as stock market.
- This gives companies' access to capital and investors a slice of ownership in a company with the potential to realize gains based on its future performance.
- The securities traded in the equity market can be either public stocks, which are those listed on the stock exchange, or privately traded stocks.
- **Commodity trade** - This market is mostly related to food, energy or metals, are an important part of everyday life.
- Commodities traditionally move in opposition to stocks, so they are used as a significant way to diversify a portfolio beyond traditional securities.
- Types of commodities in this market includes Metals like gold, silver, etc., Energy like crude oil, gasoline etc.

#### **Universal Exchanges**

- Usually security exchanges and commodity trading are regulated by separate entities.
- By creating universal exchange SEBI has allowed the same exchange to offer products in the equity, commodity derivatives, and debt and currency segments.
- By this stock exchanges need not to set up different entities to offer commodity trading.
- Detailed guidelines are yet to be issued, but new products will only be introduced with SEBI approval.

#### **Significance**

- The NSE and the BSE offer equity and equity derivatives, while the MCX and the NCDEX specialise in commodity derivatives.
- This clearance will enable the BSE and the National Stock Exchange (NSE) to launch commodity derivatives trading.

- It will also enable Multi Commodity Exchange of India (MCX) and the National Commodity and Derivatives Exchange (NCDEX) to move into the equity segments.

#### **Prospects of Universal Exchanges**

- Universal exchanges will enhance competition across all categories, thus creating deeper markets with lower spreads and exchange fees.
- It would offer greater convenience, in that traders will be able to trade all asset categories from a single account.
- It may also lead to consolidation; cross-holding norms will have to be reviewed in case mergers between exchanges appear attractive.
- Long trading hours of NSE and BSE enables traders to respond instantly to events at odd hours.
- Indian exchanges will find it easier to compete with their global counterparts and they can also present in multiple segments.

#### **It will promote agro Trade**

- Currently, agro futures account for around 11 per cent of the traded volume on exchanges with the rest of the turnover coming from trading in metals, bullion and energy.
- Many seasoned traders avoid trading in agro commodities due to low turnover, lack of a robust spot market, higher speculation and frequent regulatory intervention.
- Non-agro commodities, on the other hand, are linked to international prices and are easier to track and transact in.
- SEBI's recent move on Universal exchanges will ensure that the national exchanges facilitate trading in both agro and non-agro commodities.
- Boost in agro products trade will provide an avenue for farmers to sell their produce and hedge risk.
- Enabling trading in agro commodities will also entail investments in establishing warehouses and setting up a network for spot polling to discover price.
- The national exchanges would also be encouraged to invest in this infrastructure and improve the reach and awareness about commodity derivative products.

#### **Challenges Involved**

- Given the significant differences between commodities and equities risk management across asset classes will be a challenge and it might face implementation challenges.
- Commodity futures can involve physical deliveries which require the holder to either produce the commodity or take delivery from the exchange.
- But most Indian commodity futures are cash-settled, with delivery only in gold and silver.
- Commodity exchanges will remain open for very long hours, since many commodities track global prices but stock markets are time bounded.
- If the NSE and the BSE do start offering commodity derivatives segments, they will have to keep those segments open for longer hours which need regulation.

#### **Minimum Public Shareholding Rule**

**In News:** SEBI allowed its listed companies to use new methods of share sales through MPS rule.

#### **Minimum Public Shareholding Rule**

- The Minimum Public Shareholding (MPS) rule requires all listed companies in India to ensure that at least 25% of their equity shares are held by non-promoters (public).
- This rule was implemented after the amendment of Securities Contracts Regulation Rules by SEBI in 2010.
- Under this rule promoters with a strangle-hold on listed companies were asked to compulsorily sell down their stake by placing shares with institutions or issuing rights or bonus shares.

#### **Significance**

- India has 5000 listed companies but the market depth is very low.
- Thus stocks beyond the top 150/200 are less traded.
- Due to this, high promoter holdings prevail and the float available for trading by the public is very limited.
- SEBI is hoping to improve market depth and liquidity by unlocking this free float.
- Forcing promoter to relax their grip on listed companies can improve corporate governance by giving public shareholders and institutions greater say in corporate actions.
- There is very few investment opportunities in the stock market and so forcing promoters to sell shares would improve the supply of shares.
- MPS rule ensures better liquidity, price discovery and governance in the stock market.

#### **Challenges with this Rule**

- Initially PSUs were allowed a 10% MPS, but have recently been asked to comply with a 25% MPS by August 2018.
- Review by SEBI in June 2013 also found that over 105 private sector firms hadn't fallen in line and it issued notices to them.
- Instead of addressing the compliance issues SEBI is keen to further expand the mandatory MPS to 30 per cent or even 35 per cent.

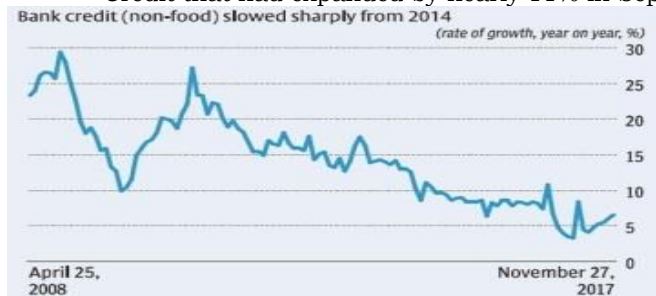
- SEBI also imposes penalties to the company which is non-compliant by freezing the promoter shares and barring promoters from any directorships.
- This threatens new players in the market.

### **Decline in Sectoral Deployment of Bank Credit**

**In News:** RBI has released data on sectoral deployment of bank credit.

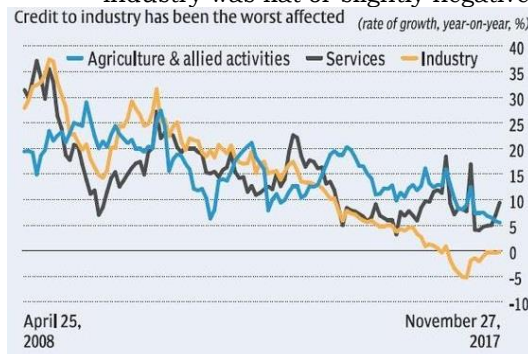
#### **Non-Food Credit Deployed**

- From 2003 to late 2008, bank credit increased at a very fast clip, at around 20-30% per annum.
- Due to the Global Financial Crisis and its fallout India put a brake on that expansion, so that the rate of growth fell in October 2009 to just fewer than 10%.
- It revived until late 2013 and bank credit continued to expand at a healthy pace, generally at annual rates of more than 15%.
- But from early 2014, a prolonged deceleration set in, with continued slowing down of credit deployment, this slowdown clearly preceded the demonetization.
- Credit that had expanded by nearly 11% in September 2016 fell to rates of 3.3% in February 2017.



#### **Credit Deployment to Industries**

- Credit to the services sectors has been volatile and the deceleration of bank credit directed to agriculture has been more evident since April 2017.
- Credit to industry had recovered strongly after the shock of 2008-09, such that it was growing at annual rates of 20-30% in the period 2010-12.
- Annual growth rates of less than 15% were first evident in November 2013 and by mid-2016, credit to industry was flat or slightly negative.



#### **Credit Deployment for MSMEs**

- Medium-sized enterprises have been very volatile and have faced declining credit for more than two years, since mid-2015.
- The Micro-Units Development and Refinance Agency (MUDRA) scheme, which seeks to reach credit to small entrepreneurs aiming to establish or expand small businesses, has not been successful either.



### Reasons behind Falling Credit Rates

- Most of the Indian public sector banks are under debt traps and are reluctant to lend until they recover their NPAs.
- In India there is a large retail lending for personal consumption instead of investments.
- After all the credit deployment decline became more pronounced with demonetization.
- The MUDRA scheme announced by union government to promote MSMEs has no interest rate concessions and the interest rates on the loans are ranging between 9 and 12%, which makes the borrowers hesitant to take such loans.
- At the same time banks are also more interested in lending to the large enterprises, they receive more than 82% of total bank credit to industry.
- Thus combination of investors unwillingness to borrow and banks reluctance to lend has resulted in decline in sectoral credit deployment.

### NABARD

- The Parliament has recently passed the National Bank for Agriculture and Rural Development (Amendment) Bill, 2017.
- The Bill seeks to amend the NABARD Act, 1981 which establishes NABARD by transferring the agricultural credit functions of RBI and refinance functions of the then Agricultural Refinance and Development Corporation (ARDC).
- The amendment bill seeks to increase the authorised capital of the Bank to 30,000 crore rupees from 5,000 crore rupees.
- Currently the Central government is holding 99.60% share of the bank and the rest is with RBI (0.40%).
- The capital can be increased further by the government in consultation with the RBI.
- NABARD is responsible for providing and regulating facilities like credit for agricultural and industrial development in the rural areas.
- It provides both direct finance (lending directly to customers) and refinance (lending to financial institutions to provide loans to customers)

Direct Finance		Refinance	
i.	Loans for Food Parks and Food Processing Units in Designated Food Parks	i.	State Cooperative Banks and Regional Rural Banks for providing short term agricultural loans
ii.	Loans to Warehouses, Cold Storage and Cold Chain Infrastructure	ii.	Cooperative Banks - State, District, Primary Urban; RRB, Commercial Banks, Agriculture Development Finance Companies, NBFC for providing credit for investment activities in agriculture and allied activities.
iii.	Rural Infrastructure Development Fund		
iv.	Long Term Irrigation Fund		
v.	Alternative Investment Fund		

## INTERNATIONAL AFFAIRS

### China's Exploitative Trade Relations

**Context:** Chinese trade investments and assistance in some Asian countries are taking shape as exploitative adventures, calling for a coordinated resistance.

#### China's Actions Becoming Exploitative

- **SRI LANKA - Investments** - China seems to have taken trade advantage in Sri Lanka by exploiting its economic vulnerabilities.
- Evidently, China has heavily financed some projects including the Hambantota port, power plant, airport, industrial park, sports complex, etc.
- **Debt** - The investments made have proved largely uneconomical.
- Most of the projects remain unutilized or under-utilized and hardly make any substantial returns.
- Given this, the investments and assistance could soon become part of Sri Lanka's mounting official and unsustainable debt burden.
- Notably, Sri Lanka has been spending 90% of government revenues to service debts.
- **Threat** - Unable to repay its debts, Sri Lanka has been forced to convert Chinese investments into equity in Hambantota.
- This has given partial ownership of the port to the Chinese, posing threat for Sri Lanka's sovereignty.
- The projects are also leading to a plunder of natural resources by the Chinese companies.
- Notably, the World Bank has blacklisted some of these companies across the world because of their corrupt practices, including bribery.

- **MYANMAR** - China's belt and road initiative in Myanmar is primarily concentrated on developing the Bay of Bengal port of Kyaukpyu.
- And connecting the port to neighboring Yunnan province by oil and gas pipelines, and road and rail networks.
- But Myanmar is wary of over-dependence on China.
- This is because of China's environmentally damaging energy projects and its yearning for access to precious metals and stones.
- **PAKISTAN** - China's 'all-weather friend' Pakistan is facing problems in implementing the China-Pakistan Economic Corridor (CPEC).
- Pakistan has some reservations with agreeing to the financial terms set by the Chinese.
- Notably, there is very little transfer of technology and know-how, and minimal local participation in Chinese construction projects.
- Evidently, China is only aiming at making use of its own surplus labour force and construction machinery and materials abroad.
- This is given the fact that its unprecedented domestic construction projects at home are completed.
- Pakistan is also concerned of the whereabouts of the resources to repay the debt that will accrue from the CPEC projects.
- Moreover, Pakistan will soon be unable to credibly claim sovereignty.
- This is because places like the Gwadar port are becoming more a Chinese-run military base, close to the strategic Straits of Hormuz.

#### Other Countries' Response

- **India** - By expressing its concerns over the Chinese presence, India has made Sri Lanka retain the operational control of Hambantota port.
- This is to ensure that Chinese submarines and warships do not freely berth in the port.
- Some pre-emptive action has also been taken to prevent the Chinese from developing Trincomalee as the next port of interest for its strategic ambitions.
- The Indian Oil Corporation has established a business presence in Sri Lanka.
- This is particularly for a progressive involvement in the use of Trincomalee for import and processing of petroleum products.
- **Myanmar** - Myanmar seeks the support of India, Japan, South Korea, the US, the EU and neighboring ASEAN countries to resist the Chinese pressure.
- **Indonesia** - Indonesia has ensured that it responds cautiously to Chinese inducements and avoids getting closely drawn into a Chinese tactical web.
- In all, other countries should have a coordinated effort to strengthen the economic relations among themselves, to potentially tackle China's exploitative trade relations.

#### US' Threat to Pakistan

**In News:** The U.S. President has recently made an announcement, threatening to stop financial assistance to Pakistan.

#### US's Stance

- The US has accused Pakistan of providing safe havens to the terrorists that US is striving to root out in Afghanistan.
- There was significant scaling down of U.S assistance to Pakistan in the later years of the Obama administration.
- The U.S has also made disbursement of Pentagon's Coalition Support Funds (CSF) more stringent.
- CSF is the reimbursement to Pakistan for logistical and operational support of U.S-led military operations.
- A decision by the Trump administration on CSF for 2017 is pending.
- Notably, US was insisting Pakistan to hand over a Haqqani Network operative who kidnapped an American-Canadian couple and held them hostage.
- It was also "contemplating withholding" aid if Pakistan's response to the demand was not satisfactory.
- Besides shutting down terror havens, the US wants Pakistan to use its influence on those terror organizations in negotiations with the Afghan government to hold peaceful elections.

#### Implications

- **Pakistan** - Pakistan has maintained that it would officially respond to Trump's allegations.
- With Pakistan already caught up in a civil-military crisis in recent months, Trump's move has caused new disruptions.
- The real catastrophe in Pakistan is the cynical use of Islamist extremism by the security establishment to hold democracy hostage.
- Until this change, there is scant hope Pakistan will take control of terrorism.
- **China** - It is possible that Pakistan will reach out to China to alleviate the potential economic hardship due to US's decision.
- Notably, China holds that Pakistan had made enormous efforts and sacrificed for the fight against terrorism.
- It defended Pakistan, saying the world community should acknowledge Pak's "outstanding contribution" to counter terrorism.

- China has reasserted Pakistan as its all-weather partner and expressed its readiness to promote and deepen all-round cooperation.
- Notably, China is currently investing heavily in Pakistan as part of China Pakistan Economic Corridor (CPEC).
- Roping in Afghanistan, Beijing announced plans to extend the CPEC to Afghanistan as well.
- But, Afghanistan accuses Pakistan of sheltering Taliban militants.
- However, China is seeking to mediate between the two neighbors through the trilateral mechanism.

### **China Moots Afghan Entry into CPEC**

**In News:** China on Tuesday flagged the possible inclusion of Afghanistan in the China-Pakistan Economic Corridor (CPEC) — a move that is likely to irk India.

- India has opposed CPEC, which passes through Pakistan-occupied Kashmir (PoK), on the grounds that it infringes on its sovereignty.

### **China-Pakistan Economic Corridor**

- CPEC is a \$54 billion infrastructure development project that aims to connect China's Xinjiang region to Pakistan's Gwadar port.
- It is part of China's ambitious Belt and Road initiative (BRI).

### **Benefits for Afghanistan**

- With the Taliban's resurgence, which coincided with the withdrawal of international forces Afghanistan's security situation has been steadily declining since 2014.
- CPEC is predicted to bring industrialization and investment to Pakistan, the carry-over effects of which will benefit neighbouring Afghanistan.
- Pakistan has already undertaken the building of several roads to improve connectivity between the two countries.
- Torkham-Jalalabad, Peshawar-Torkham, D.I. Khan to AngoorAdda, Ghulam Khan to Paktika and Khost provinces of Afghanistan road are some of them.
- By becoming a part CPEC, and BRI in general, Afghanistan will have the opportunity to stabilize its economy.
- In 2015, over 70 percent of Afghanistan's total exports were to Pakistan and India alone.
- Accessing the wider BRI network will provide access to markets in China, Central Asia, and parts of Europe.
- The chance to diversify Afghan trade products by exporting copper, iron, and other resources to countries on the BRI.

### **Benefits for China**

- For China, Afghanistan presents strategic value due to its geographic location at the crossroads of South Asia and Central Asia.
- Its vast untapped mineral resources present a valuable economic opportunity.
- In 2008 China had signed a 30-year agreement with the Afghanistan government to access MesAynak, the world's second largest untapped copper deposit.
- The deal, which was worth over \$3 billion, was viewed with great interest until it stalled due to security concerns and attacks by the Taliban.
- Ensuring security in Afghanistan will also allow China to be at ease regarding instability from Afghanistan impacting security and stability in its western region, specifically Xinjiang.
- China has made minimal contributions to the security effort in Afghanistan, largely deferring to the United States and NATO.
- Since 2014, however, China has increased its security cooperation, providing military aid for counterterrorism efforts.
- Perhaps a greater effort to combat militancy in Afghanistan will open the doors for Chinese investments and access to the country's untapped resources.

### **Benefits for Pakistan**

- A stable and thriving Afghanistan presents several direct benefits to Pakistan.
- It will allow Pakistan to ease the economic toll of hosting Afghan refugees.
- For decades, Pakistan has hosted millions of Afghan refugees, and even more Afghans were born within Pakistan, which increased the economic burden.
- The economic integration and improvement of Afghanistan's economy will allow for millions of refugees to slowly return to their homeland and reap the benefits of the new economic opportunities.
- A cooperative relationship will open up the doors for easier access to trade with Central Asia for Pakistan.
- The Central Asia Regional Economic Cooperation (CAREC) Sherkhan-Ninjpayan border route has been identified by Tajikistan, Afghanistan, and Pakistan as a potential corridor for trade.
- The region could serve as a transit hub for countries like Pakistan to reap the benefits of trade.
- Cooperating on economic development with security will be a win-win for both countries and allow for the improvement of cross-border relations.

### **Collaboration with Competing Projects**

- The United States' "New Silk Road" and the trilateral Chabahar port project undertaken by Afghanistan, India, and Iran are existing efforts at integrating Afghanistan with its neighbouring countries.
- If executed effectively, these two projects have leverage to become a far more effective participant in CPEC and BRI.

- The New Silk Road's two major subprojects are the CASA-1000 hydroelectricity grid and the TAPI (Turkmenistan-Afghanistan-Pakistan-India) natural gas pipeline.
- While the New Silk Road is currently stalled, a CPEC-led revival of the project could boost its chances of success, and in turn Afghanistan's economic integration.
- In 2016, India, Iran and Afghanistan signed a trilateral transit agreement allowing Indian goods to travel to Afghanistan via Iran's Chabahar port.
- The transit track is crucial for India, as it skips Pakistan, and makes its way to Afghanistan through Iran.
- Afghanistan and Iran are both keen on joining CPEC and the larger BRI mix; they are unlikely to compete with China through Chabahar port.

#### **Opening up Natural Resources for Foreign Investment**

- China is keen on accessing Afghanistan's large reserves through its state-owned enterprises (SOE), and has the monetary resources to invest in developing the infrastructure for procurement.
- In addition, such a move will bring forth much needed foreign direct investment (FDI) to the cash-strapped country.

## **DEFENCE/SECURITY AFFAIRS**

### **Third Revolution in Warfare**

**Context:** Automated weapons are rapidly growing across the globe which causes anxieties.

#### **Autonomous Weapons**

- Autonomous weapons have been described as the third revolution in warfare, after gunpowder and nuclear arms.
- These weapons are termed under Lethal Automated Weapons (LAWs).
- These weapons can select and engage targets without human intervention.
- They might include armed quad copters that can search for and eliminate people meeting certain pre-defined criteria.

#### **How lethal are these weapons?**

- Even Small drones powered by artificial intelligence (AI), could use facial recognition and Internet protocol tracing to track down people by identifying their faces or locating their mobile phones or vehicles.
- These drones could then kill their targets using tiny explosive charges at close range, leaving bystanders unharmed.
- Such a device could do its killing, without human intervention or oversight, if the target parameters were set, but LAW devices can take humans out of the loop at an earlier stage.
- Such devices could also slaughter huge numbers of civilians or malfunction in disastrous ways.
- Unlike with landmines or dum-dum bullets, there are no laws prohibiting LAW devices.

#### **Advantages of LAWs**

- LAWs can be used as toned-down versions with tranquillizers or tear gas for law enforcement and riot control.
- In war, LAWs could save soldiers' lives and be a formidable force multiplier.
- If selective targeting is possible, these could lead to less collateral damage.
- LAWs do not need exotic materials, which makes them cost-effective.

#### **Existing uses of LAW**

- LAW devices are being developed for all sorts of tasks; they are already used in anti-aircraft and anti-missile systems.
- Israel's Iron Dome autonomously targets and destroys missiles, Germany's Mantis, a group of radar-guided cannons, protects army bases against rocket assaults.
- Although neither Iron Dome nor Mantis targets people, future systems will.
- The Samsung Techwin SGR-A1 sentry gun is deployed in the demilitarized zone (DMZ) between the two Koreas.
- A much larger LAW is the Sea Hunter, an anti-submarine unmanned weapon, which will be deployed for anti-submarine warfare and mine-sweeping.

#### **Global Actions on These Weapons**

- United Nations Convention on Certain Conventional Weapons is seriously debating the threats and prospects of LAWs.
- Campaign to Stop Killer Robots (CSKR), a movement backed by Human Rights Watch is spreading awareness about these weapons across the globe.
- The CSKR is one of several coalitions lobbying to pass laws that ban the development and use of "Lethal Autonomous Weapons" (LAWs).
- India is one among many non-committal nations to ban LAWs. As it senses deploying sentry guns along the borders is a tempting prospect.

## **Meeting of NSAs**

**In News:** National Security Advisers (NSAs) meeting between of India and Pakistan was recently held in Bangkok.

### **Ongoing Indo-Pak Tensions**

- Ceasefire violations on the Line of Control (LoC) spiked sharply compared 2016.
- Pakistan arrested retired naval officer KulbhushanJadhav alleging that he was an R&AW agent in Baluchistan and denied consular access.
- After India went to the International Court of Justice, the death penalty awarded to him by a Pak military court was kept in abeyance.
- Public pronouncements by ministers and officials about Pakistan have been aggressive in recent days fuelling the turmoil.
- People-to-people engagement between the two countries has been limited, except for some medical cases of Pakistani nationals.
- The tension in the Middle East and the role of Saudi Arabia in Pakistani domestic politics further complicates the situation.
- Apart from this Pakistan's hostile relations with Afghanistan and its parliamentary elections this year also makes bilateral Initiatives with India more complex.

### **Implications**

- It ended without any decisive conclusions.
- India demanded a Director General of Military Operations (DGMO) level talk.
- DGMOs of the two nations last met in December 2013, after a gap of 14 years.
- But Pak army has refused to offer such talks, probably fearing that it would be perceived as a sign of weakness.
- It is also yet to declare its causalities in LoC tensions.

### **Other Channels of Negotiations**

- India-Pakistan armies usually engage through weekly telephone calls between the two Military Operations (MO) directorates.
- A Brigadier from the Indian MO directorate and a Colonel from the Pakistani MO directorate usually talk on Tuesday mornings.
- The two DGMOs would also talk by telephone, if there is an urgent requirement.
- The two sides have used the emergency hotline mechanism in recent months to complain about particular incidents on the LoC.
- Apart from armies the DGs of Border security forces of both nations meet annually alternately in the two countries.
- Track-2 engagement, mainly involving retired diplomats, military officials and commentators, mostly takes place in third countries.
- But these meetings have limited value and scope, unless blessed by the respective governments.

### **Advanced Air Defence (AAD)**

- Ballistic Missile Defence (BMD) is a two tiered defence shield which aims to destroy enemy ballistic missiles.
- The BMD consists of two interceptor missiles, the Prithvi Defence Vehicle (PDV) and the Advanced Area Defence (AAD) missile.
- PDV/Pradyumna Ballistic Missile Interceptor is capable of destroying missiles at exo-atmospheric (high) altitudes of 50–80 km.
- PDV is a two stage supersonic missile fuelled by solid motor in 1<sup>st</sup> stage and liquid fuelled in 2<sup>nd</sup> stage.
- AAD/Ashvin Advanced Defense interceptor is capable of destroying missiles at endo-atmosphere (low) altitudes of 15-30 kilometers.
- AAD is a single-stage supersonic solid fuelled interceptor missile.
- The Ballistic Missile Defence shield is expected to be achieved by 2022.
- AAD was recently successfully test-fired from a test range in Odisha.

## **ENVIRONMENTAL AFFAIRS**

### **Compensatory Afforestation for Increasing the Forest Cover**

#### **Context:**

- Rules for the 'Compensatory Afforestation Act' haven't been notified yet.
- The government needs to stay invested and streamline its various programs for expanding the green cover in the country

#### **Compensatory Afforestation Act, 2016**

- Diversion of forests for non-forest use seems inevitable to some degree due to developmental activities and biotic pressures.



- Compensatory Afforestation Fund Act, 2016, seeks to remedy this loss through disbursement of national and State funds for carrying out afforestation projects.
- While 40,000 crores have already been accumulated for compensatory projects, the rules for the implementation of the act haven't been drafted yet.
- This reflects the government's low resolve for environmental protection.
- Notably, sequestration of carbon through sustainably managed forests is a key component of the commitment made under the Paris Agreement.

#### **Argument against Compensatory Afforestation**

- Some argue that the Compensatory Afforestation as a concept is flawed.
- Significantly, the evidence on compensatory afforestation in a big project such as the 'Sardar Sarovar Dam' is not encouraging.
- While around 13,000 hectares were compensated there for afforestation, the outcomes were only patchy as biodiversity loss was immense.
- Some areas saw healthy monoculture plantations albeit with low biodiversity value crop up, while others resulted in unhealthy plantations with few trees.
- Also, it is worthy to note that the current method used to calculate the net present value of forests and its ecological services for carrying out afforestation drives, largely underestimates costs.

#### **Way Forward**

- **Structuring Afforestation Drives** - Suitable lands for afforestation that are preferably contiguous with protected areas needs to be identified.
- These needs to be turned over for joint management by forest department staff and select experts groups.
- There is already a Green India Mission, which is distinct from the framework envisaged for compensatory afforestation.
- Hence, independent audits for all connected programmes are needed, in order to sensibly deploy the financial resources now available.
- Most importantly, the rules for the current law on compensatory afforestation need to be structured and implemented immediately.
- **Biodiversity Conservation** - However, it is important to recognize that replacing a natural forest with a plantation is not ideal.
- Both wildlife and the forest-dwellers stand to lose considerably because of the sheer loss of biodiversity.
- But there is immense potential to augment the services of forests through a careful choice of plants and trees under the afforestation programme.

### **Discovering the Potentials of Bio-fuels**

#### **Context:**

- India's robust transport sector leaves an unsustainable carbon footprint on cities affecting the health of citizens
- Buses that run on biofuels will mitigate both pollution and congestion.

#### **Concerns of Transport Sector**

- The transport sector will add more than 250 million passenger cars, 185 million two- and three-wheelers, and 30 million trucks and vans to the vehicle stock by 2040.
- The transport sector is the second largest contributor to carbon dioxide.
- In addition to the health costs of pollution, fossil fuel dependency of the sector continues to burden the exchequer.

#### **Issues with Government's Plan on E-Mobility**

- National Electric Mobility Mission Plan 2020 was also introduced to promote the use of electricity in road transportation.
- It is aimed to support a target of level of 6 to 7 million hybrid and electric vehicles by 2020.
- But relying on e-mobility alone will not accomplish India's ambition to create a sustainable and green transport on a pan-India basis.
- Much evidence so far suggests that market uptake of pure electric vehicles has been largely confined to scooters and there is no rapid rollout of electric buses and cars.
- Even if there is rapid adoption of electric cars, the problem of congestion is increasing due private vehicle growth; government is yet to formulate plans to address this.

#### **Bio Fuels**

- Biofuels are fuels produced directly or indirectly from organic material, including plant materials and animal waste.
- Sewage treatment plants are a gold mine for vehicular fuel and currently generate around 70 billion litres of waste-water every day.
- Bio- fuels can be generated from local municipal waste and used in Public and private vehicles to address pollution.
- Biofuels may also be derived from forestry, agricultural or fishery products or municipal wastes, as well as from agro-industry, food industry and food service by-products and wastes.
- This will provide additional incomes to the farmers and will reduce government's exchequer.

### Measures Needs to be taken

- Rapid adoption of bio-fuels requires government support to all stakeholders to manufacture biofuel engines, suppliers of biofuels and of course fuelling infrastructure.
- By building biogas generation and upgrading facilities at the Sewage Treatment Plants, the output can possibly substitute 350 million liters of diesel, and over 8 million LPG cylinders of 14.2 kg capacity.
- Such projects need urgent attention and fiscal support from Central and State governments.
- There have been no fiscal incentives to encourage biofuel-based mass transport; buses which can run on biofuel now attract 28 per cent GST plus 15 per cent cess this needs to be addressed.

### New Technology for NamamiGange

#### Context:

- The high cost of refining units slows down the progress of NamamiGange project with continued inflow of untreated wastewater.
- A new technology by the Water Technology Centre (WTC) of the Indian Agricultural Research Institute needs consideration for adoption.

#### New WTC Technology

- It is a novel biological water purification technique that uses plants and micro-organisms to sequester impurities and decontaminate wastewater.
- The perennial plant used in this system is Typhalatifolia which naturally absorbs pollutants.
- The plant boosts oxygen content of the watery medium around its roots to cleanse the dirty water.
- Besides, it also encourages proliferation of water decontaminating micro-organisms.
- And thus averts the need for using chemicals and aerators to improve water quality as is usually done in the conventional methods.

#### Relative Advantages

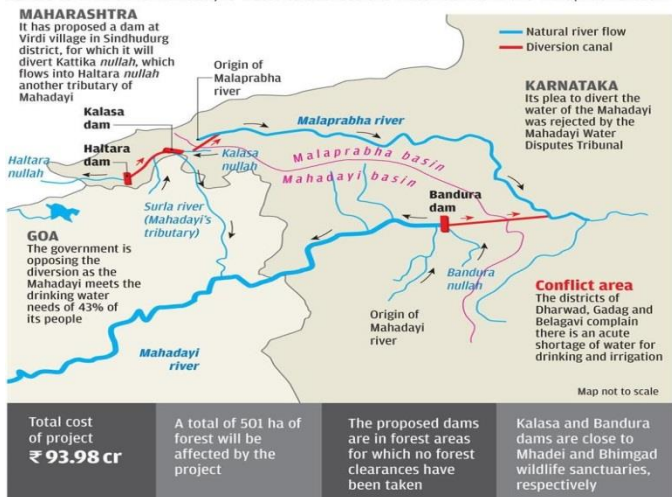
- **Effective** - The system requires no chemicals, no energy, no skilled manpower and no inputs, barring seeding the plants.
- It removes even the metallic residues to the extent of 80 to 99%, something that the conventional methods are unable to do.
- **Economic** - The cost of refining the untreated sewage released into the Ganga would come down roughly by 8 times as against the conventional methods.
- It also generates revenue to make sewage treatment a profitable activity.
- The economic returns from the treatment plants can be enhanced further by incorporating fisheries into these ventures.
- Notably, planktons and zooplanktons, which serve as nutritious feed for fish, thrive well in the water ponds of these units.
- The fish output of such integrated sewage treatment enterprises is relatively high and of good quality, being free of toxic residues.
- Also, these units can be transformed into environment-friendly eco-parks, boosting tourism by attracting migratory birds.
- **Biomass** - Instead of producing sludge, the Typha-based treatment units produce biomass.
- This can further be converted into good quality particle boards or energy briquettes and pellets for use as clean fuel.
- The upper parts of Typha can be cut every 4 months or so for this purpose and the plant regenerates again.
- **Land** - The land requirement for setting up the WTC treatment units is comparatively far meagre than conventional plants.
- **Odour** - Unlike the normal sewage treatment plants, the WTC treatment units do not emit any unpleasant odor.
- This is because the decontamination process occurs under the soil surface without the use of chemicals which generate smelly gases.

### Mahadayi River Dispute

- There have been ongoing protests in Karnataka on the issue of sharing of Mahadayi river waters.
- Mahadayiriver originates in Karnataka before flowing into Goa where it is called Mandovi.
- Karnataka is seeking release of 7.56 tmcft water by Goa from the river for the Kalasa-BanduriNala project, , which is being opposed by Goa.
- The project involves building barrages across Kalasa and Banduri, tributaries of Mahadayiriver, to divert water to the Malaprabha which meets drinking water needs of the north Karnataka districts of Dharwad, Belagavi, Bagalkot and Gadag.
- Goa is of the view that it has no problem in providing "reasonable and justified" amount of 0.1 TMC of water to Karnataka for its drinking needs.
- The matter is pending before the Mahadayi Water Disputes Tribunal.

## Controversial water diversion plan

Under the Kalasa Bandura project, the Karnataka government has proposed dams and canals to divert the Mahadayi's water to address the water deficit in the Malaprabha basin



## Blue Flag

- The 'Blue Flag' is a certification by the Foundation for Environmental Education (FEE) that a beach, sustainable boating tourism operator, meets its stringent standards.
- Union Environment Ministry has launched a pilot project for beach clean-up and development and is also striving for the 'Blue Flag' certification for such identified beaches.
- Under the project, each state or UT has been asked to nominate a beach which will be funded through the on-going Integrated Coastal Management Programme.

## FEE

- Foundation for Environmental Education is a non-governmental organization promoting sustainable development through environmental education.
- It was formed in 1981 and is headquartered in Copenhagen, Denmark.
- The Blue Flag was originally a symbol of an environmental awareness initiative in France in 1987.
- It was later adopted as a programme by FEE, followed by other initiatives like adoption of the Eco-Schools and Young Reporters for the Environment (YRE).

## Garbage Emergency

- Bali has declared a "garbage emergency" across a six-kilometer stretch of coast.
- Indonesia is the world's second biggest contributor to marine debris after China.
- Indonesia is one of the nearly 40 countries that are part of the UN Environment's Clean Seas campaign.
- The campaign aims to halt the tide of plastic trash polluting the oceans, boost recycling services, curb the use of plastic bags, launch cleanup campaigns and raise public awareness.
- As part of its commitment, the government has pledged to reduce marine plastic waste by 70% by 2025.

## Narcondam Hornbill

- The Narcondam hornbill (*Rhyticeros narcondami*) is a small, distinctive, dark hornbill, measuring 45 to 50 cm in length.
- They are monogamous, non-migratory resident birds showing sexual dimorphic.
- This species is endemic to the tiny (6.8 sq.kilometers) dormant volcanic island of Narcondam, forming part of the Andaman Islands, India.
- It is resident in fairly open mixed forest, which covers most of the island, from sea-level to the peak
- This hornbill is listed as "**Endangered**" in IUCN red list and CITES Appendix II.
- It is protected under the Wildlife Protection Act and Narcondam Island is a wildlife sanctuary, near Myanmar's Coco Island.
- The Important Bird and Biodiversity Area (IBA) of these hornbill species in India is the Narcondam Island Wildlife Sanctuary.
- Its population appears to be stable despite some degree of hunting and habitat degradation.

## Agariyas

- Agariyas are nomadic tribes and traditionally salt farmers in Rann of Kutch, a seasonal salt marsh in Thar Desert, Rajasthan.
- The tribes derive their names from the word "Agar" meaning salt farms.
- During the monsoon months, the Rann of Kutch is submerged in sea water.
- As the sea water finally begins to recede in October, the Agariyas move in and begin the elaborate process of salt farming.

- This salt is different from the marine salt produced on the coast and is locally known as Badagara, literally meaning Bada (big) and Agara (pan).
- They suffer from skin lesions, severe eye problems, tuberculosis and abnormally thin legs, stiff with years of exposure to high concentration of salt.
- After the salt production season, they move to the peripheral villages.
- High Temperature, high wind velocity and high soil salinity makes Rann of Kutch an ideal place for salt production.
- It is home to rare breed of wild ass and flamingos.

## BIO/ HEALTH ISSUES

### **Research findings on Encephalitis**

**In News:** A research paper on epidemic Encephalitis has been realized.

#### **Encephalitis**

- It is inflammatory brain disease which can cause severe headache and confusion.
- The majority of cases are caused by either a viral infection or the immune system mistakenly attacking brain tissue.
- Mild cases may cause no symptoms or mild flu-like symptoms. Severe cases can be life-threatening.
- Immediate medical attention is required for symptoms such as confusion, hallucinations, seizures, weakness and loss of sensation.
- It can be spread by animal or insect bites or stings.

#### **Account of this Disease in India**

- In India Japanese encephalitis (JE) is most prevalent, it caused by JE virus spread by the bite of infected mosquitoes.
- It's more common in rural and agricultural areas which cause serious brain swelling with a sudden headache, high fever and disorientation.
- Indian public health diagnostic machinery has built around this illness and a vaccine was also introduced.
- This disease is being prevalent in U.P.'s Gorakhpur district for past three decades.

#### **Epidemic in few Parts of India**

- The recent research paper finds an unexpected cause of encephalitis which is recurring for several years in Malkangiri district of Odisha.
- Researchers find out it was likely due to the consumption of a wild bean, called BadaChakunda, which grows freely in the region.
- Several natural toxins had caused fatal dysfunction of the liver, heart and brain in underfed children.
- Even in Uttar Pradesh's Saharanpur district, the encephalitis outbreak was traced to this bean.
- There are also epidemics in Bihar's Muzaffarpur district which were linked to lychee consumption, again among emaciated children.
- In all these cases, the suspicion of JE, though the epidemiology and symptoms didn't match, this delayed the discovery of the cause.

#### **Concerns**

- As JE vaccination rates have grown, incidence has shrunk, and a host of other causes of encephalitis, like dengue, scrub typhus, and other disease have emerged to the forefront.
- Yet investigating agencies such as the National Centre for Disease Control and the National Institute of Virology have persisted in focussing on JE.
- There is a problem of archaic format in which encephalitis is reported to the government.
- Under this format, if an encephalitis case cannot be confirmed as JE, doctors tag it as Acute Encephalitis Syndrome (AES).
- But AES is no diagnosis, just a temporary label for different unnamed diseases.
- Thus doctors by them don't have a clear understanding about the disease due to narrow minded observation.

### **Concerns of Clinical Trials**

#### **Context**

- Clinical trials are widely used for gathering data from bioequivalence studies.
- In India for such clinical trials volunteers from poor and vulnerable sections of the society are being largely used.

### **Bioequivalence Study**

- Bioequivalence is a term used to assess the expected comparison between biological equivalence of two proprietary preparations of a drug.
- Bioequivalence studies test the metabolism of generics in healthy subjects.
- If two products are said to be bioequivalent it means that they would be expected to be, for all intents and purposes, the same.
- For example if a X company produces a brand name generic drug A1 and Y company produces the same drug it need to prove its bioequivalence with the brand name drug for market standards.
- The target of such study is to evaluate the therapeutic compatibility of tested drugs i.e. pharmaceutical equivalents or pharmaceutical alternatives.
- The importance of bioequivalence studies is increasing due to the large growth of the production and consumption of generic products.

### **Why Clinical Trials are used?**

- For finding out bioequivalence data volunteer subjects, generally healthy individuals but occasionally in patients are used.
- For testing a drug usually Serum/plasma samples are obtained at regular intervals and assayed for parent drug concentration.
- But these alone neither feasible nor possible to compare the two products of various means of use for instance if drug is to be consumed by inhaling etc.
- Thus testing will be conducted to clinical trials at several different doses to derive expected results.

### **Concerns with Clinical Trials in India**

- The big problem plaguing clinical research is an over-representation of low-income groups among trial subjects.
- Sometimes Clinical research organizations CROs recruit them selectively, exploiting financial need and medical ignorance.
- Because these subjects are well-paid, and get no therapeutic benefit, their only reward from the trial is financial.
- Such deception is a risk not only to volunteer health but also to society, because it can throw off the trial's results.
- Due to this unethical practice unsafe drugs can make their way into the market and safe drugs can get rejected.
- Selectiveness in recruiting subjects for clinical trials leads to human rights violations and to bad science.

### **Measures Needs to be taken**

- One potential solution is a national registry of trial volunteers, which will alert a CRO when someone signs up for two studies simultaneously.
- So that regulators can create a system that anonymousness each participant's data.
- Another option is to pay volunteers less, taking away the financial incentive to fudge their participation history.
- Encouraging a wider cross-section of society to participate in research on human subjects will ensure that the burden not fall completely on the vulnerable groups.
- Landmark amendments to the Drugs and Cosmetics Act in 2013 led to better protection of vulnerable groups such as illiterate people, but more regulation is needed to ensure truly ethical research.

### **Ant Species in Andaman**

- Scientists have discovered the new species **Tetramoriumkrishnani** and **Tetramoriumjarawa** in Havelock Island, a part of the Andaman archipelago.
- The ant species are endemic to the Andaman Islands.
- They dwell in leaf litter in the evergreen forests of the Island.
- The species are named in honour of late scientist K.S. Krishnan, and after the Jarawas, an indigenous people of the islands, who are inhabited the islands.



### **Night Frogs**

- Frogs belongs to the genus Nyctibatrachus are commonly known as night frogs.
- They are found only in the Western Ghats mountain range.
- Scientists have recently discovered new night frog “Mewasinghi”, belonging to Nyctibatrachus from Malabar Wildlife Sanctuary, Kozhikode.
- It is found in a small stream running along the Peruvannamuzhi dam.
- It is closely relative to Athirappilly night frog (found south of the Palakkad Gap in Thrissur and Idukki) and the Kempfoley night frog (found in the northern Western Ghats of Kerala and Karnataka).

### **New Ginger Species**

- Scientists have discovered two new species of Ginger in Manipur and Nagaland.
- They were found in easternmost districts bordering Myanmar.
- Both the plants are from the family of Zingiberaceae, to which the commonly found Ginger (Zingiberofficinale) belongs.
- The species discovered in Nagaland, is an epiphytic plant and grows on tall trees.
- The species from Manipur was found growing in rock crevices, boulders and humus rich soil in the Shirui Hills.

### **Humpback Whale**

- The humpback whale is one of the four species of baleen whales occurring in Indian waters.
- Characteristic baleen plates and paired blowholes help distinguish baleen whales from toothed whales.
- These whales strain huge volumes of ocean water through their baleen plates to capture food
- Humpback Whales migrate annually from the summer feeding grounds near the poles to warmer winter breeding waters closer to the Equator.
- They are found near coastlines, feeding on tiny shrimp-like krill, plankton, and small fish.
- The Arabian Sea humpback whales are the only sedentary whales in the world, feeding and breeding in the same area.
- Researchers from Environment Society of Oman have tagged a female humpback whale named as “Luban” to track its movement via satellite.
- It started its journey from Oman, heading towards east and reached off the coast of Goa after two months.
- Even though the IUCN Red List categorises humpback whale as of ‘least concern’, it recognised the distinct Arabian Sea population as ‘endangered’ in 2008.

## **TECHNOLOGICAL AFFAIRS**

### **Hurdles in Realizing Roof Top Solar Plants**

**In News:** Union government is working on a “rent a roof” policy to support its plan to generate 40 GW of solar power by 2022.

#### **“Rent a Roof” Policy**

- Under the policy, a developer will take rooftops on rent and will offer lease to each household, and then feed the solar power to the grid.
- This policy works under net-metering system, by which a consumer is only billed for the electricity consumed after deducting the power generated from one’s solar rooftop panels that is supplied to the grid.
- Union government aims to give the discoms financial incentives for every MW of rooftop capacity created in their area of operation.
- However, to avail themselves of incentives, discoms should create the capacities through tariff-based competitive bidding.
- The proposed scheme seeks to shift the game from captive players to energy companies (independent power producers, or IPPs).

#### **Hurdles**

- Most of the discoms in India are State government-owned and are hesitant to take up such projects due to of their nature of self-protection from instant financial turmoil.
- These companies have refused to buy any surplus power from them.
- Therefore, factories and commercial establishments, like shopping malls, put up only as much rooftop solar capacity as would satisfy their demand, even if they have the space and wherewithal for more.
- As for individuals, rooftop solar has are not being attractive proposition as there is no clear government policy stand on installation and maintenance of roof top solar plants.
- There is also absence of policy direction on 'net metering', which would allow owners of captive rooftop plants to sell surplus power to the grid.
- In a tariff-based competitive bidding scenario, individual and small producers will be at a disadvantage.
- Competitive bidding process would also culminate in a power purchase agreement and a PPA is not particularly appropriate for a sell-only-surplus situation.

### Pod Taxi Project

- A high-level panel has recommended inviting fresh bids for India's first pod taxi project.
- The projected Rs. 4,000-crore scheme, also known as Personal Rapid Transit (PRT), is to start off with the 12.3 km Delhi-Gurugram pilot corridor on public-private partnership basis.
- PRT is an advanced public transport using automated electric pod cars to provide a taxi-like demand responsive feeder and shuttle services.
- It is for small groups of travellers and is a green mode of uninterrupted journey.
- The automated people mover (APM) standards in the US constitute the minimum requirements for an acceptable level of safety and performance for the PRT.

#### The future of travel

A look at the next generation mode of travel in India, the pod-taxi, which is estimated to be operationally cheaper than the Metro rail.

- Pods can carry upto 5 passengers at a time, and are fully automatic, driverless and travel independently over an overhead network which is usually about 5 - 10 meters above the ground
- Pods are equipped with military grade wireless technology and sensors, which are monitored at a command base and on the ground for extra security and safety

#### Advantages

- The pods and the network are not affected by adverse weather conditions
- They can move along dense crowded and congested roads and localities
- The pod network saves fuel, cost of transportation and pollution



Project cost: ₹ 4,000 crore

Project management: NHAI

Photo for representational purpose: GETTY IMAGES

### PSLV C-40

- ISRO is planning to launch 31 satellites, including India's Cartosat-2 series earth observation space craft, in a single mission using PSLV C-40 in January, 2018.
- The mission will be the first PSLV mission after the unsuccessful launch of the navigation satellite IRNSS-1H.
- The mission consists of 28 nano satellites from abroad, including Finland and the U.S., one micro and one nano satellite from India along with one Cartosat satellite.
- The satellites will be launched from Sriharikota, Andhra Pradesh.
- Earlier this year, PSLV-C37 launched the first Cartosat-2 series satellite along with 103 co-passenger satellites in a single flight.

### Cartosat-2 Satellite

- ISRO is set to launch 28 commercial satellites along with CartoSat-2 in the upcoming month.
- Cartosat is a series of **Earth Observation Satellites** placed in Polar Sun Synchronous Orbit (PSSO).
- The objective is to provide high-resolution scene specific spot imagery.
- The imageries from Cartosat-2 series satellite will useful for cartographic applications, urban and rural applications, coastal land use and regulation, utility management like road network monitoring, water distribution, creation of land use maps.
- It will also be useful in various other Land Information System (LIS) and Geographical Information System (GIS) applications.

### SwayamPrabha

- The SwayamPrabha is a group of 32 DTH channels devoted to telecasting of high-quality educational programmes on 24X7 basis using the GSAT-15 satellite.
- The channels cover higher education, school education and assist the students (class 11th & 12th) prepare for competitive exams.
- The contents are provided by IITs, UGC, IGNOU, NCERT and NIOS.
- Information and Library Network (INFLIBNET), an autonomous Inter-University Centre (IUC) of UGC maintains the web portal.

- INFLIBNET is involved in creating infrastructure for sharing of library and information resources and services among Academic and Research Institutions.
- It allows students to choose the time of their convenience for learning.
- It widens the scope of SWAYAM, an online education platform which covers teachers training, graduate and post graduate courses.

#### **Training Teachers through SwayamPrabha**

- After the launch of the SarvaShikshaAbhiyan and the RTE, many teachers without requisite training had been hired.
- The RTE (Amendment) Act, 2017 mandates teachers to acquire Bachelor/Diploma in Elementary Education by May, 2019 to retain their jobs.
- The NIOS, an autonomous organisation under the Ministry of HRD, is tasked with training these teachers.
- Under SwayamPrabha, the government had one DTH channel in English and Hindi of the 32 channels for telecasting educational programmes dedicated to teacher training.
- The government has decided to increase it to 3 channels along with providing an encoder device that permits live video interaction
- ISRO is collaborating with NIOS in providing the devices to the teachers.

#### **LiFi**

- Light-fidelity (LiFi) is a technology used for free-space communication using visible and near-visible light.
- It is similar to Wireless Fidelity (WiFi), a technology for wireless local area network communication using microwaves.
- Microwaves can pass through walls while transmitting signals whereas visible and near-visible light cannot pass through walls.
- Thus it makes LiFi signal network more secure.
- Scientists have recently added a new layer of security to LiFi.
- Light bounces off from walls and falls on the receiver.
- So wall boundaries can be used effectively for reflecting signals so that communication is maintained even without line-of-sight communication between the signal source and receiver.
- Receiving detectors can receive both direct and reflected signals.
- Walls painted with fluorescent and phosphorescent paints absorb and then emit light with marginal loss.
- The paints continue to emit light even several hours after the original source of light has been switched off.
- This makes the communication signal more effective and secure.

#### **SOFIA**

- SOFIA, the Stratospheric Observatory for Infrared Astronomy, is the largest airborne observatory in the world.
- It consists of an extensively modified Boeing aircraft carrying a reflecting telescope with an effective diameter of 2.5 meters.
- The observatory is based at NASA's Armstrong Flight Research Center in Palmdale, California.
- The project is implemented by NASA and German Aerospace Center (DLR).
- Many objects in space emit almost all their energy at infrared wavelengths. Often, they are invisible when observed in ordinary visible light.
- Thus SOFIA observes universe in infrared wavelengths to get the expanded views.
- It is preparing for its 2018 campaign for observing Saturn's giant moon Titan.

### **IN-SHORT**

#### **Atal Tinkering Labs**

- NitiAayog brainchild Atal Innovation Mission (AIM) has selected additional 1,500 schools across the country to establish Atal Tinkering Labs (ATLs).
- ATLs are play workspaces fitted with state-of-the-art technologies like 3D printers, robotics, sensor technology kits, Internet of things (IoT), miniaturised electronics.
- The labs are designed to spur the spark of creativity, and go beyond regular curriculum and text book learning.
- AIM will enhance the coverage of ATLs to over 98 per cent smart cities and 93 per cent districts.
- The addition of these schools will give a major boost to realise the vision of the mission to cultivate one million children in India as the innovators of tomorrow.

#### **Indian Science Congress**

- The 2018 edition of the Indian Science Congress will be held at Manipur University, Imphal, in March.



- Since the days of Jawaharlal Nehru, the ISC was traditionally the first public function the Prime Minister addressed in the calendar year.
- It had to be postponed due to “security problems.”
- The congress sees several students, Nobel Laureates and scientists from India’s science academies in attendance.
- In recent years, the Science Congress has also got flak for being a forum that promoted pseudo science, such as in 2014, when a session on mythology and Vedic-era airplanes was a highlight.

#### **Clean Authority of Telangana**

- Telangana government is set to introduce “Clean Authority of Telangana” to deal with solid waste, waste water and polluted air in all the urban areas across the State.
- It is an exclusive authority modeled on the lines of a similar body in Japan.
- It will ensure enforcement of measures aimed at containing the harm caused through solid waste, waste water and polluted air to human health.

#### **LDF -Mobile App**

- Union Ministry of Agriculture has launched Livestock Disease Forewarning –Mobile Application (LDF-Mobile App).
- The app is developed by ICAR to provide early warning about diseases like Foot-and-mouth disease (FMD), Brucellosis etc.
- It will also provide information about clinical samples for the diagnosis in case of the epidemic.
- It will be beneficial for the consumers and stakeholders engaged in disease control programmes.

#### **The Indian Institute of Petroleum and Energy Bill, 2017**

- Parliament has recently passed “The Indian Institute of Petroleum and Energy Bill, 2017”.
- The Bill establishes the Indian Institute of Petroleum and Energy, Vishakhapatnam, Andhra Pradesh.
- The Institute aims to provide high quality education and research focussing on the themes of petroleum, hydrocarbons and energy.
- The Institute is required to maintain a fund which will be credited with the funds that it receives from the central government, fees and money received from any other sources (grants and gifts).
- The accounts of the Institute shall be audited by the Comptroller and Auditor- General of India.
- The bill declares the Institute as an Institution of National Importance (INI).

#### **Home Ministry’s Directive to NGOs**

- The Home Ministry has recently directed all NGOs, business entities and individuals who receive funds from abroad to open accounts in any of the 32 designated banks.
- The banks are integrated with Public Financial Management System (PFMS).
- The directive is issued under the powers conferred upon the central government under the Foreign Contribution (Regulation) Act 2010.
- It is expected to provide a higher level of transparency and hassle-free reporting compliance.

#### **Public Financial Management System (PFMS)**

- PFMS, earlier known as Central Plan Schemes Monitoring System (CPSMS), is a web-based online software application.
- It is launched with the objective of tracking funds released under all Plan schemes of GoI, and real time reporting of expenditure at all levels of Programme implementation.
- It is integrated with the Core banking system which helps to monitor the flow of funds.
- It has been envisaged that digitization of accounts shall be achieved through PFMS.
- It is developed and implemented by the Office of Controller General of Accounts.

#### **FAME II**

- FAME India Scheme [Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India] was launched in 2015.
- Its objective is to support hybrid/electric vehicles market development and Manufacturing eco-system.
- The phase I of FAME expires on March 31, 2018.
- In phase II, the government is targeting a fully (100%) electric fleet for public transport, including buses, taxis and auto-rickshaws.
- The FAME India Scheme is aimed at incentivising all vehicle segments i.e. 2 Wheeler, 3 Wheeler Auto, Passenger 4 Wheeler Vehicle, Light Commercial Vehicles and Buses.
- It has 4 focus areas i.e. Technology development, Demand Creation, Pilot Projects and Charging Infrastructure.

#### **Financial Stability and Development Council**

- The 18<sup>th</sup> meeting of the Financial Stability and Development Council (FSDC) has recently been held in New Delhi.
- FSDC was established in 2010 with Union Finance Minister as its Chairman.
- It was to solve the regulatory tussle between SEBI and IRDA on the regulation of Unit Linked Life Insurance Plan (ULIP).

- Its members include
  - the heads of financial sector regulators (RBI, SEBI, PFRDA, and IRDA)
  - Finance Secretary, Department of Economic Affairs
  - Secretary, Department of Financial Services
  - Chief Economic Adviser
- FSDC has two core functions:
  1. to perform as an apex level forum to strengthen and institutionalize the mechanism for maintaining financial stability
  2. to enhance inter-regulatory coordination and promote financial sector development in the country
- It will focus on financial literacy and financial inclusion.
- It will monitor macro-prudential supervision of the economy and also assess the functioning of the large financial conglomerates.
- FSDC sub-committee is chaired by the Governor of RBI.

### **Mission Seven Summits**

- It is a unique series of **mountaineering expedition** launched by Indian Air Force (IAF).
- The mission's aim is to fly the tricolour and the IAF flag on the highest peaks in every continent.
- A team of Mountaineers recently scaled Mt Vinson in Antarctica. With this, IAF becomes the first organisation in India to achieve this unique feat.

### **World's First Photovoltaic Highway**

- World's first solar highway in Jinan, the capital city of China's Shandong province was recently opened for testing.
- The new solar road consists of an insulating layer on the bottom, photovoltaic panels in the middle, and transparent concrete on top.
- It can generate 1 million kilowatt-hours of power in a year and saves the space for building solar farms and shorten the transmission distance.

### **Umananda Island**

- It is the smallest inhabited river island in the world.
- It is situated in the river of Brahmaputra in Assam.
- According to the Hindu mythology, Lord Shiva lived in the island much to the ananda or joy of his consort Uma, another name for Parvati, hence the name 'Umananda'.
- It is also known as Peacock island, because it resembled a peacock's feathers splayed in full view.
- Golden Langur, one of the most endangered species of primates is found in this island.
- Golden langurs are found only in parts of Western Assam and the neighbouring foothills of the Black mountains of Bhutan.

### **Dhanush Artillery Gun**

- Dhanush is an upgraded version of the Swedish bofors howitzers.
- It is a 155 mm gun with a maximum range of 40 km compared to 17 –km range of the original guns.
- It is expected to be inducted in the Indian Army by 2018.
- Army is keen on inducting Dhanush since it has not inducted any new artillery gunds since the Bofors procured in 1980's from Sweden.

### **NARI**

- NARI is an online portal developed by the Ministry of Women and Child Development.
- The portal will provide women citizens with easy access to information on government schemes and initiatives for women.
- It provides links to the Ministries, Departments and autonomous bodies offering the schemes as well as easy access to online applications and grievance redressal.

### **e-Samvad**

- **e-Samvad** is an online portal to provide a platform for NGOs and Civil Societies to interact with the Ministry of Women & Child Development.
- Through e-Samvad, NGOs and civil society can provide their feedback, suggestions, put up grievances, share best practices which will help in formulation of effective policies.

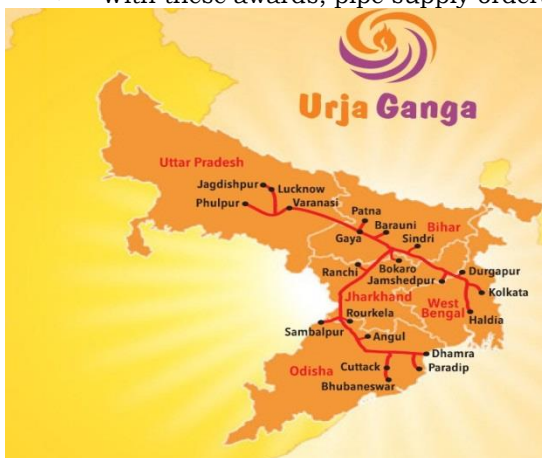
### **Margdarshan**

- Margadarshan scheme is under the purview of All India Council for Technical Education (AICTE), a national level apex advisory body under Ministry of Human Resource and Development.
- The scheme aims to provide mentoring to institutes by a well performing Institute.
- Institutions of repute will act as a mentor with its existing facilities to serve as the hub to guide and disperse knowledge to 10 technical institutions.

- It will allow for information sharing, such as technical education, research and sharing of resources to encourage best practices.
- Mentor institute also provide services to faculty for self-improvement.
- Government owned, aided and self-financed institutes and universities approved by AICTE can participate.
- Duration of the project shall be of 3 years.
- The fund dispersed by AICTE shall be utilized to conduct programmes for technical up liftmen of the faculty members and shall not be used for purchase of equipment like computer, laptop etc.

### PradhanMantriUrja Ganga

- Jagdishpur-Haldia&Bokaro-Dhamra Natural Gas Pipeline (JHBDPL) project is also known as PradhanMantriUrja Ganga.
- The 2,655 km project aims to connect the eastern states to the national gas grid.
- Uttar Pradesh, Bihar, Jharkhand, Odisha and West Bengal are the beneficiary states.
- The project will usher Industrial development in East India by supplying environmentally clean natural gas to fertiliser and power plant, refineries, steel plants and other industries.
- It also provides clean energy to households and transportation in the cities en-route the pipeline.
- State-run gas utility GAIL India has recently placed orders for 400-km of pipeline.
- With these awards, pipe supply orders for 2,100 km of the project have been placed.



### Schemes to Promote Milk Production

- Government of India is implementing RashtriyaGokul Mission, National Dairy Plan- I to supplement the efforts of States in promoting milk production.
- RashtriyaGokul Mission has been initiated with the aim of development and conservation of indigenous bovine breeds thereby enhancing milk production and productivity.
- National Dairy Plan-I has focus on development and conservation of indigenous breeds of cattle and buffalo through implementation of progeny testing and pedigree selection programme.
  - 6 indigenous breeds of cattle (Gir, Sahiwal, Rathi, Kankrej, Tharparkar and Hariana)
  - 6 buffalo breeds (Murrah, Mehsani, Jaffarabadi, Nili Ravi, Pandharpuri and Banni)

### Classical Language Status

- Maharashtra government has sent a proposal to Ministry of Culture for granting classical language status to Marathi language.
- As of now, six languages i.e. Tamil, Telugu, Kannada, Malayalam, Odia and Sanskrit have been given the status of classical languages.
- The criteria adopted for the eligibility of a language for granting classical language status are
  - High antiquity of its early texts/ recorded history over a period of 1500-2000 years;
  - A body of ancient literature/ texts, which is considered a valuable heritage by generations of speakers;
  - The literary tradition be original and not borrowed from another speech community;
  - The classical language and literature being distinct from modern, there may also be a discontinuity between the classical language and its later forms or its offshoots.

The benefits include-

- A one-time grant of Rs 100 crore for research and development of the language.
- Two major annual international awards for scholars of eminence in the concerned language.
- Setting up of a 'Centre of Excellence for Studies in Classical Languages' can be set up.
- The University Grants Commission can be requested to create, to start with at least in Central Universities, a certain number of professional chairs for classical languages, for scholars of eminence in the concerned language.

### Speed Breeding Technique

- Australian scientists have developed the world's first 'speed breeding' technique that can boost the production of the crop by up to 3 times.
- The technique is inspired by the NASA's experiments to grow wheat in space.
- It involved the use of continuous light on wheat to trigger early reproduction in the plants.
- It has largely been used for research but now is being adopted by industry.

### BhimaKoregaon Battle

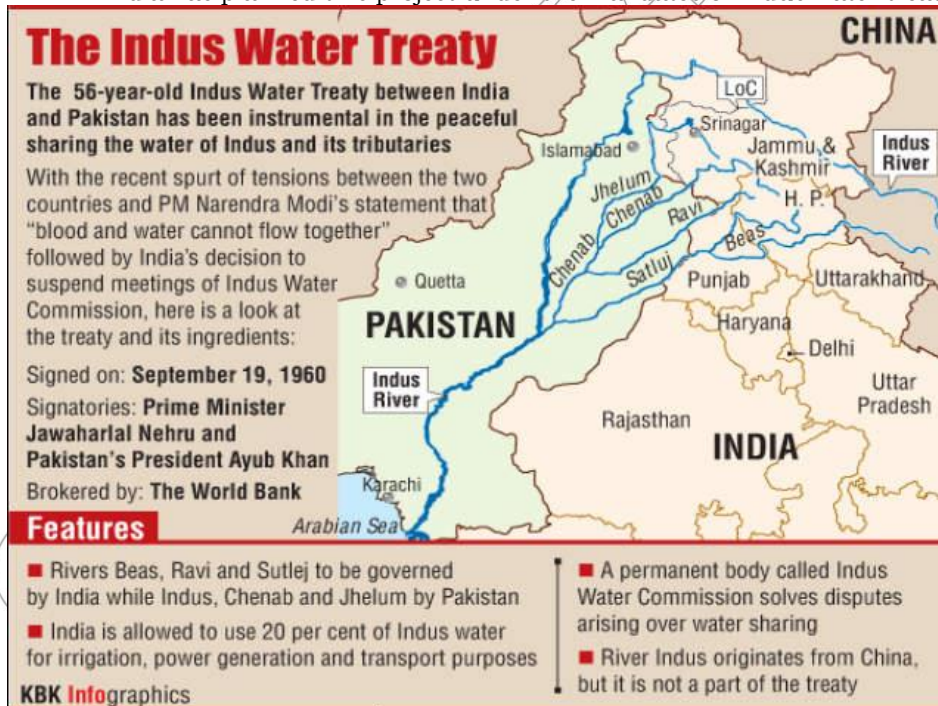
- It is one of the last battles of 3<sup>rd</sup> Anglo-Maratha War in January 1818, between Maratha ruler BajiRaoPeshwa II and the British East India Company along with the local Mahar community.
- The battle brought an end to the domination of Peshwas.
- Historically, Mahars were considered as untouchables.
- Maratha King Shivaji, nevertheless, recruited large number of Mahars into the Maratha Army in the 17<sup>th</sup> century.
- However, relations between Mahars and Peshwas turned sour after BajiRao II reportedly insulted the community by rejecting their offer to serve the army.
- This made them to side with the English against the Peshwa's numerically superior army.
- After the victory, British erected a commemorative victory pillar (KoregaonRanstambh) in Bhima-Koregaon village in 1818.
- Dr BR Ambedkar visited the site.
- This year, the event commemorating the 200th anniversary of the battle had been met with protests.

### KAB-1500 bombs

- India has announced its first proposal for procurement of 240 KAB-1500 bombs, from Russia.
- It is a precision guided weapon which uses laser for precision guidance.
- It will be used in IAF's Sukhoi Su-30MKI fighter jets.
- It is designed to destroy ground targets such as railway lines, ammunition depots, bridges, military facilities and ships.
- The bomb has folding fins that allow it to manoeuvre while being guided to the target.

### Ujh Multipurpose Project

- The Central Water Commission (CWC) has finalised a detailed report on Ujh multi-purpose project.
- The project is to come up in Kathua district, will store around 0.65 million acre feet (MAF) of water from Ujh (a tributary of Ravi).
- It will irrigate 30,000 hectares and produce over 200 MW of power.
- India has planned this project under the mandates of Indus water treat (IWT)



### CWC

- Central Water Commission is a premier Technical Organization of India in the field of Water Resources.
- It is presently functioning as an attached office of the Ministry of Water Resources, River Development and Ganga Rejuvenation.

- The Commission is entrusted with the general responsibilities of initiating, coordinating and furthering in consultation of the State Governments concerned, schemes for control, conservation and utilization of water resources throughout the country, for purpose of Flood Control, Irrigation, Navigation, Drinking Water Supply and Water Power Development.
- It also undertakes the investigations, construction and execution of any such schemes as required.

#### **Keoladeo National Park**

- It is Located in Bharatpur district, the eastern part of Rajasthan.
- The park is spread over nearly 30 sq.km which comprises many artificial and seasonal lagoons.
- Keoladeo attracts several migratory birds that make the region their breeding and wintering grounds.
- It is an UNESCO World Heritage and also a Ramsar site.
- The Siberian crane is one of the rare species that was spotted here till about the turn of the century.
- It habitat for nearly 365 species of birds, including raptors and waterfowls.
- Animal such as Jackals, Sambar, Nilgai, wild cats, hyenas, wild boar, porcupine and mongoose can be found in the region.

#### **Ramsar convention**

- The Convention on Wetlands called the Ramsar Convention is the intergovernmental treaty.
- It provides the framework for the conservation and wise use of wetlands and their resources.
- The Convention was adopted in the Iranian city of Ramsar in 1971 and came into force in 1975.
- Since then, almost 90% of UN member states, from all the world's geographic regions, have acceded to become "Contracting Parties".
- The Convention uses a broad definition of wetlands, It includes all lakes and rivers, underground aquifers, swamps and marshes, wet grasslands, Peatlands, oases, estuaries, deltas and tidal flats, mangroves and other coastal areas, coral reefs, and all human-made sites such as fish ponds, rice paddies, reservoirs and salt pans.

#### **Ancient Monuments and Archaeological Sites**

- Parliament has recently passed Ancient Monuments and Archaeological Sites and Remains (Amendment) Bill, 2017.
- The Bill permits construction of public works in 'prohibited areas' for public purposes.
- The Act defines a 'prohibited area' as an area of 100 meters around a protected monument or area.