1. SOCIAL ISSUES

1.1. Draft Bill On Human Trafficking

The Union Cabinet has approved the draft **Trafficking of Persons (Prevention, Protection and Rehabilitation) Bill, 2018.** Trafficking in human beings is the 3rd largest organized crime violating human rights in the country.

What Constitutes Human Trafficking

- Trafficking for the purpose of forced labor, begging etc.

- Trafficking by administering chemical substance or hormones on a person for the purpose of early sexual maturity.

- Trafficking of a woman or child for the purpose of marriage or under the pretext of marriage.

Scenario In India

- India is a destination for human trafficking. In the year 2016 alone, 8132 human trafficking cases have been reported in India according to NCRB data.

- The states where the cases reported high are West Bengal, Rajasthan, Gujarat, Maharashtra and Tamil Nadu.

- The main purposes for human trafficking given in the NCRB report are Sexual exploitation, Forced Marriage, Forced Labour and Domestic servitude.

India's Efforts So Far To Tackle Human Trafficking

- Trafficking in Human Beings or Persons is prohibited under under **Article 23 (1)** of the Constitution.

- The **Immoral Traffic (Prevention) Act, 1956 (ITPA)** is the premier legislation for prevention of trafficking for commercial sexual exploitation.

- Protection of Children from Sexual offences **(POCSO) Act, 2012** is a special law to protect children from sexual abuse and exploitation.

- **Criminal Law (amendment) Act 2013** has come into force wherein Section 370 of the Indian Penal Code has been substituted with Section 370 and 370A of IPC which provide for comprehensive measures to counter the menace.

- There are other specific legislations enacted relating to trafficking in women and children:

  o Prohibition of Child Marriage Act, 2006,

  o Bonded Labour System (Abolition) Act, 1976,

  o Child Labour (Prohibition and Regulation) Act, 1986,

  o Transplantation of Human Organs Act, 1994,

- State Governments have also enacted specific legislations to deal with the issue. (e.g. The Punjab Prevention of Human Smuggling Act, 2012)

Need For Such A Law

- **International Commitment:** India is a signatory to *2003 UN Protocol on Trafficking* which necessitates to have such a law. India has also failed to uphold *The Palemo Protocol*, which provides protection to children against trafficking.

- **Lack of Comprehensive Law**

- o Although Article 23 of the Constitution prohibits human trafficking, it does not define the term. The country's first definition of human trafficking based on the UN trafficking protocol was first seen in the Criminal Law (Amendment) Act of 2013, which substituted Section 370 of the IPC with 370 and 370A which deals with trafficking of persons for exploitation. However, this does not include _forced labour_. Nor does the Immoral Traffic (Prevention) Act of 1956 (as amended in 1986). Other laws pertaining to forced labour in the country do not adequately address the complex issue of human trafficking for the purpose of labour.
- o Although there is an _Immoral Traffic Prevention Act_ in place against trafficking, it only refers to trafficking for prostitution, hence not comprehensive. Nor does the Act provide clear definition of 'trafficking'.

- **Lack of Holistic Approach:** A holistic approach for prevention, protection, and rehabilitation of victims is possible only with an over-arching law.

- **Confusion in Existing Laws**: India's legal framework for addressing trafficking consists of various laws as mentioned above. This creates confusion leaving a legal vacuum when it came to the investigation and prosecution of trafficking offences.

- **Inter-departmental Co-ordination:** The draft seeks to vest the powers of investigation in National Investigation Agency. This can felicitate inter-departmental co-ordination.

Provisions Of The Bill

- The bill adopts a *3-pronged approach* of prevention, rescue and rehabilitation.

- *Punishment*
  - o It proposes a punishment of life imprisonment for repeat offenders.
  - o It also moots three years in jail for abetting, promoting and assisting trafficking.

- The Bill provides for interim relief immediately to victims within 30 days to address their trauma and further appropriate relief within 60 days from the date of filing of chargesheet.

- *Institutions*
  - o The National Investigation Agency (NIA) will act as the nodal authority for probing cases of human trafficking.
  - o NIA shall perform the task of anti-trafficking bureau. It will be funded by Nirbhaya fund in order to set up a cell for investigating human trafficking.
  - o The proposed legislation recommends a national anti-trafficking relief and rehabilitation committee which would be headed by Secretary, WCD Ministry.

- It aims to ensure confidentiality of victims or witnesses and complainants by not disclosing their identity, time-bound trial and repatriation of the victims within a period of one year from taking into cognizance.

- In order to break the organized nexus, both at the national and international level, the Bill provides for the attachment & forfeiture of property and also the proceeds for crime.

- The Bill comprehensively addresses the transnational nature of the crime. The National Anti-Trafficking Bureau will perform the functions of international coordination with authorities in foreign countries and international organizations; international assistance in investigation; facilitate inter-State and trans-border transfer of evidence and materials, witnesses and others for expediting prosecution; facilitate inter-state and international video conferencing in judicial proceedings etc.

Criticism

- At least 10 different laws currently address activities that constitute "trafficking of persons" - sometimes at cross-purposes with each other. This Bill adds yet another legislation to this list. Not only that, it proposes to set up a parallel anti-trafficking bureaucracy with at least 10 new agencies.

- The current fails to recognize the Government's undertaking in 2015 to the Supreme Court of India that it will draft a comprehensive legislative framework by harmonising and integrating existing laws into one.

- Trafficking for the purposes of begging is considered "aggravated" under the Bill, whereas trafficking for sexual exploitation and forced removal of organs is simple trafficking. Hence, according to the current bill, trafficking for the purposes of begging is graver offence than trafficking for sexual exploitation and forced removal of organs

- Slavery and practices similar to slavery and servitude, which capture the most egregious forms of coercion and bondage under domestic and international law, are also simple trafficking.

- The Bill categorizes a person who encourages another person "to migrate illegally into India or Indians to some other country", as having committed an act of 'aggravated form trafficking', punishable with 10 years imprisonment.

- Conflation of migration, which is voluntary movement of persons, with trafficking, which necessarily involves coercion, fraud, deception and exploitation is dangerous, especially for refugees and other vulnerable immigrants.

- According to this Bill, factories and farms can be "closed down" based on a mere complaint as the Bill introduces offences in relation to, and authorizes closure of premises, which are "to be used" as a "place of trafficking".

- Currently, trafficked victims are charged for 'minor' offences like travelling without a passport [in case of foreign nationals], soliciting [in the case of sex work] or working without authorization or employment papers [in the case of labour trafficking]. Victims will continue to be charged and tried for these violations, like before. It is nothing but the travesty of justice.

- The bill completely ignores the recommendations of Supreme Court-appointed panel in relation to sex work. Such recommendations of the Court appointed panel, not reflected in the Bill, are:
  - to adopt community-based rehabilitation, i.e. alternatives that are not contingent on trafficked women staying in state-run "homes".
  - to revise laws like the ITPA so as to distinguish between those coerced into sex work and those who engage in it voluntarily, so that interventions are tailored to those who need them.

- The Bill provides solutions which have been rejected by the UN. 'Protection homes' and 'rehabilitation homes' - which are the mainstay of rehabilitation under the Bill, have been proven to be sub-optimal, even counter-productive solutions.

- The United Nations Special Rapporteur on Trafficking in Persons, especially Women and Children, has explicitly noted that such measures "inevitably compound the harm already experienced by trafficked persons and denies them the rights to which they are entitled".

Conclusion

Human trafficking is often a cross-border phenomena occurring in collusion with people from neighboring countries. The new law will, therefore, make India a leader among South Asian countries to combat trafficking.

1.2. Pan-India Expansion of Beti Bachao Beti Padhao Programme (BBBPP)

BBBPP was scaled up to cover all 640 districts country-wide following the success of its 1st phase in improving child sex ratio from 914 to 919 (according to NFHS-4) which covered 161 districts.

About the Programme

Beti Bachao Beti Padhao was launched as a convergent effort of Ministries of Women and Child Development, Health & Family Welfare and Human Resource Development in 2015 to address the declining Child Sex Ratio and related issues of empowerment of women over a life-cycle continuum.

Objectives

- Prevent gender biased sex selective elimination
- Ensure survival & protection of the girl child
- Ensure education of the girl child

Key Components

- Enabling girls' education
- Enforcement of Pre-Conception & Pre Natal Diagnostic Techniques (PC&PNDT) Act.
- Awareness for changing mindsets

Strategies

- Implement a sustained Social Mobilization and Communication Campaign to create equal value for the girl child & promote her education.
- Place the issue of decline in CSR/SRB in public discourse, improvement of which would be an indicator for good governance.
- Focus on Gender Critical Districts and Cities low on CSR for intensive & integrated action.
- Mobilize & Train Panchayati Raj Institutions/Urban local bodies/ Grassroot workers as catalysts for social change, in partnership with local community/women's/youth groups.
- Ensure service delivery structures/schemes &programmes are sufficiently responsive to issues of gender and children's rights.
- Enable Inter-sectoral and inter-institutional convergence at District/Block/Grassroot levels.

Reasons For Pan-India Expansion

- **Drop in Sex-Ratio at Birth**: Scaling up of Beti Bachao Beti Padao Programme country-wide comes at a time when NITI Aayog in its report stated that sex-ratio at birth nationwide had dropped from 906 in 2012-2014 to 900 in 2013-2015.
- **63 Million 'Missing girls**: Economic Survey 2017-2018 highlighted the issue of skewed sex ratio at birth in favour of males leading to the identification of 63 million missing women in 2014. The prevalence of 'Missing Women' is either due to sex selective abortion, disease, neglect, or inadequate nutrition.

Important Bit For Prelims
• Sex ratio at Birth is the number of girls born for every 1,000 boys.
• Child Sex Ratio is defined as the number of females per thousand males in the age group 0–6 years in a human population.
• **Son-Meta preference:**
o While active sex selection via foetal abortions is widely prevalent, parents may choose to keep

having children until they get the desired number of sons. This is called son meta preference.

    o   A son meta preference does not lead to sex-selective abortion. However it may be detrimental to female children because it may lead to fewer resources devoted to them and therefore can contribute to missing women at a later stage.

1.3. National Nutrition Mission Launched

The Union government has launched the National Nutrition Mission with a budgetary support of Rs.9000 Cr over the next three years in order to address the serious incidence of under-nutrition and related problems in the country. The Mission seeks to reduce the levels of stunting, under-nutrition, anemia and low-birth weight of babies.

Indicators Of Nutrition In India

- **Wasting:** Children whose weight is below the average for their height are considered wasted. Wasting is an indicator of acute malnutrition.

- **Stunting:** Children whose height is below the average for their age are considered to be stunted. Stunting is an indicator of chronic malnutrition.

- **Underweight**: Children whose weight is below the average for their age are considered under-weight. Under-weight is an indicator of acute or chronic malnutrition or both.

- As per the **National Family Health Survey (NFHS)-4 (2015-16**), 35.7 per cent children below five years are underweight, 38.4 per cent are stunted and 21 per cent are wasted in the country.

- **Current status**: One in every 2 women is Anaemic, One in every 3 children is Stunted, One in every 3 children is Malnourished, One in every 5 children is Wasted.

Targets

- The Mission aims to reduce mal-nutrition by 2% every year by reducing **stunting, wasting and under-nutrition by 2%** every year.

- It also seeks to reduce incidence of **anemia by 3%** every year. This is done by administering Iron Folic Acid supplements through **life-cycle approach** covering all life-cycles including children, women of reproductive age, expectant mothers, adolescent girls etc.

- **Mission 25 by 2022:** Mission also strives to achieve reduction in Stunting from 38.4% (NFHS-4) to 25% by 2022.

More than 10 crore people will be benefitted by this programme. All the States and districts will be covered in a phased manner i.e. 315 districts in 2017-18, 235 districts in 2018-19 and remaining districts in 2019-20.

Features

- **Robust Convergence Action**: Under-nutrition being a multifaceted challenge includes food, medicines, sanitation etc. NNM, as an apex body, will monitor, supervise, fix targets and guide the nutrition related interventions across the Ministries.

- **Synergy**: NNM through robust convergence mechanism and other components would strive to create the synergy among various schemes including National Food Security Act, Mid-Day Meals, ICDS, Swachh Bharat, National Rural Drinking Water Programme, Mission Indradhanush, Deworming Initiative, MAA National breastfeeding pogramme, Beti Bachao Beti Padao etc which directly or indirectly affect the nutritional status of children (0-6 years age) and pregnant women and lactating mothers.

- **Continuous Real-time Monitoring** through the use of ICT.

- **Complimentary Feeding**: Special emphasis has been given to complimentary feeding which includes supplementary feeding practices to stop breast feeding after 6 months from birth.

Please refer Sec 1.1 (National Nutrition Week) in CA- Part 5 (Sept) 2017 for detailed coverage on Hunger and Nutrition in India.

1.4. <u>The Delhi End TB Summit : TB-free India</u>

In a landmark event 'The Delhi End TB Summit', India has launched TB Free India Campaign. India has committed to **eliminate Tuberculosis by 2025** which is ahead of the world target set under Sustainable Development Goal Framework which is 2030.

About The Disease

- TB is an airborne bacterial disease caused by the slow growing bacteria bacillus Mycobacterium tuberculosis.
- They grow best in areas of the body that has high amount of oxygen and blood. Therefore it is called pulmonary TB. So, it typically affects the lungs (pulmonary TB) which is 80% of the TB incidence but can also affect other sites (extra-pulmonary TB) like brain, uterus, stomach, mouth, kidneys and bones which is rest 20%.
- People with pulmonary TB can spread the disease when they cough, sneeze or spit.
- The probability of developing TB is much higher among people with weak immunity such as those infected with HIV, under-nutrition, diabetes, and also among people who smoke (weak lungs) and take alcohol.
- Further, the dark and damp environments are more prone to infection where the bacteria thrive better.
- Symptoms: Mild fever, Cough, night sweats, weight loss. These conditions are mild for three weeks.

Prevention and Treatment

- Popular prevention and diagnostic measures for TB currently include Bacille Calmette-Guérin (BCG) vaccine (only for children), Rapid Molecular Tests recommended by WHO, Sputum Smear Microscopy to determine the presence of bacteria. Note that there is currently no vaccine that is effective in preventing TB disease in adults.
- Globally, use of Rapid Molecular Tests is increasing as it has much better accuracy than sputum smear microscopy. So, many countries are phasing out the use of smear microscopy for diagnostic purposes.
- Bedaquiline and Delaminid, the new-generation drugs, are recommended by WHO for DR-TB patients. Health Ministry has only 10,000 doses of Bedaquiline and 400 doses of Delaminid.
- DOTS strategy (Directly observed Treatment Short Course) is globally a recognized cost effective strategy to reduce the disease burden of TB. DOTS strategy includes Sustained political and financial commitment, early diagnosis through sputum-smear microscopy, standardized short-course anti-TB treatment to ensure the right drugs are taken at the right time for the full duration of treatment, regular and uninterrupted supply of high quality anti-TB drugs.

TB Incidence Across The Globe

- TB is the ninth leading cause of death worldwide and the leading cause from a single infectious agent, ranking above HIV/AIDS. Every 10th death in the world occurs due to TB.

- According to WHO's Global TB Report 2017, there were 10.4 million cases worldwide in 2016. India, Indonesia, China, Philippines, Pakistan, Nigeria and South Africa accounted for 64% of the total TB incidence across the world.

- Of the new TB cases identified last year, 45% were in Southeast Asia, 25% in African countries, 17% in Western Pacific, 7% in East Mediterranean.

- In poor and developing countries, the rate of death due to TB is 300 per lakh population. In developed countries, it is 10 per lakh population.

- India tops the list of 20 TB high burden countries. According to WHO report, out of the 10.4 Million global TB incidences, 2.8 Million (about 27%) occurred in India in 2016 killing almost 4.2 lakh Indians. The number of deaths per lakh population due to TB is 217 in India.

- For the period 2016–2035, WHO's End TB Strategy and the United Nations' (UN) Sustainable Development Goals (SDGs) share a common aim, i.e., to end the global TB epidemic.

- Specific targets set in the End TB Strategy include a 90% reduction in TB deaths and an 80% reduction in TB incidence (new cases per year) by 2030, compared with 2015.

- thrice weekly to *daily drug regimen using fixed dose combinations (FDC)* for treatment.

Reasons For Prevalence And Persistence of TB

- Delay in detection and treatment due to lack of latest equipments.

- Inadequate surveillance.

- Poor notification.

- Absence of co-ordination with the private sector.

- Poverty is the major cause for TB incidence as poor population is more prone to infections.

- Under National TB control programme, only 1/3rd of the patients have been reported to have completed the treatment because of long duration of the treatment. Because of incomplete treatment, the bacteria have developed Multi-Drug Resistance and Extreme-Drug Resistance to first-line and second-line drugs even to the two most powerful anti-TB drugs used in the treatment, Isoniazid and Rifampicin.

- Advanced patented medicines used to treat Drug Resistant Tuberculosis (DR-TB) are available to only about 1,000 patients out of the tens of thousands who need it.

- Due to non-existence of voluntary license or compulsory license, the innovator-manufacturers are not ready to licence Indian drug-makers who can sell them at affordable prices.

A Look At India's Efforts To Eradicate TB

- We have an ongoing National TB control programme since 1962 which has not performed upto the mark. *Revised National TB control Programme (RNTCP)* was adopted in 1997 after WHO declared TB as the global epidemic in 1993. RNTCP adopted the DOTS strategy. About 4 lakh DOTS centres have been established so far. RNTCP was extended to the entire country in 2006.

- The government made three significant important policy decisions to improve disease surveillance: Making TB a *notifiable disease* (May 2012); including *anti-TB drugs under Schedule-H1* (August 2013); and developing a *case-based, web-based TB surveillance system*.

- The Health Ministry has been providing the thrice weekly regimen for the treatment of tuberculosis (TB). However, it has now decided to change the treatment strategy for TB patients from thrice weekly to daily drug regimen using **fixed dose combinations (FDC)** for treatment.

Multi-Pronged Approach At The 'Delhi End TB' Summit

- India has adopted a National Strategic Plan for TB Elimination based on TB Elimination Strategy of WHO and SDG of UN under which Rs.12000Cr will be spent over the next three years.

- As it is clear the major problem with treating TB is its long duration of treatment. The government has started daily regimen of fixed dose combination of drugs (3 drugs in 1 pill) at free of cost with continuous monitoring.

- Efforts to partner with private sector have been stepped up. Incentives are given in the recent budget for notification of the disease to private medical practitioner.

- 'Medicine till end' and 'nutrition till end' strategy. In the recent budget, the government has announced Rs.500 per month as nutrition support for every TB patient who visits the DOTS centres.

- Access to Bedaquine has been expanded. As a way forward, compulsory licensing of Bedaquine and Delaminid should be done in order to give access to these new-generation medicines to common man at affordable price.

1.5. SC Upholds Passive Euthanasia

In a landmark decision, the Supreme Court has upheld the phenomenon of passive euthanasia together with allowing the right of every individual to draft a 'Living will' that gives her/him the right of self-determination with regards to medical treatment in case of terminal illness or permanent vegetative state.

Passive Euthanasia
- Passive euthanasia is the act of withdrawing or withholding medical support to a dying patient with a terminal illness with no hope for revival or cure. Active euthanasia, on the other hand is defined as the intentional act of causing the death of a patient.
- As per Supreme Court ruling, the hospital should constitute a medical board with experts to examine if the case is fit for passive euthanasia. The opinion of the medical board is then considered by another medical board constituted by the district collector whose decision is final. In case of denial, the family can approach the high court under article 226. Therefore, as a safeguard, the decision gives precedence to medical opinion to test the fitness of the patient to passive euthanasia.

Living Will And Guidelines

Living will, also called as *advanced medical directive*, is a will drafted by an individual determining if a medical treatment should be continued or not in case he is suffering from a terminal illness.

With the growing advances in medical science in recent times, medical ethics and patient rights should also evolve commemoratively. The idea of 'living will' is a step in that direction which allows a person to decide a dignified procedure of death in case of permanent vegetative state or a state of terminal illness. According to the unanimous decision of the 5-judge bench, right to die with dignity is an integral part of Article 21 of the constitution that guarantees right to dignified life.

Following are the guidelines on content of the living will with safeguards that the Court has specified:

- It has to be executed by the person himself who is the subject of the treatment.

- It should specify circumstances under which it can be enforced.

- Who shall decide in case the person himself is not in a position to decide. This person is called 'next friend',

- Specifies the number of witnesses.

In nutshell, decision is to be taken by the patient about execution of living will or if he is not in a position to do so, a person identified as 'next friend' should do what is specified in the living will.

Criticism

- The caregiver may get fed up and frustrated, and may make the patient feel that he or she has become a burden and should not live anymore forcing the person to execute the living will.

- There is a belief that right of life is in the hands of God. It was not acceptable for anyone who believes in humanity to kill a person suffering from old age or sickness due to sympathy.

Way Forward

- The **Medical Treatment Of Terminal Illness Bill 2016** needs a revisit in accordance with the principles followed under these guidelines of the Court.

- Strict guideline should be laid down within the ambit of the law in order to prevent the misuse of living will.

- The landmark decision sets a good precedent for cases like '**Santhara' (**a Jain ritual of fasting unto death) that is still pending in the Court.

- Countries like Belgium, Australia, and Switzerland have progressive laws on euthanasia. Recently active euthanasia was allowed in a specific case in Belgium. With rapid advances in medical sciences landscape, the landmark ruling will trigger a debate on **medical ethics and patient autonomy** in India.

1.6. World Happiness Report 2018: India Slips To 133rd Position

- India ranked 133rd, far behind terror-ravaged Pakistan which stood at 75 and poorest-of-poor Nepal (at 101) in the list. It was behind the majority of SAARC nations, except the war-ravaged Afghanistan, which stood at 145. Bhutan has been placed at 97th rank. While Bangladesh and Sri Lanka are at 115 and 116 positions, respectively, China stands at 86.

- Myanmar, which is embroiled in the ethnic violence between the majority Buddhists and the minority Rohingya Muslims has been placed at 130th position.

- India witnessed a drop of 11 places from last year's 122nd rank in the World Happiness Report published by *Sustainable Development Solutions Network for the United Nations*. India has been consistently falling in the happiness index since 2014. In 2015, India was ranked 117 out of 158 nations.

- Finland topped the list with Norway taking the second place. Top 10 countries are: Finland, Norway, Denmark, Iceland, Switzerland, Netherlands, Canada, New Zealand, Sweden and Australia.

- The special focus of this year's report was well-being of the immigrants.

- The report ranks countries on *six key variables* that support well-being: income, freedom, trust, healthy life expectancy, social support and generosity.

Why Happiness Eludes India

- **People living in more equal societies are happier** - Glaring disparity in the purchasing power of the population has long haunted India, where still nearly one-fourth of the population is lives below the poverty line.

- According to a 2016 World Bank report titled 'Taking on inequality', India has the most number of people – about 224 million – in the world living below the international poverty line of $1.90.

- While economics are not the only indicator of happiness – it is almost a necessary factor and it demands greater equity in India. Not to mention that along with poverty, comes malnutrition and abysmal public health for a huge section of the population.

- **Shortfall in public infrastructure for education** - Opportunities for development and acquiring knowledge and skills for gainful employment is at the heart of happiness. According to a report, access to education beyond higher secondary schooling is a restricted to a mere 10 per cent among the university-age population in India.

- The disparity exists across genders, socio-economic religious groups and geographical regions. Furthermore, public Indian institutions providing quality higher education are even fewer and necessitate fierce competition among scores of contenders, inducing undue amounts of stress on young students.
- This, combined with social perception of success and pressure to be a certain way, keeps a majority of young individuals from reaching a place of satisfaction and stability.
- **Safety and security of women's bodies:** who literally forming almost 50 per cent of society — is still an unyielding major issue, in direct contradiction of social trust – a key factor to societal happiness.
- **Perception of personal liberties:** Substituting peaceful discourse of ideas with violence is bound to have poor ramifications of societal peace and inclusivity in a diverse society with several fault lines. Personal liberties of various kinds have literally received blows without resulting in punity.
- **Mental Health:** Mental health care continues to be grossly underfunded. While India has made significant strides in the health sector (such as controlling infant mortality, greater longevity, small pox and polio elimination) since independence, mental health is not a part of it.
- The current shortage of mental health care professionals combined with the invariable stigma attached to mental health issues is a quietly brewing crisis.
- **Corruption** – Widespread corruption in public institution is also responsible for India's poor ranking in the report.

About The Report

- The World Happiness Report is an annual publication of the United Nations Sustainable Development Solutions Network.
- The tiny country of Bhutan brought attention to happiness as a metric for its people. Its prime minister proposed a World Happiness Day to the United Nations in 2011, which created an international focus on happiness.
- One year later, the U.N. General Assembly declared March 20 as World Happiness Day, recognizing "the relevance of happiness and well-being as universal goals and aspirations in the lives of human beings around the world and the importance of their recognition in public policy objectives."
- This report is the sixth to come out since 2012.

1.7. YesIBleed

Minister of Women and Child Development announced the national campaign on menstrual hygiene called YesIBleed. There are about **355 million menstruating women and girls** in India. However, there is lack of comfortable and dignified experience with menstrual health.

Reasons For Poor Menstrual Health

- **Lack Of Education On Puberty And Menstrual Health:** According to UN data, 66% of Indian girls are unaware of menstruation before their first period.

- **Lack of Access to Sanitation Facilities:** About 63 million adolescent girls live in homes without toilets. Despite national efforts to improve sanitation, women and girls lack appropriate facilities and community support to manage their menstruation privately and in a safe manner.

- **Lack of Access to High-quality Menstrual Hygiene Management (MHM) Products:** Almost 88% of women and girls in India use homemade alternatives, such as an old cloth, rags, hay, sand, or ash. According to NFHS 4, 62% of young women in India are still using cloth which leaves them vulnerable to health issues such as urinary and reproductive tract infections.

- **Solutions Often Remain Siloed:** Rashtriya Kishori Swasthya Karyakram (RKSK), SABLA, SSA consider MHM awareness as a component of improving outcomes such as adolescent health, life-skill, or education. However, the current emphasis on MHM is small.

- **Lack Of Convergence And Coordination**: For example, RKSK and SABLA both prioritize creating awareness about MHM among adolescent girls; however, there is limited clarity on how a counselor under RKSK's Adolescent Friendly Health Clinics and an Anganwadi worker supported by SABLA may complement each other's efforts.

- **Limited Human Resource Capacity:** Although MHM programs leverage health workers (e.g., ASHAs, counselors) and teachers to provide MHM education, their comfort is less in discussing sensitive topics, particularly when talking to boys.

- **Market Barriers:** The MHM Guidelines recommend increasing access to MHM products by outsourcing production and distribution of pads to self-help-groups. However, despite efforts to leverage SHGs, they have struggled to create awareness of sanitary pads and serve as a high volume platform for manufacturing pads.

Impact Of Poor Menstrual Health

- Restricted mobility, lack of agency, lack of dignity hinders their empowerment.

- Absenteeism in school due to physical discomfort, lack of facilities at school and fear of staining clothes.

- Absenteeism at work.

- Environmental hazard due to improper disposal.

Policies To Improve Menstrual Health In India

- The Rashtriya Kishori Swasthya Karyakram *(RKSK),* launched in January 2014 enables access to MHM information, support, and products through Adolescent Friendly Health Clinics and counselors.

- The Swach Bharat Mission *(SBM),* prioritizes sanitation infrastructure (e.g., individual and community toilets, solid waste management) and awareness programs for behavioral change.

- The *SABLA* program (2011), has a component of awareness about MHM to adolescent girls through Anganwadi Centers.

- In December 2015, the Ministry of Drinking Water and Sanitation released the National Guidelines for Menstrual Hygiene Management with support from UNICEF India, elevating the urgency for an integrated approach to improved MHM for adolescent girls and women in India

- Under *WASH* (water, sanitation and hygiene) a number of NGOs are developing curriculum and partnering with schools to deliver awareness programs.

What More Could Be Done: Way Forward

- Menstrual health should not only be treated as a public health issue but with a human right approach ensuring access to a safe, clean and private space to every menstruating girl and woman.

- Build on the existing momentum through public-private partnership to ensure a viable model for MHM products delivery.

- A multi-sectoral response involving water, sanitation, urban planning, education, health, and the social sector can ensure that appropriate evidence-based, and cost-effective interventions and policy are developed and implemented for the benefit of girls and women.

- #YesIBleed campaign is a good step to raise awareness and ensure that every girl and woman gains the requisite knowledge on menstrual management and has greater access to hygiene products at affordable prices.

1.8. <u>Death Penalty For Child Rapists</u>

In the recent past Madhya Pradesh, Rajasthan, Haryana, Karnataka etc. are all in the process of drawing up a law that awards capital punishment to those convicted of raping girls below the age of 12.

Laws Against Child Sex Abuse in India

Until 2012

Sexual offences in general were covered by three sections of the Indian Penal Code (IPC):

- Section 376: sexual intercourse without consent.
- Section 354: Outraging modesty of a woman rape
- Section 377: Unnatural acts defined as "carnal intercourse against the order of nature with any man, woman or animal" (anal sex, homosexuality or bestiality)

Observation

- It should be noted that the above-mentioned provisions are not specific to children.
- Other forms of non-penetrative sexual assaults, harassment and exploitation for pornography were not explicitly recognised as crimes.

Post-2012

Protection of Children from Sexual Offences (POCSO) Act

- POCSO Act classifies child abuse into sexual harassment, sexual assault, and aggravated sexual assault.
- Punishment for sexual harassment is imprisonment of up to three years, five years' imprisonment for sexual assault and 10 years to life imprisonment for aggravated sexual assault.
- POCSO covered wide ranging behaviours as sexual harassment including sexting, cyber bullying, stalking etc.

Observation

- POCSO 2012 has made a substantial contribution in educating the public, sensitizing the criminal justice system, and making the reporting of Child sex abuse mandatory.
- Following the enactment of POCSO, the number of offences registered under rape itself went up by 44 %.

Why Are States Adopting Capital Punishment For Child Rape

The recent triggers that led to states adopting resolutions seeking death penalty are:

- Significant rise in the number of child rapes post 2001. According to NCRB, out of the total recorded 38,947 rape cases, 19,765 cases were child rape in 2016. About 8,000 of the victims were children below the age of 12. A PIL was filed in the Supreme Court seeking capital punishment in the aftermath of the incident of rape of an eight-month-old in Delhi.
- Child rape is considered more heinous than the rape of a woman. The trauma the child undergoes throughout the life cycle hindering its healthy development is considered more severe.

- Further the legislators of the State are of the opinion that death penalty will act as a strong deterrence against child rape.
- It is a step towards having retributive justice in addition to reformative justice guaranteed by POCSO Act.

Arguments Against Death Penalty

- India is a signatory to Convention for abolishment of death penalty under *International Covenant on Civil and Political Rights.*
- Supreme Court has held that death sentence can be awarded only in **"rarest of the rare cases"**.
- In 2015, a **Law Commission report** had recommended that the death penalty be abolished gradually except in terror-related cases.
- The *Criminal Law Amendment of 2013*, post Justice Verma committee recommendations, introduced death penalty as a punishment for rape that caused vegetative state or death. However, studies have shown that **death penalty is no deterrence** to rape.
- **Capital punishment endangers child rape survivors** as the accused will kill the victims to destroy the evidence.
- Death penalty requires the highest level of *proof and rigorous trials*. Therefore, child victims are subjected to severe trauma to testify the crime.
- Therefore, death penalty is not to be used as a rule but as an exception.

1.9. First Indian 'Sign Language Dictionary' of 3000 Words Launched

India's first-of-its-kind dictionary aims to bring uniformity in sign languages used by hearing and speech impaired people across the nation.

Highlights

- The Indian Sign Language (ISL) dictionary has been developed by the Indian Sign Language Research and Training Centre (ISLRTC).
- It consists of 3,000 Hindi and English words and their corresponding graphic representation of the signs which are used in daily life.
- The basic aim of developing the ISL Dictionary is to remove communication barriers between the deaf and hearing impaired communities as it is focused on providing more information in Indian sign language. As per the census 2011, there are 50,71,007 deaf and 19,98,535 people with speech disability in India.
- The dictionary also includes regional variations.
- The dictionary is available both in print and video format.
- The words in the dictionary are divided into five categories — Everyday, Legal, Academic, Medical, and Technical terms.
  - o Everyday terms category includes words that are used in everyday communication.
  - o The legal category includes videos for 237 legal terms and explains legal words like "affidavit", "acquittal", etc., that are used in various legal situations.

- o Academic terms help deaf children understand complex academic concepts and contain explanations for terms like "nervous system", "rotation" and "revolution", etc. The words are from various subjects like Physics, Geography, Biology, and Maths, among others.

1.10. Karnataka Clears Minority Religion Tag For Lingayats

The Karnataka government approved the recommendation of **Nagmohan Das Committee** to accord separate religious minority status for the dominant Lingayat community. In August 2017, through a massive rally in Bidar, Karnataka the Lingayats demanded a minority status for their community similar to Sikhism or Buddhism as they believe they are distinct from Hindu religion.

Who Are Lingayats

- Lingayats are the followers of **Basavanna**, a 12th century socio-religious reformer who rejected discrimination based on Caste and Gender.

- Sharanas were the original followers of Basavanna's teachings. Sharanas rejected the Vedas, Shastras, Smritis and Upanishads.

- They denounced temples and idol-worship. They rejected the phallic linga symbol and opted for ishtalinga which signifies inner conscience.

Timeline

- In their bid for a separate religion status, the Lingayats wanted to dissociate themselves from Veerashaaivas. Veerashaivas belong to the order of Shaiva faith. They accept Vedic texts, caste and gender discrimination.

- The movement for a separate religion tag, which was started as far back as 1942, was resurrected in 2017. In December 2017, a seven-member expert committee under Nagmohan Das was formed to study five separate demands, three of which were for a separate minority religion status for Lingayats.

- In January 2018, the committee recommended 'religious minority tag' for Lingayats. It concluded that Lingayat religion is different from Hindu religion.

- In addition the Veerashaivas - another sect looking to get religious minority status, too can be part of the larger umbrella of 'Lingayat religion'.

17% Estimated Veerashaiva-Lingayat population in state. Veerashaivas make up about 3%, it's believed

LINGAYAT	VEERASHAIVA
Different from Hindu religion. Worship one god. Oppose Vedic rituals like Homa. No caste system. Do not believe in rebirth. Started by Basavanna	Part of Hindu religion. Worship mainly Shiva. Believe in rebirth. Most of the sects of Veerashaivas' follow Basavanna's philosophy

WHAT IS THE DECISION?
Siddaramaiah cabinet has approved State Minorities Commission recommendation to accord separate religious minority status for Lingayat community

WHAT IT MEANS
No change in quota till Union government gives its nod. Currently 42 sub-castes of Veerashaiva-Lingayat community enjoy 5% under BC quota. For now, this will continue. Among the minorities, Muslims have 4% reservation under BC category

- A number of petitions were filed before the Karnataka High Court challenging the formation of the panel.

- Now, the Karnataka government approved the recommendation of Nagmohan Das Committee to accord separate religious minority status for the dominant Lingayat community by incorporating even Veerashaiva-Lingayats who believe in the Basava philosophy under the ambit of Lingayats.

This is in accordance with Sec 2(d) of the Karnataka Minority Commission Act and forwards therecommendation to the Centre to accept it under Section 2(c) of the National Minorities Commission Act.

A Note On Minorities In India
• The Constitution of India does not define the word 'minority'. However, Articles 29 and 30 of the constitution of India stand guarantee to the interest and protection of minorities in India.
• Article 29 states "Any Section of the citizens residing in the territory of India or any part thereof, having a distinct language, script or culture of its own, shall have the right to conserve the same".
• Article 30 provides for the right of the minorities" based on religion or language, to establish and administer educational institutions of their choice".
• By combining these two articles together, it can be inferred that the Indian constitution safeguards the interests of three different categories of minorities, based on language, religion and culture.
• The communities notified as minority communities by the Government of India, are Sikhs, Muslims, Christians, Zoroastrians, Buddhists, and Jains.

1.11. Union Cabinet Clears The Surrogacy (Regulation) Bill 2016

The Union cabinet has cleared the deck for Surrogacy (Regulation) Bill 2016 that seeks to regulate altruistic surrogacy in India and putting blanket ban on commercial surrogacy. Surrogacy is a practice where a woman gives birth to a child for an eligible couple and agrees to hand over the child after the birth to them.

Surrogacy is the process of carrying and delivering of the child of another. Surrogacy is of *two types*:
1. **Gestational surrogacy**, where the woman (the genetic mother) provides the egg, which is fertilized, and another woman (the surrogate mother) carries the foetus and gives birth to the child.
2. **Traditional surrogacy**, where the woman provides her own egg, which is fertilized by artificial insemination, and carries the foetus and gives birth to a child for another person.

Context

- Today, India is a major destination for surrogacy due to absence of strict regulations and the relatively low cost. "Wombs for rent", "outsourcing pregnancies", "baby farms" is some of the negative terms used to describe the practice.

- Commercial surrogacy has been legal in India since 2002 as a result of which India has emerged as a surrogacy hub of the world. As per the 2009 Law Commission Report, surrogacy is a Rs. 25,000 crore industry.

- Growing number of unethical practices, exploitation of surrogate mothers, and abandonment of children born out of surrogacy has led to the government attempting to regulate surrogacy in India.

- The bill is cleared by the cabinet considering the recommendations of a Parliamentary Standing Committee which was constituted in 2017 for the purpose.

- Altruistic surrogacy involves a surrogacy arrangement where the monetary reward only involves medical expenses and insurance coverage for the surrogate mother. The bill covers 18-month care expenses and insurance cover for the surrogate mother.

- Commercial surrogacy includes a monetary benefit or reward (in cash or kind) that exceeds basic medical expenses and insurance for the surrogate mother. The bill puts a blanket ban on Commercial surrogacy in India.

Objective

- The major objectives of the Bill are to regulate surrogacy services in the country, to provide altruistic ethical surrogacy to the needy infertile Indian couples and to prohibit commercial surrogacy including sale and purchase of human embryo and gametes thereby preventing commercialization of surrogacy and consequent exploitation of surrogate mothers in India.
- The bill also provides for constitution of The National Surrogacy Board and State Surrogacy board which shall be the Policy making bodies.

The detailed provisions of the bill are yet to be out in the open.

1.12.   Cabinet Approves Enhancing The Coverage Of PMRPY

Highlights

- The Cabinet Committee on Economic Affairs has given its approval for enhancing the coverage of Pradhan Mantri Rojgar Protsahan Yojana (PMRPY).
- Accordingly, the Government will contribute the employer's full admissible contribution for the first three years from the date of registration of the new employee for all the sectors including existing beneficiaries for their remaining period of three years.
- Until now the government has been paying 8.33% contribution of Employers to the Employees' Pension Scheme (EPS)

Background

- India has a huge potential for a demographic dividend. However, there are challenges which need to be addressed to reap this dividend.
- In the last decade, the growth of economy at an annual rate of 7 to 8% was accompanied by a low growth in jobs.
- The proportion of persons in the labour force declined from 43% in 2004-05 to 39.5% in 2011-12, with a sharp drop in female participation rate from 29% to 21.9%.
- As per the Sixth Economic Census (2013), around 58.5 million establishments were in operation. About 77.6% establishments (45.36 million) were engaged in non-agricultural activities. These establishments employ around 131.29 million persons. Thus, there is a significant potential for employment in these establishments.
- Therefore, in order to incentivize creation of new jobs in the formal sector, PMRPY was introduced in 2016.
- To incentivize the employers to recruit unemployed persons, Government is paying the 8.33% contribution of Employers to the Employees' Pension Scheme (EPS) in respect of new employees (who have joined on or after 1st April 2016) having a new Universal Account Number (UAN).
- To channelize this intervention towards the target group of semi-skilled and unskilled workers, the scheme will be applicable to those with salary up to Rs 15,000 per month
- The scheme has a dual benefit i.e. on the one hand the employers are incentivized for increasing the employment base of workers in the establishments, and on the other hand a large number of workers will find jobs in such establishments.
- A direct benefit is that these workers will have access to social security benefits of the organized sector.

- Till now, the scheme has added about 31 Lakhs beneficiaries to the formal employment involving an expenditure of more than Rs. 500 crore.

1.13. National Annual Rural Sanitation Survey (NARSS) 2017-18

NARSS was conducted by a third-party agency, Kantar Public, to check the progress in sanitation outcomes, including the open defecation free (ODF) status under Swacch Bharat Abhiyan.

Highlights Of The Survey

- This survey was done 3 ½ years after the launch of the Swacch Bharat Abhiyan.
- World Bank, in order to disburse its $1.5 billion loan, requires a third party to conduct a survey on the outcomes of Swacch Bharat Abhiyan- Gramin.
- 68 % of rural households in India do not practise open defecation.
- Kerala and Mizoram are the best performing States, with 100% of open defecation free households.
- Uttar Pradesh and Bihar are at the bottom of the rankings, with less than 44% ODF households.
- Further 77% of all rural households now have access to toilets, and that 93.4% of those who had access to toilets used them regularly.

> **Important Definitions:**
> - A household is considered as practising open defecation when all the members of that household use the toilet 100% of the time.
> - For communities, ODF status is defined by "no visible faeces found in the environment/village; and every household as well as public/community institutions using a safe technology option for disposal of faeces."
> - Access to toilets is defined as "households having access to a toilet that they own or having access to a shared toilet which can be used by multiple families or have access to a community toilet."

1.14. E-Tribes: Tribes India

Ministry for Tribal Affairs launched 'e-Tribes: Tribes India', e-commerce portal, and M-commerce, android app 'Tribes India', a window for national and international market for tribal artisans.

Key Features

- **Need for Digital Platform**: Nearly 55,000 tribal people are connected with TRIFED. With this digital platform, they can associate not only with local people but also can get access to international markets. TRIFED is located only in New Delhi. With digital platform now, the entire nation can get access to the products.
- **Apps and Portal:** Along with the portal https://www.tribesindia.com, central has launched an App on Android platform as well. As of now no other platforms have this app. This app will be similar to Amazon, Flipkart and so on.
- **Other e-commerce portals:** Along with the official website for TRIFED, the products are also available in other e-commerce websites such as Flipkart, Amazon, Snapdeal and so on. These products will also be available in their own app.
- **Target:** According to the Central Ministry, within 2018-19, the organization has set a target of Rs. 100 Cr.

- **Inventory Software:** TRIFED has also developed software that will help the authority to record sales and inventory digitally.

1.15. <u>Supreme Court Guidelines on SC/ST (Prevention of Atrocities) Act 1989</u>

Violence erupted in several parts of the country in the aftermath of recent Supreme Court ruling on the Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act 1989.

Key Observations of Court

- **Against Automatic Arrest:** The Apex court ruled against automatic arrest of the accused under the SC/ST (Prevention of Atrocities) Act. Once a complaint is registered under SC/ST Act, a preliminary enquiry should be completed within seven days, pending which it is not mandatory to arrest the accused.
- **Arrest Only With The Approval Of The Appointing Authority:** If accused is a public servant, it is mandatory for the police to seek approval of the appointing authority for the arrest of the person.
- **Approval of SSP**: If the accused is not a government official, permission from SSP (senior superintendent of police) is mandatory for making the arrest.
- **Anticipatory Bail:** The Supreme Court further allowed anticipatory bail in cases registered under the SC/ST Act which was not permissible under section 18 of the Act until now.

Why Did The Apex Court Come Out With The Ruling

- According to the apex Court, there has been rampant misuse of the act. This is hinted by the low conviction rates with respect to cases registered under the act.
- According to NCRB data the conviction rates under the act has reduced drastically from 35% in 2010 to 28% in 2015.
- The Supreme Court referred to NCRB data of 2015 which said that of all the cases registered under SC/ST Act, 15-16 % matters were closed after preliminary enquiry due to lack of evidence to proceed further.
- In around 75 % of the cases that reached the courts, the accused were either acquitted for lack of evidence or cases were withdrawn or dismissed.
- The court also pointed out that the law has often been misused to blackmail innocent public servants and private individuals to wreak personal vengeance or serve vested interests.

Timeline
- The genesis of the Supreme Court ruling lay in a case filed by Bhaskar Karbhari Gaikwad, the storekeeper at the Government College of Pharmacy, Maharashtra. The case related to remarks made in the ACR (Annual Confidential Report) which mentioned that he was inefficient in work and his conduct was not proper.
- Gaikwad lodged a case in 2006 against the seniors who belonged to upper castes under the SC/ST Act charging them of making the comments because of his caste and not performance at work.
- Ten years later, Gaikwad lodged another FIR naming some other officials including Dr Subhash Kashinath Mahajan, Maharashtra Director of Technical Education, who apparently did not take action on his first complaint.
- The Director Of Technical Education approached Bombay High Court seeking quashing of the complaint against him in matter related to adverse entry in the ACR of Gaikwad.
- The Bombay High Court quashed the plea following which Mahajan approached the Supreme Court,

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which gave its ruling on March 20 this year.

Criticism Of The Ruling

- The Court has cited the reason of misuse of law in order to introduce the guidelines. But, it is a well-known fact that laws related to dowry laws, rape cases etc are also misused. To dilute an act citing the *reason of misuse* can have a chilling effect on already underreported crimes against dalits.

Recent Incidents:
- March 2018: Dalit youth killed following riding a horse.
- Jan 2018: Clashes in the aftermath of 200th anniversary of Bhima-Koregaon celebrations.
- 2017: Dalit man and his mother trashed for skinning a dead cow in Gujarat

- The argument of Apex Court for introducing safeguards against the act as mentioned above is *low conviction rates*. But this could be because of gaps in the criminal justice system, apathy of the police machinery towards the SC/ST community, loose ends in the process from the time FIR is filed till the trial.

- There is a need for stringent law because the crimes against dalits is on the rise. According to NCRB data, crimes against dalits rose from 38670 in 2015 to 40801 in 2016. Though there is evidence for breakdown of traditional caste structures, Dalit position has not improved in terms of economic resources, education, health and other human development indicators. New inequalities overlap with old caste structures. This is evident in the fact that dalits continue to work in precarious jobs like manual scavenging etc.

- The judgment is considered as a classic case of *judicial overreach* by the critics. While judiciary is the guardian of the rights of the citizens in general and weaker sections in particular, it cannot usurp the power of parliament to make laws.

- The government officials who had been named in the FIR had argued that if cases were allowed to be registered on the basis of the remarks made in the ACR under the SC/ST Act, it would become impossible for them to appropriately appraise subordinate staff belonging to the community.

Way Forward

The government in response to the Court's judgment has filed a review petition seeking a review of the judgment.

- The criminal justice system should be revamped to ensure accurate investigation, effective trial and speedy disposal of the cases.

- Parliament can look into the matter of low conviction rates and reasons thereof and through effective deliberation may provide for adequate safeguard in the law itself to prevent its misuse.

- Attitudinal shift in the society is a necessity to prevent discrimination against members of SC/ST.

The SC/ST (Prevention of Atrocities) Act of 1989

- *Article 17* of the constitution abolishes the practice of untouchability. To give teeth to this Article 17, The *Untouchability Offences Act of 1955* (renamed to *Protection of Civil Rights Act* in 1976) was enacted providing protection for SC/ST community.

- With its stated goal of eradication of untouchability as a social evil, this act focused on removal of disabilities rather than the punishment of atrocities

- The Government attempted to fill this gap by enacting the The Scheduled Caste and Scheduled Tribes (Prevention of Atrocities) Act in 1989.

Key Features

The Scheduled Caste and Scheduled Tribes (Prevention of Atrocities) Act was passed in order to prevent atrocities against SC/STs and help in social inclusion of Dalits into the society. The key provisions of the act include:

- Punishment for offences of atrocities committed against Scheduled Castes and Scheduled Tribes. Section 3 of the act lists punishable offenses under the act which include
    - forcing a member of the SC/ST to drink or eat inedible or obnoxious substance.
    - acts intended to cause injury, insult or annoyance to an SC/ST member.
    - Forcibly removing clothes or parading them naked
    - Wrongful occupation on land owned or allotted to them
    - Coercing them into forced labour
    - Forcing them to vote in favour of a particular candidate
    - Assault or use of force against them
    - Denying them access to public places
    - Forcing them to leave his house, village or other place of residence.
- As per the act offenses are punishable with imprisonment from six months to five years.
- Provides for special courts for speedy trials and relief of rehabilitation of victims.
- Section 18 of the act prohibited the grant of anticipatory bail to the accused.
- As per Section 4 of the act, a public servant wilfully neglecting his duties required to be performed by him under this Act, shall be punishable with imprisonment for a term from 6 months to 1 year.
- Investigation under the act is carried out by Deputy superintendent of police level officer.

Amendment In 2015

- The SC/ST Act 1989 was amended in 2015 to make it more stringent.
- It expanded the definition of offences under the act.
- Acts like tonsuring of head, moustache or any other act by dominant castes to challenge the dignity of people belonging to SC/ST communities were made offence.
- Addition of IPC offences attracting less than 10 years of imprisonment like hurt, grievous hurt, intimidation, kidnapping etc.
- Establishment of Exclusive Special Courts and specification of Exclusive Special Public Prosecutors to exclusively try the offences under the PoA Act to enable speedy and expeditious disposal of cases.
- Completion of trial of the case within two months, from the date of filing of the charge sheet.

1.16. Atal Innovation Mission Ties Up With SAP To Foster Innovation

SAP India has tied up with NITI Aayog's Atal Innovation Mission (AIM) to set up 100 Atal Tinkering Laboratories to promote science, technology, engineering and mathematics (STEM) education among secondary school children across India.

Highlights

- **Digital Education**: SAP employee volunteers will coach and mentor students in advanced technology topics to digital transformation and the Internet of Things, e.g. Design Thinking methodology, introduction to programming languages and experiential science learning.

- **Hands-On-Experience**: The design lab of SAP Labs India will provide trainings and allow students to gain hands-on experience with technology gadgets.

- **Teacher Training**: SAP will also work closely with Atal Innovation Mission to also train teachers and design new technology courses and projects.

- **CSR Contribution**: SAP will also provide CSR grants through non-profit partners to Atal Tinkering Laboratories.

Impact

- The support to Atal Incubators will catalyze adoption of the innovations to commercial scales.

- The public-private partnership shall help support and boost innovations from the ATLs.

- India's growth for the next few decades will depend on the innovations coming out of these tinkering labs.

- It is expected to train students who will disrupt industries with new technologies that will thrust India into the leadership position for technological creativity and innovation.

> **Atal Innovation Mission**
> - The Atal Innovation Mission (AIM) is mandated to create an umbrella structure to oversee innovation ecosystem of the country.
> - AIM has already announced selection of 2441 schools across India to establish Atal Tinkering Labs.
> - In the last one year, more than 50,000+ school students have been engaged in Atal Tinkering Labs.
> - The goal is to establish over 30,000 ATLs over next three years.
> - Support to 21 Established Incubation Centres.
> - AIM also ensures training of teachers and mentors.

1.17. Integrated Scheme for School Education

The Cabinet Committee on Economic Affairs has approved the formulation of Integrated Scheme on School Education by subsuming Sarva Shiksha Abhiyan (SSA), Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and Teacher Education (TE) from 1st April, 2018 to 31st March, 2020.

Objectives

- The integrated scheme envisages a holistic approach to education looking at school as a continuum.

- It aims to support the States to ensure inclusive, equitable and quality education **from nursery to senior secondary stage**.

- The main emphasis is on improving quality of school education by focusing on the *two T's* - Teacher and Technology.

Components Of The Scheme

- Improving learning outcomes of students.

- Funding pattern - **Center : State :: 60 : 40**

- Bridging Social and Gender Gaps in School Education; Enhanced Commitment to 'Beti Bachao Beti Padhao'- Upgradation of KGBVs from class VI -VIII to upto class XII.

- Ensuring equity and inclusion at all levels of school education; Inclusion of senior secondary levels and pre-school levels for the first time.
- Enhanced use of digital technology in education through smart classrooms, digital boards and DTK channels.
- Promoting vocationalization of education; Emphasis on 'Kaushal Vikas' in schools.
- Support States in implementation of Right of Children to Free and Compulsory Education (RTE) Act, 2009; and
- Strengthening and up-gradation of State Councils for Educational Research and Training (SCERTs)/State Institutes of Education and District Institutes for Education and Training (DIET) as nodal agencies for teacher training.
- Support 'Khelo India' - provision for sports and physical equipment

Impact

- The Scheme gives flexibility to the States and UTs to plan and prioritize their interventions within the scheme.
- It will help improve the transition rates across the various levels of school education and aid in promoting universal access to children to complete school education.
- It would lead to an optimal utilization of budgetary allocations and effective use of human resources and institutional structures created for the erstwhile Schemes.

Criticism

- Merging the Sarva Shiksha Abhiyan with the others may lead to elementary education being neglected.
- The scheme makes Block Resource Centres and Cluster Resource Centres the nodal agency to provide academic guidance to both secondary and senior-secondary schools in their jurisdiction. These **centres already lack in capacity** and it is doubtful if they will be able to cope up.
- The draft **does not have a provision for filling vacant teaching posts or training untrained teachers**, who numbered 15 lakh according to 2017 NSSO data.
- The scheme has earmarked funds – Rs 10 lakhs to Rs 20 lakhs per district, for the assessment of learning outcomes. While the new scheme puts an emphasis on testing, it **sets no targets** for schools or for learning.

71st Round NSSO
- While universal enrolment has been achieved at the elementary level (class I-VIII), the enrolment consistently falls with successive levels of education.
- The dropout rate peaks at the secondary level (class IX-X) at 17%, as compared to 4% in elementary school (class I-VIII) and 2% in upper secondary school (class XI-XII)
- The lowest transition rate is at the secondary level (from class X to class XI) at 69%.
- Transition rates indicate whether they are able to advance to higher classes.
- A transition rate below 100% indicates that the students are held back or have dropped out of school.

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2. POLITY AND GOVERNANCE

2.1. National Financial Reporting Authority To Be Set Up

The Union Cabinet has approved the setting up of National Financial Reporting Authority (NFRA), an independent regulatory body to regulate the ***auditing and accounting standards*** as well as for ***oversight of auditing profession*** in India in line with global best practices. NFRA will have 15 members including a chairperson, 3 full-time members and a secretary.

Context

- NFRA was first proposed to be set up in 2009 in the wake of Satyam and Sahara fraud cases which underlined the lapses in the auditing standards and clearly indicated the fault of auditing authorities in the scams.

- Further, Section 132 of the Companies Act of 2013 empowered the central government to set up National Financial Reporting Authority that would have powers to penalize auditing firms for any mal-practices. However, it was not notified until recently.

- Until now, while Institute of Chartered Accountants of India (ICAI) had the sole power to govern and discipline the auditors, the National Advisory Committee on Accounting Standards (NACAS, an extension of ICAI) was entrusted with the role of advising central government on formulating & laying down accounting policies and accounting standards for adoption by the companies.

- Currently the members of ICAI essentially Chartered Accountants are regulated by the body itself. The self-regulatory mechanism has hurt investors and lenders who are the victims of dodgy accounting and incompetent auditing.

- Demand for NFRA, an independent regulator that can oversee auditors and auditor firms, comes in the wake of growing number of auditing lapses in the banking sector both in scope and magnitude, recent one being Punjab National Bank fraud case.

- This will reinstate trust in the Indian audit profession that is much needed to attract more domestic and foreign investments, promote economic growth and standardize auditing practices in line with global best practices.

Functions

NFRA, a body to be constituted under the Companies Act 2013, is entrusted with the following functions:

- Under Companies Act 2013, NFRA was assigned the task of accounting and auditing standards in the country.

- Ensure compliance and Impose Penalties: NFRA will be an independent regulator with powers to impose penalties on erring auditors and audit firms or debar them for upto 10 years.

- Power to investigate disciplinary cases regarding professional misconduct by Chartered accountants as well as auditor firms. NFRA will have the powers to investigate either suo-moto or at central government's reference.

- Further no other body can initiate proceedings in matters in which the investigation is already initiated by NFRA.

- While trying a suit the authority will have the same powers of that of a civil court under CrPC 1908.

- Under the Companies Act 2013, the jurisdiction of NFRA will extend to all listed and large unlisted companies. The Central government can also refer such other entities for investigation where public interest is involved.

Impact On Functions Of ICAI

- ICAI will retain its monopoly on training and qualifying CAs, giving them licenses and regulating them to ensure audit quality.
- ICAI will continue to exercise its powers over all small unlisted companies.

Criticism Of This Move

- Many analysts believe that creation of NFRA would only go against the spirit of "ease of doing business".
- The issue here is, would NFRA recover the money? If not, why not strengthen or streamline the present system rather than creating another layer of red tape through NFRA.
- In the past, too, institutions were created, but these only added up to files being piled up and an additional layer being created in the bureaucracy.
- The Enron scam is a good example where the then government took two actions. One, amendment of Clause 49 of the Listing Agreement, asking listed companies to reveal all and hide nothing. Two, setting up of the Serious Fraud Investigation Office (SFIO) to crack down on economic offences.
- Amendment of Clause 49 was to strengthen the existing system and, by and large, it worked well. However, SFIO added another layer.
- Since March 2007, SFIO has inquired less than 100 cases and submitted less than 20 reports. None of these cases were taken up suo motu. So one wonders why SFIO was created when SEBI and Excise and Customs departments were already present.
- There is need to employ RBI and the Institute of Chartered Accountants of India (ICAI) to strengthen the system to oversee the norms, rather than creating another body.

2.2.   Arbitration Council of India

The Union cabinet has approved the Arbitration and Conciliation (Amendment) Bill providing for creation of the **Arbitration Council of India (ACI)** which will grade arbitral institutions and accredit arbitrators in the country.

Background

- Recently, the Government has placed emphasis on improving the arbitration landscape in India by *institutionalizing arbitration* in commercial matters in order to facilitate ease of doing business in India and promote India as an investor-friendly jurisdiction.
- Currently in India there is a preference to ad-hoc arbitration contrary to the global practice where about 86% of arbitrary awards given in the last decade have been institutional arbitration.
- In addition, though there are 35 arbitral institutions in India, Indian parties have preferred international arbitral institutions such as the Court of Arbitration of the International Chamber of Commerce, the Singapore International Arbitration Centre and the London Court of International Arbitration.
- Low case-load in the Indian arbitral institutions point towards preference to either international arbitration centres or ad-hoc arbitral centres in India.

Why Institutional Arbitration Is Better Than Ad-Hoc Arbitration

- In the absence of monitoring, ad hoc arbitration is vulnerable to the risk of delay tactics, which increases delays and costs that is further accelerated in case of additional procedural hearings, adjournments etc.

- In India where parties are not sophisticated and do not have sufficient knowledge regarding arbitral proceedings, institutional arbitration is decidedly preferable.

Advantages Of Institutional Arbitration

- It provides for a clear set of arbitration rules
- Timelines for the conduct of an arbitration
- Support from trained staff
- A panel of arbitrators to choose from to decide the dispute
- Scrutiny of awards.

Important Functions Of Arbitration Council Of India

- **Grading Of Arbitral Institution:** ACI will have the primary function to grade arbitral institutions in India. This is needed because the quality of these institutions (currently over 35 in India) varies greatly in terms of efficiency and speed of the arbitral process, infrastructure, panel of arbitrators, and quality of the arbitral awards made. Grading by ACI would set a benchmark for assessing arbitral institutions resulting in the evolution of certain common minimum standards in the functioning of arbitral institutions in India

> **Compostion**
> - **Chairperson**: Judge of the Supreme Court or Chief Justice or Judge of any High Court or any eminent person.
> - **Other members** would include an eminent academician etc. besides other government nominees.

- **Accreditation Of Arbitral Institutions:** It is generally perceived in India that domestic arbitrators are of poor quality and lack professionalism. For creating a pool of young, qualified, and well-trained arbitrators, accreditation is seen as the first step. Accreditation would also act as a reliable standard for parties wishing to appoint arbitrators.

- **Not A Regulatory Body:** It should be emphasized that ACI is not a regulatory body. It only grades arbitral institutions thereby evolving minimum standards in administering institutional arbitration in India. Regulating institutional arbitration would be antithetical to the foundation of arbitration process which ensures autonomy to the parties.

2.3. Autonomy of Prasar Bharati

In a recent interview, the CEO of Prasar Bharati criticized the Ministry of information and broadcasting and its bureaucrats with regards to its autonomy.

Background

- The issue with respect to a public broadcaster in India since 1965-66 has been that it has been treated as a wing of government to project its policy. Both Doordarshan and Akashvani were functioning under the Ministry of Information and Broadcasting.

- Various committees recommended autonomy to DD and AIR including AK Chanda committee, B G Varghese committee, and PC Joshi committee. The fundamental principle was that for a democracy like India, it was important to have a public broadcaster accountable to people and not to the Government of India.

- Therefore, India's largest public broadcast agency was created in 1997 according to Prasar Bharati Act 1990 to hive off Doordarshan and Akashvani from Ministry of Information and Broadcasting and put them under an autonomous corporation called Prasar Bharati.

- The Chairman and the other Members, except the ex-officio Members, the Nominated Member and the elected Members shall be appointed by the President of India on the recommendation of a committee headed by the Vice president of India.
- In 20 years of its existence, Prasar Bharati has run the largest penetrating television and broadcasting infrastructure (92%) of the country.

Objectives Of Prasar Bharati

The objectives of Prasar Bharati are defined under the following:

- Section 12 (3)(a) mandates that Prasar Bharati ensure that "broadcasting is conducted as a public service."
- Section 12 (3)(b) reinforces that the purpose of establishing the corporation is to gather news, not propaganda.

Autonomy Questioned

Despite 20 years of the legislation, there have been serious questions about autonomy of Prasar Bharati in some of the following issues, creating a rift between Government and Prasar Bharati:

- Recently there was a Ministry directive that the Secretary, I&B, would appraise the Prasar Bharati CEO. Another directive wants the Prasar Bharati to get rid of contractual employees.
- The Centre has the power to make rules, issue grants or allowances and control the salaries of employees of the Prasar Bharati.
- Section 22 gives the Centre powers to issue directions which it "may think necessary in the interests of the sovereignty, unity and integrity of India or the security of the State or preservation of public order" to not broadcast "any matter of public importance".

Way Forward

- An amendment to the Broadcasting Corporation of India Act (Prasar Bharati Act 1990) clearly laying the rules that define the framework under which the government and the autonomous body function should be brought out to ensure a public broadcaster accountable to people and not to government.
- Confer *financial and personnel autonomy* on PB. There is gross overstaffing and staff must become employees and not allowed to remain government servants, a pernicious legacy of official control. The board should be professionally managed.
- There must be a *complete transfer of ownership and management* of all assets and human resources to PB to make it independent.
- Funding should come from the government, internal resource mobilisation, including monetising the tremendous archival assets of AIR and DD.
- *Private investment* in production.
- Set up an autonomous third arm, '*PB Connect*', to manage social media.

2.4. <u>ASICS 2017 Reveals Improvement In City-Systems But At A Very Slow Pace</u>

- Janaagraha, a Bengaluru-based non-profit in its 5th edition of its Annual Survey of India's City-Systems (ASICS) report, evaluated quality of governance in cities.
- The report underlines the need for sharp focus on **City-Systems or institutional reforms to city governance** in our cities.
- **Pune topped the chart** among Indian cities for the first time. Other cities that came in the top five include *Kolkata, Thiruvananthapuram, Bhubaneswar and Surat*.

- Bengaluru, Chandigarh, Dehradun, Patna and Chennai constituted the bottom five cities.

What Does It Measure

- ASICS measures the preparedness of cities to deliver high quality infrastructure and services in the long-term by evaluating "city—systems" of **spatial planning and design standards, municipal finance, municipal staffing, political leadership** at the city level and **transparency and citizen participation**.

- The report strongly signals that Indian cities are grossly under-prepared to deliver high quality of life that is sustainable in long term. The recurring floods, garbage crises, fire accidents, building collapses, pollution and dengue outbreaks are results of this deeper governance crisis in our cities.

Systemic Challenges That Need To Be Urgently Addressed

- Lack of a modern, contemporary framework of spatial planning of cities and design standards for public utilities such as roads, footpaths, bus stops and other underground utilities such as water and sewerage networks

- Weak finances, both in terms of financial sustainability and financial accountability of cities

- Poor human resource management, in terms of number of staff, skills and competencies of staff, organisation design and performance management

- Powerless mayors and city councils and severe fragmentation of governance across municipalities, parastatal agencies and state departments

- Total absence of platforms for systematic citizen participation and lack of transparency in finances and operations of cities.

2.5.   Andhra Pradesh's Demand For Special Category Status

The Union government has declined the Andhra Pradesh legislator's demand of special category status for their state.

What Is Special Category Status

- Special category status was awarded by the then National Development Council to certain states that were historically disadvantaged as a result of their geography, socio-economic status and other such parameters.

- NDC laid the following bases for the grant of SCS status: *difficult hilly terrain, low population density, sizeable share of tribal population, strategic location along international borders, economic and infrastructural backwardness, and non-viable nature of the state's finances*.

- Accordingly, SCS was accorded to the eight North Eastern and three Himalayan states (Uttarakhand, Himachal Pradesh and J&K) between 1969 and 2001.

Benefits Conferred Upon States With Special Category Status

- Under the Gadgil Formula, SCS entitled the states to **liberal Central plan grants**. 30 % of Centre's gross budget was earmarked for these states.

- Further a **higher share of Central funding in Centrally Sponsored Schemes (CSS)**. An SCS state gets 90% of central funding under CSS in the form of grants, while other states get 30%.

- SCS states get various **tax breaks, concessions on excise duties and subsidies** to attract investments.

Arguments Against SCS For Andhra

- **Special Development Package v/s SCS status:** The Andhra Pradesh Reorganisation Act, 2014, had a provision for **special development package (non-special category status)** which the central government is ready to grant.

- **Restriction of 14th Finance commission:** Fourteenth Finance Commission did away with the 'special category' status for states except for the Northeastern and three hill states. Instead, it suggested that the resource gap of each state be filled through 'tax devolution' urging the Centre to increase its share of tax revenues to the states from 32% to 42%. If devolution alone could not cover the revenue gap for certain states the Commission recommended that the Centre could provide a revenue deficit grant to these states.

- **Recent Changes In The Structure Of Grants**: The structure of grants to states has undergone significant changes in the recent years putting a constraint to award such category to new states. While block grants, the very basis of Gadgil formula was abolished in 2015-16, the plan-non plan distinction was discontinued in 2016-17. This poses difficulty in working out a formula for awarding SCS status.

- *Revenue deficit grant:* Center also offered an additional Rs 1600 crore-revenue deficit grant for the state for the 22-month period between June 2014 and March 2016.

- *Tax soaps:* The Central government also agreed to extend the tax sops for industrial investments i.e. 15% additional accelerated depreciation and 15% additional investment allowance for AP (for five years till March 2020).

- **Demand From Other States:** Other states like Bihar, Odisha, Jharkhand etc have been demanding SCS status owing to imbalance in the regional development. In absence of formula to grant such status, it could lead to issue being politicized and misused for electoral gains.

Argument for SCS for Andhra

- T Finance Commission, which apart from devolution of Union taxes, recommends only non-plan grants. Non-plan grants are not important to SCS states because they benefit mostly from plan grants.

- Besides, the SCS category states receive tax incentives, capital investment subsidy, excise duty and income tax exemptions, and transportation cost subsidies which are important for development of industries in the region.

WHAT ANDHRA PRADESH WANTS	WHAT CENTRE SAYS
■ Special category status, akin to 11 NE/hill states	■ Special-category tag will open a Pandora's box
■ An extra revenue-deficit grant of ₹12,100 crore for June 2014-March 2015	■ All commitments under AP Act, 2014, to be met
■ Nabard funds for specific centrally sponsored projects with the Centre taking fiscal hit	■ Extra revenue deficit grant of ₹1,600 cr for June 2014-March 2015
	■ Open to Nabard facility, but via SPV, to avoid fiscal impact

- Courtesy special category status, some states have achieved standards comparable to or above national averages, such as Sikkim, Himachal Pradesh and Uttarakhand. As the development of Andhra Pradesh is in nascent stage, as a result of bifurcation and loss of significant industrial regions (Telangana for instance), the development experience of SCS states could act as a model for Andhra.

Conclusion

The SCS is awarded irrespective of the degree of backwardness in these states. Further, SCS is granted without any performance expectation and monitoring. As a result there is no accountability on the part of the states. SCS should be reviewed periodically and a formula-and-target-based, time-bound approach should be arrived at. There should be increasing focus on accountability, performance and monitoring of achievements.

2.6. Foreign Funding Of Political Parties Exempted From Scrutiny

The Lok Sabha passed a bill to amend Foreign Contribution Regulation Act (FCRA) 1976 that exempted political parties from scrutiny of funds they have received from abroad since 1976.

Background

- The Foreign Contribution Regulation Act 1976 prohibited financial contribution from **any foreign source or company** to a political party registered in India. It was made mandatory for such organisations of 'political nature' to accept foreign contribution only **upon prior permission** from the Ministry of Home Affairs.

- A company which is registered abroad or those with subsidiaries abroad is defined as foreign firm.

- **FCRA 2010** *repealed the Foreign Contribution (Regulation) Act of 1976* giving more authority to enforcement agencies to regulate donations from abroad.

  o The Act prohibits acceptance and utilisation of foreign contributions or foreign hospitality for **any activities detrimental to national interest**.

  o It included **several organisations**, including those of a political nature, from receiving foreign funding.

  o The rationale of FCRA was to prohibit the flow of foreign funds to political parties, candidates contesting elections, journalists, judges, cartoonists, editors etc.

  o Acceptance of foreign contribution or hospitality by violating any provision of the FCRA law was made a punishable offence with an imprisonment of upto 5 years.

2014 Ruling of the Delhi High Court

In response to a PIL, the Delhi High Court in 2014 had directed the Ministry of Home Affairs and the Election Commission to take appropriate action against the Congress and the BJP for allegedly accepting foreign funds in violation of the law.

Finance Act 2016

- Finance Act, 2016, had changed the definition of a foreign company by saying a firm with less than 50% of share capital held by a foreign entity would no longer be a foreign source any more.

- This left room for some categories of foreign funding of political parties from subsidiaries of foreign companies in India.

- This amendment also came into effect retrospectively from September 2010. In effect it exempted the foreign funds received post-September 2010 from scrutiny. However the foreign funds received by political parties before 2010 were open to scrutiny.

Present Amendment And Its Impact

The Finance Bill 2018 seeks to push this year to 1976. In effect the foreign funding from 1976 in the said category is out of the purview of scrutiny of the Ministry of Home Affairs.

Criticism

- It should be noted that FCRA 1976 stands repealed according to FCRA 2010. The amendment has been criticized on the question that **how a repealed act can be amended**.

- It absolves political parties of the violations of law during the period 1976-2010. The violation includes acceptance of foreign funds which was raised by PIL in 2014 in Delhi High Court.

- Further no action was taken on the 2014 Delhi High Court judgment. The order of the High court could stand nullified after the present amendment to the already repealed law.

2.7. Maiden Electoral Bond Issued

Recently, Electoral Bonds worth Rs 222 crore were sold in its maiden issue in order to fund political parties.

Background

- The government had introduced electoral bonds in Union Budget 2017 in order to increase transparency in electoral funding in India.

- India is the *first country to introduce* electoral bonds which will now be an additional way to make donations to political parties.

Details

- Electoral bonds are like promissory notes available in multiples of Rs 1,000, Rs 10,000, Rs 1 lakh, Rs 10 lakh and Rs 1 crore.

- An Indian citizen or a body incorporated in India can buy these bonds with their KYC-compliant account and fund the political party of their choice. Further these bonds are issued only by SBI.

- The names of the donor or political party will not be disclosed.

- Registered political parties under Representation of People's Act 1951, which have secured not less than 1 % of the votes polled in the last Lok Sabha or assembly election, are eligible to receive fund through this route.

- The money can be encashed by the party through its verified account within 15 days.

- Electoral bonds will be available for purchase for a period of 10 days in January, April, July, and October, and for 30 additional days during the year in which the Lok Sabha elections take place

- This year the maiden sale of these bonds started on March 1 for a period of 10 days at the four main branches of State Bank of India in Mumbai, Chennai, Kolkata and New Delhi.

Problem With Electoral Bonds

- The mechanism involves secrecy in that the names of donor or political party receiving funds will not be disclosed.

- However, there is a trail of the money because the bonds are bought using banking instrument only and identity of the voter is captured.

Way Forward

- Though Electoral bonds are a better mechanism of political funding than that of cash donations, **digital transfer of funds** is the way forward to bring in complete transparency in private electoral funding.

- Going forward blanket ban on private funding of political parties should be enforced. Alternately we can have a **public fund** with open contribution from all. The funds can then be distributed to political parties in proportion to the votes obtained.

For more information on Electoral bonds refer Sept 2017 issue of Current Affairs Magazine

2.8. Mahanadi Dispute: Tribunal Finally Set Up To Resolve The Dispute

The Ministry of Water Resources last week notified the setting up of a Tribunal to resolve the dispute between Odisha and Chhattisgarh over the sharing of the waters of the Mahanadi River.

Background

- The Mahanadi River originates from Dhamtari district of Chhattisgarh fall into the Bay of Bengal close to the temple town of Konark in Odisha's Puri district.
- The Mahanadi river and its tributaries drains through 37 districts; 15 districts in Chhattisgarh which forms the initial course of the basin and 22 districts in Odisha, forming the middle and lower part of the basin.
- The Mahanadi basin caters to 38,606,665 persons and acts as a lifeline for the people of Chhattisgarh and Odisha. The important uses of the river include agriculture, industries, fisheries, navigation and tourism.
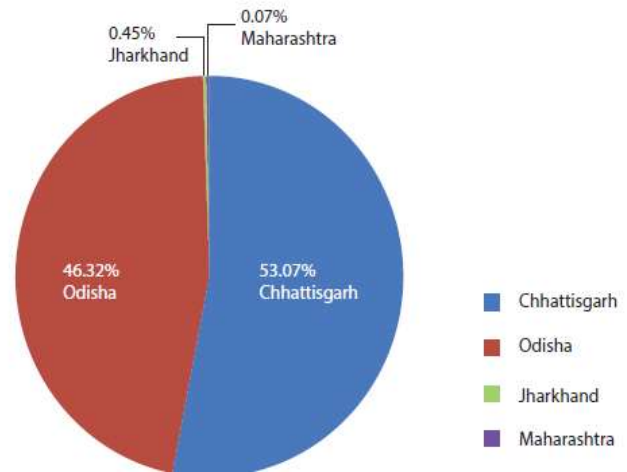
Water-Related Conflicts In Mahanadi Basin

- Reallocation of water from Agriculture to Industries.
- Rapid urbanization leading to change in water use resulting in changing environmental-flow (e-flow) of the river.
- Conflict against privatization

✓ The Seonath river is a tributary of the Mahanadi, and it was contracted to a private corporation — Radius Water — a division of the Kailash Engineering Limited in 2001. After a few months of signing the contract, Radius Water informed the local fishermen that they were no longer allowed to fish in certain areas, banned farmers who owned land near the river from lifting water from the river with motor pumps. This saw the first mobilisation of the people against water privatisation in the country.

✓ Another important conflict that is worth mentioning is the one over the Kelo River which is a minor perennial tributary of the Mahanadi. Here the Chhattisgarh government granted permission to Jindal Steel and Power Limited (JSPL) to extract water through a combination of stop dams and intake wells from the Kelo River. After this happened, the local people got organised and started to complain about the situation.

✓ Reallocation of water from the Hirakud dam. This also led to a massive mobilisation of the farmers from the command area of the project.

Inter-state Dispute

- According to Odisha, about 10 barrages are being built by Chhattisgarh, of which two or three are already completed and consequently flow into the Hirakud dam has reduced by a third.
- In 1983, a Memorandum of Agreement was reached between undivided Madhya Pradesh and Odisha for the establishment of a Joint Board to look into the inter-state issues. However, till date this Board has not been constituted.
- Further there was no Tribunal appointed under the Inter-state Water Disputes Act of 1956 to sort out the issues of water sharing between the riparian states of the Mahanadi.

- Some of the barrages that are being constructed in the Chhattisgarh part of the basin are becoming a cause of tension between the two states which was raised by Odisha through a calling attention motion in July 2016.

- The Supreme Court in January 2018 directed the Centre to notify a Tribunal to adjudicate the dispute.

- The Tribunal, which the Centre notified on March 12, has been asked to "determine water sharing among basin states on the basis of the overall availability of water… contribution of each state, the present utilisation of water resources in each state and the potential for future development".

Issue and Way forward

- The inter-state contestations come to the fore in deficit years and hence how we share shortages is an important aspect of inter-state water sharing.

- Since the two states have not engaged in a meaningful, the Centre has intervened and appointed a Tribunal to sort out issues. However, the experience of Tribunals in solving inter-state water disputes has not been all that promising. The latest example is the Cauvery Tribunal —where it took nearly 17–18 years to give the final award.

- Geographic advantages and disadvantages can only be resolved by negotiation. Identities, vote bank politics, etc., can get enmeshed in this situation and give rise to a situation of "less water and more politics".

2.9. Demonstrations Involving Violence Not A Fundamental Right: Supreme Court

In News

- The Apex Court has held that public demonstrations resorting to violence are not protected by the fundamental right to free speech and expression or right to assemble peaceably.

- The judgment came on a plea by Gorkha Janmukti Morcha leader Bimal Gurung for protection against arrest in several cases filed against him by the West Bengal government for violent unrest in the Darjeeling Hills.

Constitutional Provisions

- *Article 19(1) and Article19 (2)* of the constitution guarantees to all citizens, right to freedom of speech and expression, right to assemble peaceably and without arms respectively. Freedom of Speech and Expression covers Right to demonstration or picketing but not right to strike.

- Further the State can impose 'reasonable' restrictions on the enjoyment of these rights only on the grounds of sovereignty and integrity of India, security of the state, friendly relations with foreign states, public order, decency or morality, contempt of court, defamation, and incitement to an offence.

- The State can impose reasonable restrictions on the exercise of right of assembly on two grounds, namely, sovereignty and integrity of India and public order including the maintenance of traffic in the area concerned.

- Freedom of Assembly includes the right to hold demonstrations peacefully and unarmed. This provision does not protect violent, disorderly, riotous assemblies, or one that causes breach of public peace or one that involves arms. This right does not include the right to strike.

- A demonstration is a means to express dissent which is covered under Article 19(1) of the Constitution. However, if it creates public disturbances or operate as nuisances or create or manifestly threaten some tangible public or private mischief, it is not covered under Article 19.

- In addition, though right to speak in public is covered under right to free speech it should not be used to incite violence.

3. ECONOMY AND INFRASTRUCTURE

3.1. Centre To Enact Law Against Fugitives

In News

- The Central government will bring in a *Fugitive Economic Offenders Bill*, which proposes the confiscation of assets of those who flee the country to evade prosecution or refuse to return in cases involving more than 100 crore.

- The proposed law assumes significance in view of the reports of major bank frauds in the past few years.

Provisions Of The Bill

- *Definition:* The draft bill defines a fugitive economic offender as any individual against whom an arrest warrant has been issued and who has either left the country or refuses to come back to face prosecution.

- *Financial criteria:* The Fugitive Economic Offenders Bill, 2018 will cover all offences where the sums involved are at least 100 crore.

- *Offences covered:* It covers wide range of offences, including wilful loan defaults, cheating and forgery, forged or fraudulent document of electronic records, duty evasion, non-repayment of deposits and others.

- *Special courts:* The bill also makes a provision of setting up a special court that, under the Prevention of Money laundering Act, could declare a person as a fugitive economic offender.

HEAT ON ECONOMIC ABSCONDERS

- Bill name: Fugitive Economic Offenders Bill
- Purpose: Catch alleged absconders. Nirav Modi, his uncle Mehul Choksi have been charged of defrauding PNB and leaving the country. Also Vijay Mallya
- What will govt do: Try to put bill before Parliament as early as second part of budget session starting next month

Bill highlights

- ED to start proceedings in special court by first issuing notice to 'fugitive economic offender'
- If offender appears in six weeks, notice will be terminated
- Prosecution starts if he chooses to stay away from country and sends counsel

- *Application by FIU:* The Bill also proposed to allow the Financial Intelligence Unit (FIU) to file an application for declaration of a fugitive economic offender for confiscation of their assets.

- *Appointment of administrator:* Further provision has been made for the appointment of an administrator to dispose of the property to satisfy creditor's demands.

- *Disposal of property:* The bill has provision for settling dues of creditors by disposing properties of defaulters in cases involving over 100 crore.

- *ED tasked with job:* As proposed, the Enforcement Directorate will be empowered under the Prevention of Money Laundering Act (PMLA) to initiate the proceedings.

- *Application:* The bill will be applicable to various financial and allied offences as defined under the Indian Penal Code, Prevention of Corruption Act, SEBI Act, Customs Act, Companies Act, Limited Liability Partnership Act and the Insolvency and Bankruptcy Code.

- *Other provisions:* Under the Law the offender will be disentitled from bringing forward or defending any civil claim. It will also prevent the offender, if he returns to India from reclaiming any property.

Benefits

- *Improve financial health of banks:* This will also help banks and other financial institutions to achieve higher recovery from financial defaults committed by such fugitive economic offenders, improving the financial health of such institutions.

- *Deter future loan defaulters:* A new bill on tackling financial fraud should deter future loan defaulters from fleeing India.

- *Higher chance of success in Extradition requests:* It will also strengthen India's efforts to score higher on extradition requests that have often failed to bring home the truants.

- *Umbrella legislation:* The Bill will become an umbrella legislation incorporating various provisions of existing laws catering to such offences thus avoiding overlapping and confusion.

- *Overcome the lacunas of existing laws:* The current law framework allows the Enforcement Directorate to seize the property and assets of an accused as per the rules under the Prevention of Money Laundering Act. But the existing laws do not allow complete 'non-conviction' based asset attachment without any encumbrances.

Lacunas

- *Time limit for attachment:* Section 7(3) of the Bill envisages that an attachment will continue for a period of 180 days from the date of the order of such attachment that may not be sufficient time frame in such cases.

- *Non-effectiveness of bill for extraditing the accused person:* The bill may be effective only in attaching the property of the offender but may not be sufficient to bring him back to India.

- *Difficulty in selling property:* The Fugitive Economic Offenders law may help the banks recover some money as the investigative agencies can attach the properties. However, it will not be easy to sell these properties as buyers are often wary of disputed assets.

- *Question over deterrence effect:* Also whether the fear of their properties being sold is enough to bring the offenders back to the country remains to be seen.
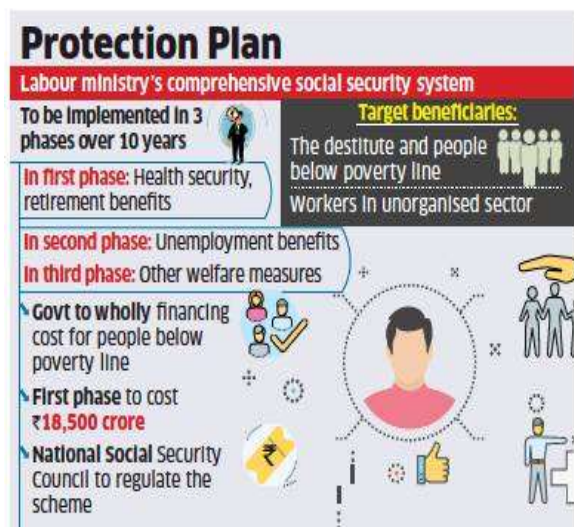
Way Forward

The bill is a step in the right direction to control the practices of fraud and siphoning of the public fund but the actual outcome depends on the proper implementation of the act. Moreover, there is also a need to take preventive steps by proper auditing, purify India's electoral funding, and breaking the nexus between businessman and politician.

3.2. Government Readies Social Security Scheme For 50 Cr Workers

News Highlights

- *Social security system for workers:* The labour ministry has proposed a comprehensive social security system to provide retirement, health, old-age, disability, unemployment, and maternity benefits to 50 crore workers in the country.

- *Phased implementation:* The plan is to implement the scheme in three phases over 10 years after which the government hopes to make it universal. The scheme will be implemented in four tiers with the government wholly financing the cost for people below the poverty line.

- *Three phases:* The first phase will see all workers getting the bare minimum, which includes health security and retirement benefits. The second phase will see unemployment benefits being added to it while in the third phase other welfare measures can be added.

Protection Plan

Labour ministry's comprehensive social security system

To be implemented in 3 phases over 10 years

In first phase: Health security, retirement benefits

In second phase: Unemployment benefits
In third phase: Other welfare measures

Target beneficiaries:
The destitute and people below poverty line
Workers in unorganised sector

- Govt to wholly financing cost for people below poverty line
- First phase to cost ₹18,500 crore
- National Social Security Council to regulate the scheme

- *Regulatory body:* Its implementation would be regulated and monitored by an overarching regulatory body called the National Social Security Council to be chaired by the prime minister with finance minister, health minister and chief ministers of all states along with workers and employers as its members.

- *Classification of workers:* The first tier will comprise destitute and people below poverty line who cannot contribute for their security and hence the cost will be entirely borne by the government under tax-based schemes. Workers in the unorganised sector who have some contributory power but are not self-sufficient may be covered under the subsidized schemes in the second tier. The third tier of beneficiaries will include those who either by themselves or jointly with their employers can make adequate contribution to the schemes so as to be self-sufficient while the fourth tier will comprise comparatively affluent people who can make their own provisions for meeting the contingencies or risks as they rise.

- *Current status:* India's total workforce stands at around 500 million. A little over 10% of this is in the organised sector, where workers enjoy social security of some sort under EPFO and ESIC. But a major portion of the total workforce is still in the unorganised sector, where workers do not often get even the minimum wage and lack any kind of social security cover.

3.3.   US Plans Stiff Curbs On Steel Imports From India, 11 Other Countries

In News

- The US Department of Commerce recommended a tariff of at least 53% on all steel products from India, which accounted for 2% of the US steel imports in 2017. The US has taken the plea that import from such countries could threaten to impair the national security.

- USA has invoked Section 232(b) of The Trade Expansion Act of 1962 that gives the US the ability to investigate whether certain imports, or high levels of certain imports, pose a threat to national security.

- The department recommended global tariff of at least 24% on all steel products and 7% on all aluminium imports.

Global Implication

- *Trade war:* If these recommendations are accepted and implemented by, it could trigger a trade war if targeted the countries retaliated.

- *Threat of Chinese dumping:* Exporter will not only find harder to export their steel to the U.S but now they will also have to deal with the issue of the biggest exporters, China in particular which is now seeking other places to dump their wares.

- *Impact on stock market:* The prospect of retaliation from Canada, China and Europe sent world stocks tumbling towards a 2.5 percent loss as investors turned to traditional safe havens such as government bonds, gold and the Japanese yen.

- *Relevance of WTO:* The US move has also raised question about the effectiveness of WTO as a body as the selective application of tariff is against the most favoured nation concept.

- *Impact on USA:* Any restrictions besides leading to disruptions in USA itself will also lead to price spikes in the raw materials used in everything from autos to appliances and aircraft and construction. Therefore, economists believe that the price increase will destroy more jobs in US than they create.

Impact on India

- *No immediate impact:* The impact on India will not be much as India's exports of steel and aluminium to US are not significant. Thus, protectionist American tariff hikes are unlikely to immediately dent the Indian metals sector.

- *Indirect impact on equity and debt market of India:* Within the US domestic economy higher inbound steel and aluminum escalates the threat of higher consumer prices, which could then force the Federal Reserve to frontload its interest rate glide path that is raise rates faster than it would have done otherwise. An increase in interest rates in the world's largest economy has implications for emerging economies such as India, both for the equity and debt markets.

Immediate Concern, Bigger Worries

US imposes higher tariff on steel and aluminium	India's exports not so big, but could take a hit	Worry if more goods covered
25%	April-December ($ Million)	Trump has talked of reciprocal tariffs for India, China / He has mentioned the high duty on Harley-Davidson bikes
10%	■ Aluminium ■ Iron & Steel	India had recently reduced the duty to 50% from 75% earlier
Steel / Aluminium	228.98 217.55 445.31 266.42 / 2016 2017	**INDIA'S VIEW** Duties will have some impact on steel and aluminium exports
		India will wait and assess the impact / Duties not compatible with WTO

Way Forward

Instead of retaliating with more tariffs, which could cause the current dispute to spiral into a full-fledged global trade war the US's trading partners must try to achieve peace through negotiations.

3.4. Priority Lending: Foreign Banks With 20 Branches Under Ambit

News Highlights

- *Foreign banks in purview:* The Reserve Bank of India (RBI) has brought foreign banks with at least 20 branches in India under the ambit of compulsory targeted lending to small farmers and micro-enterprises.

- *Sub targets:* The sub-target of 8 per cent of Adjusted Net Bank Credit (ANBC) or Credit Equivalent Amount of Off-Balance Sheet Exposure (CEOBE) whichever is higher shall become applicable for the foreign banks with 20 branches and above for lending to the small and marginal farmers from FY 2018-19. In addition, the sub-target of 7.5 per cent of ANBC or CEOBE, whichever is higher for

bank lending to micro enterprises shall also become applicable to foreign banks with 20 branches or more from FY19.

- The directive is likely to apply to Standard Chartered Bank (with 100 branches in India), Citibank (35 branches) and HSBC (26 branches) so as to create level playing field within banks.

- The proposal to mandate foreign banks to lend to small farmers and micro-enterprises was first mooted in April 2015 as part of the recommendations of an internal working group set up by the RBI to revisit existing priority sector lending norms.

- *Removal of loan limit:* The central bank also removed the currently applicable loan limits of Rs 5 crore and Rs 10 crore per borrower to micro-enterprises and small and medium enterprises (services), respectively, for classification under priority sector. Accordingly, all bank loans to MSMEs engaged in providing or rendering of services as defined in terms of investment in equipment under MSMED Act, 2006 shall qualify under priority sector without any credit cap.

Priority Sector Lending

Categories Under Priority Sector

Priority Sector includes the following categories:

(i)   Agriculture
(ii)   Micro, Small and Medium Enterprises
(iii)   Export Credit
(iv)   Education
(v)   Housing
(vi)   Social Infrastructure
(vii)   Renewable Energy
(viii) Others

Targets and Sub-targets for banks under priority sector

The targets and sub-targets for banks under priority sector are as follows:

Categories	Domestic Scheduled Commercial Banks
Total Priority Sector	40 percent of Adjusted Net Bank Credit or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher.
Agriculture	18 percent of ANBC or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher. Within the 18 percent target for agriculture, a sub-target of 8 % is prescribed for Small and Marginal Farmers.
Micro Enterprises	7.5 percent of ANBC or Credit Equivalent Amount of Off-Balance Sheet Exposure.
Advances to Weaker Sections	10 percent of ANBC or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher.

3.5.   Government Sets Up Panel To Ease Fintech Norms

- *Committee:* The government has set up an eight-member steering committee on fintech to help ease regulations and boost entrepreneurship in the sector. The committee will also work with UIDAI, the statutory authority issuing Aadhaar identification numbers, to explore creation and use of unique enterprise identification number.

> technology and innovation that aims to compete with traditional financial methods in the delivery of financial services and to make financial services more accessible to the general public.. Since the end of the first decade of the 21st century, the term has expanded to include any technological innovation in the financial sector, including innovations in financial literacy and education, retail banking, investment and even crypto-currencies like bitcoin.

- *Chairman and Members:* The panel will be chaired by Subhash Chandra Garg secretary department of economic affairs. Its members will include top executives from ministry of electronics and information technology, Central Board of Excise and Customs, UIDAI and the Reserve Bank of India.

- *Term of reference:* The panel will consider various issues relating to development of fintech space in India with a view to make fintech-related regulations more flexible and generate enhanced entrepreneurship in an area where India has distinctive comparative strengths vis-à-vis other emerging economies. This will help in boosting growth of MSMEs.

3.6. Centre Plans to Lease Out 10 More NHs to Raise 6600 cr

In News

- The government plans to invite bids to lease out another 10 public funded national highways to private operators soon to raise money to build more roads. In 2016, the Cabinet Committee on Economic Affairs had authorised NHAI to monetize public funded national highway projects. 75 operational national highway projects completed under public funding had been identified for potential monetization using the TOT model.

- Under TOT model, the concessionaire pays a one-time concession fee upfront, which in turn allows him to operate and toll the project stretch for the predetermined 30 year concession period. The model also includes the risks associated with such a long concession contract.

- The government recently concluded the auction process for leasing out nine national highways in Gujarat and Andhra Pradesh. Sydney-headquartered Macquarie Group won the toll operate transfer (TOT) bid of nine national highways. The company placed the bid of 9681 crore as against the government's expectations of 6258 crore.

Benefits

- *Raising of finance:* The road transport and highways ministry expects to rake in almost 6600 crore through this second round of leasing out government-owned operational national highways under the TOT model. And the total amount expected to be raised is about 2 lakh crore through TOT in the next five years.

- *Use of fund for new infrastructure creation:* Funds generated from monetization of highways will be used for new infrastructure programmes such as Bharatmala.

- *Increase private participation:* The TOT model has been developed to encourage private participation in the highways sector.

3.7. Ban On LoUs Will Squeeze Trade Credit

The Reserve Bank of India's (RBI) decided to discontinue letters of undertaking (LoUs) and letters of comfort for importers to prevent their misuse.

For LoU, please refer articles on PNB fraud in February CA 2018.

Implication

- *Costlier route for trade finance:* With trade financing moving to Letter of credit (LC), importers will have to cough up additional costs as these instruments involve a commission fee along with acceptance charge unlike in the case of LoU.

- *Knee jerk reaction:* The RBI decision to discontinue LoUs and letters of comfort for importers is a knee jerk reaction. Besides hurting trade financing and raising the cost of credit for importers, it could also put pressure on the rupee.

- *Change required in business model:* Overseas branches of Indian banks will have to rejig their business model after RBI decision to ban LoU as a trade finance instrument since most of their assets abroad are linked through this instrument.

- *Loss of business for PSBs:* The ban could also accelerate the movement of business to private banks from their public sector counterparts.

- *Other implications:* Small and medium enterprises will face a squeeze on their working capital needs as well. It will also dent fee-based income for banks. Moreover banks will need to set aside more capital against loans to importers and that could mean more recapitalization.

Way Forward

Rather than finding a flaw with LoUs, the unrecorded issuance points to serious lapses in governance. These include lapses in branch audit, concurrent audit and RBI annual inspection. The regulator should be given more legal powers to address governance flaws and systemic weaknesses must be fixed. Thus, it is imperative for lenders to strengthen institutional practices to prevent fraud.

3.8. USA Threaten To Move WTO Over Export Promotion Schemes

In News

- US trade representative (USTR) has recently challenged India's export subsidy programmes and threatened to request a dispute settlement panel at the WTO.

- USTR is of the view that these schemes extended financial benefits that artificially boost their price-competitiveness in the US market, harming the American workers.

- The scheme challenged by the USTR includes MEIS, EOU and sector-specific schemes, Electronics Hardware Technology Parks Scheme, SEZs, EPCG and duty-free imports for exporters programme.

India's Stand

- *ACSM does not allow a reprieve:* Experts have argued that the WTO rules under the Agreement on Subsidies and Countervailing Measures (ACSM) does not allow such a reprieve once a country breached a specified per-capita income threshold. Although India surpassed that threshold in 2013 and as per the rules should have terminated the subsidies in 2015 but export slump has dithered it.

- *Effect India's exporters:* Removal of export subsidy might affect a cross-section of India's manufactured goods exporters pretty badly as they operate on thin margins. It isn't easy for them to quickly regain the cost competitiveness without the sops, given that the relatively high transportation costs, residual red tape, infrastructure bottlenecks like high turnaround time at ports, and rigid labour laws jack up their costs.

- *India continues to be developing country:* There is no doubt that India's exports have made rapid strides and have undergone structural transformation but nonetheless India still remains a developing country. It might be in the interest of the global economy that countries such as India do even better in terms of trade and development. For this export promotion schemes become an imperative in a country like India.

- *Trade Impossibility Theorem:* If all countries consider exports as good and imports as bad and if each country only wishes to export then trade cannot take place. This is Trade Impossibility Theorem.

- *Other countries continue to provide export subsidy:* There is no clarity over the time frame for ending such subsidies. The countries like Indonesia and Sri Lanka had breached the GNI threshold of $1000 before India did and are yet to stop such subsidies.

- *Not a direct subsidy but a promotional scheme:* India's MEIS scheme is not a direct subsidy but a promotional scheme. Even the US keeps subsidies to industry indirectly and there are instances of it violating Agreement on Trade-Related Investment Measures.

Way Forward

- Both the US and India will have to view both the exports and imports in a balanced perspective rather than in a framework of combating each other and cancelling out the mutually beneficial potential trade and economic linkages.

- Moreover India will now have to fast track an ongoing plan to phase out some of these sops that are WTO incompatible and rejig others in order to put in a place a durable set of successor tax-neutralization schemes that are multilaterally legitimate.

3.9. Draft Policy Seeks Stable Regime For Agriculture Exports

In News

- The commerce ministry has drafted National Agriculture Trade Policy to help India realise the government's goal of doubling farmer's income by 2022.

- In agri-export, the inefficiencies are many else India's total agri-exports would have been far higher than $30 billion annually, which is around 2.2% of global agri-markets.

Features Of The Policy

- *Doubling farm export:* The aims of India's agri export policy are to become one of the top ten exporters of agricultural produce and to strive to double India's share in the global exports of agri produce from the present figure of over $30 billion to over $60 billion by 2022.

- *Strategic and operational recommendations:* The policy recommendations in the draft are organised in two broad categories i.e. strategic and operational. The strategic recommendations include policy measures, infrastructure and logistics, approach to boost exports and greater involvement of state governments in agri exports. While the operational focus includes clusters, promoting value added exports, marketing and promotion of produce of India, infrastructure and logistics to support agricultural exports, the establishment of a strong quality regime, self-sufficiency and export-centric production, research and development (R&D).

- *Selection of crops for agri export:* The effort of the agri export policy would be to analyze top agricultural commodities and products on the bases of current global and Indian trade. Each commodity would be studied in detail based on five key criteria namely global trade, five-year impact potential, India's current competitiveness, scope for value addition and future market potential. The effort would be to shortlist about ten commodities as focus commodities for specific farm, infrastructure and market intervention.

- *Focus of the policy:* The draft policy also pitches for high-value and value-added agricultural exports, focusing on perishables, apart from setting up an institutional mechanism to deal with barriers to market access and sanitary and phytosanitary issues.

- *Ambit of the policy:* Also the policy is aimed at providing an assurance that processed agricultural products and all kinds of organic products will not be brought under the ambit of any kind of export restrictions, including the imposition of minimum export price, export duty and an outright ban.

- *Non-interference:* The draft National agriculture trade policy has sought a stable trade policy regime with limited government interference for key farm items including the politically sensitive onion and pulses.

- *Role of States:* It has advocated greater involvement of states, improvement in infrastructure and logistics and promotion of R&D activities for new product development for the upcoming markets as essential ingredients of the renewed push to farm exports. It wants all DGFT field offices, Export Promotion Councils, Commodity Boards and Industry Associations to act as advocacy forum for reform by all the states. The policy also wants the State Governments to remove perishables from their APMC Act.

- *Reform APMC, Land leasing, mandi fee:* Reforms in APMC Act, streamlining of mandi fee and liberalization of land leasing norms are among the raft of measures suggested in the draft policy.

- *Contract farming:* The policy made a strong case for promoting contract farming as it would help in attracting investments.

- *Regulatory body:* It also said that as global bodies like US FDA and European Food Safety Authority are empowered to frame, regulate and implement policies related to both agricultural production and trade and it may be worthwhile to explore such arrangement in India as well.

- *Collaboration between Industry and research organisation:* The draft policy also said that there is a need to ensure greater interaction between the various research organisations and industry bodies which will enable the research bodies to work on industry specific requirements.

Analysis

- *Current problem:* The biggest bottleneck where India's agri-exports are concerned has been the arbitrary policy framework; governments have been prone to clamping down on exports of one product or another depending on what is politically expedient at the time.

- *Limited focus of the policy:* But the blueprint for doubling India's agri-exports promises free exports only for processed agri-products and all organic products. Exports of other products would be restricted. The draft policy paper notes that those products considered to be 'essential from a food security perspective' will be subject to restrictions. One assumes, therefore, commodities such as rice, wheat, sugar, pulses and vegetables would all be considered essential.

- *Lack of basic infrastructure:* There may be big potential to increase exports in areas such as marine products but before entrepreneurs commit to big investments they need to be assured of some basic infrastructure facilities.

Way Forward

- The new draft export policy issued by the ministry is an ambitious one but it will be a daunting challenge to implement. Such challenge includes low farm productivity, poor infrastructure, global price volatility and market access. These need to be resolved with the combined efforts of state and central government.

- At a policy level, the government must have a hands-off approach like it does for the IT sector. An investment of just 5250 crore in aquaculture for instance can yield additional exports of 36,400 crore per annum.

- The policy should also attempt to encourage export of value-added products. It can generate employment and earn more foreign exchange through domestic processing and value addition.

- Outdated concepts like minimum export price and minimum import price must be done away with. These restrictions distort the market and lend themselves to invoice manipulation by unscrupulous traders. Imposing and changing the rate of customs duty is the best way to regulate foreign trade.

3.10. Government To Update Law To Clarify Illegal Mining

In News

- The Centre is preparing a legislative amendment to clarify the definition of illegal mining, which has a direct impact on companies such as Tata Steel, Coal India Ltd and Steel Authority of India that are facing hefty penalties because of a Supreme Court order on a contentious section of the statute.

- The Central government is considering retrospective changes in the Mines and Minerals Development and Regulation Act (MMDRA), which will be put up to the cabinet.

Necessity For Amendment

- *SC decision on illegal mining:* The Supreme Court had ruled in 2017 that violations of environment and pollution control laws in a lease were also to be considered "illegal mining", which rattled miners because the penalty for this amounts to 100% of the output.

- *SC decision in conflict with the MMDR act:* The verdict triggered penalties running into thousands of crores of rupees but Section 21 (5) under MMDR Act that dealt with illegal mining only provided for mining carried out outside or in the absence of a lease.

- *Confusion:* Thus there is lack of clarity on whether the Act should deal with violations in environment norms, which are dealt by separate laws and when mining has been carried within the permitted mining lease area it cannot be termed illegal.

- *Benefits:* The proposed change in law is also expected to help Goan miners against a claim that Goa Foundation has already initiated.

3.11. Banks Board Bureau's Key Suggestions For PSBs

In News

- The Banks Board Bureau (BBB) headed by Vinod Rai completes two years on March 31. The government says it has no plans to scrap the bureau but there is no clarity on its role going ahead.

- BBB has released a compendium of its recommendations on reforms at public sector banks (PSBs) in a report that also cites a lack of engagement with the agency by the government.
- Government in 2016 approved the constitution of BBB as a body of eminent professionals and officials to make recommendations for appointment of whole-time directors as well as non-executive chairmen of PSBs.

Key Suggestions of BBB

- *Appointments:*
  - o Ownership-neutral guidelines for appointment to boards of banks.
  - o Boards should be empowered to appoint part-time/non-executive directors.

- *Compensation:*
  - o Delink bank compensation from those of civil servants; introduce performance-based compensation.
  - o Short-term variable salary component.
  - o Long-term component of stock options.

- *Performance assessment:*
  - o Relative performance rating (RPR) framework for banks.
  - o Top 10% of banks to be ranked outstanding relative to rest.

- *Governance:*
  - o Non-executive directors nominated/appointed by the government empowered to perform the role of independent directors.
  - o Boards of state-run banks empowered to assess performance of directors.

- *Code of conduct and ethics:*
  - o Board's ethics and vigilance committee should be constituted.
  - o Code of ethics/conduct and associated processes be put in place.

- *Strategy:*
  - o Recommendations on consolidation of PSBs.

BBB's Grouse

- No word from government on its many recommendations.
- BBB's request for a specific mandate on stressed asset strategy not met.
- Government has not engaged with BBB in deciding the allocation of capital to PSBs.

The Mandate That BBB Wants

- BBB wants to work on reworking the Articles of Association of IDBI Bank so that it mirrors to the extent possible the Articles of Association of other such institutions, which were earlier in the public sector.
- BBB also wants to present its quarterly assessment to the finance minister on the relative performance the respective

THE STANDOFF

MAR 2017 — Govt swaps chiefs of IDBI Bank and Indian Bank without consulting BBB

APRIL 2017 — BBB recommends names of 5 EDs to head mid-sized PSU banks, including DB Mohapatra for Syndicate Bank and Sunil Mehta for Allahabad Bank

MAY 2017 — Govt shunts out chiefs of PNB and Bank of India to two smaller PSU banks without consulting BBB or informing respective bank boards

MAY 2017 — Contrary to BBB's suggestion, govt appoints DB Mohapatra as chief of Bank of India and sends Sunil Mehta to head PNB

MAY 2017 — HN Sinor, a BBB member, resigns in protest. Sinor agrees to re-engage with BBB after consultation with Vinod Rai

JUNE 2017 — Govt takes away the power of BBB to appoint heads of financial institutions; committee headed by DFS secretary to shortlist candidates

capital assessment and growth assessment of each public sector bank.

- Put in place an arrangement for engagement of state-run bank boards.
- It also wanted to put in place an arrangement for engagement of the government with the board of PSBs rather than direct engagement with the management.
- PSB consolidation.
- Independent feedback on governance, reward and accountability framework.
- Help PSBs build capacity to attract, retain and nurture talent and tech.
- Strategize on asset-quality resolution.
- Take over RBI's specific role in respect of PSBs.

Way Forward

- The BBB must be empowered now that the government has clarified that it will not scrap the autonomous body. The performance of PSBs that are reeling under a pile a bad loans and now scams is fragile compared to their private sector peers. Fixing their governance ills calls for broader systemic reforms. This requires ring-fencing PSBs against untoward political interference and meddling as recommended earlier by the PJ Nayak committee.
- The thing to do for the Centre to create a company to hold PSB equity, appoint BBB as its board and leave it to appoint PSB boards, while also changing the law to give the RBI the same regulatory powers over PSBs as it has over private banks. It should appoint board members people of proven integrity and competence of each and every public sector bank. This will cut out political and bureaucratic meddling in appointments.
- The holding company structure will also strengthen both functional and operational autonomy even while the government retains a majority stake in the equity of the holding company.
- The BBB has recommended delinking compensation of bankers from those of civil servants. This makes eminent sense. The remuneration structure of senior bankers must be performance linked and comparable to what private sector counterparts earn. This would incentivise them to take commercial decisions and function independently. Such reform calls for overhaul of public sector banks beyond listening to the wise men of the BBB.

3.12. NITI Panel Recommends To Cut Gold Import Duty And Form Jewellery Parks

A committee, headed by Aayog principal adviser Ratan P Watal, highlighted the need for a regulatory body for the gold industry as it made 84 recommendations clubbed under 20 heads with a three month to one-year timeline for implementation.

Recommendations

- *Tax policy on gold:* According to the committee, tax policies should be so designed that it enabled migration of the largely MSME sector to an organised sector. These can be achieved by taking a decision on rationalizing the import duty on gold and gold dore as that would remove the arbitrage between Indian and international gold prices thus dis-incentivizing smuggling.

Reforming Gold Market
NITI AAYOG COMMITTEE MAKES 84 RECOMMENDATIONS

MAKE TAX policies to enable MSME sector to become organised sector

INCENTIVISE digital payments in gold transactions

INCLUDE GOLD industry under Tier 1 of Make In India Initiative

RATIONALISE Import duty on gold and gold doré

SET UP A GOLD Board of India and Bullion Exchange for Gold

GEMS AND JEWELLERY INDUSTRY SIZE: ₹6,50,000CR

- *Transparency in gold payments:* According to the committee, financialization of gold and incentivizing digital payments will bring about transparency in transactions and contribute towards India's savings rate. Financialization of gold is to integrate existing above ground stocks of gold into the financial system and real economy. Secondly, it will ensure that all future investment demand for gold is made in financial products that are backed by gold and not held as physical gold. Third, it will ensure that the economic value of an individual's gold holdings are realized (ex-loan against gold jewellery).

- *Make in India in Gold:* The committee also recommended that 'Make in India in Gold' initiative, would be desirable to include gold as one of the industries under Tier 1 of the Make in India initiative. Mining of gold should be actively pursued to the extent there are considerable gold reserves available in India. This would create additional employment in rural areas, add to domestic supply of gold and reduce the extent of gold that needs to be imported.

- *Gold refining:* It recommended that the gold refining and recycling industry needs to be incentivised as India has a cost advantage and can support refining for both domestic and global requirements.

- *Other recommendations:* The committee also suggested lowering of the import duty on gold, setting up of jewellery parks to encourage local manufacturing, making mining viable and financialization of the metal's holding among steps to transform India's gold market. It will get a parity of pricing of Indian and the global jewellery just making the exports competitive on prices. The government currently levies an import duty of 9.35% on gold doré.

- *Final recommendation:* Translation of the vision requires development of clusters, jewellery parks and common facility centres which would assist the development of the industry dominated by MSMEs.

3.13. SEBI Oks Kotak Panel Proposals To Boost Corporate Governance

In News

- *Introduction:* The Securities and Exchange Board of India (SEBI) approved sweeping changes proposed by the Uday Kotak panel on improving corporate governance standards such as splitting the post of chairman and managing director, tighter rules for independent directors, enhanced disclosure of related-party transactions and mandatory secretarial audits for listed entities and their material subsidiaries.

- *Committee:* The SEBI committee was set up in June 2017 to review corporate governance rules since the last such exercise had been conducted more than a decade before.

- *The acceptance of the recommendations:* Out of 80 odd recommendations 40 were accepted without modification, 15 with modifications, eight were referred to government and other departments. Most of the changes will be effective April 1, 2019 and April 1, 2020.

- *Two position:* The regulator has also proposed to effect the splitting of chairperson and managing

Raising Standards

Separate posts for chairperson and managing director	At least one woman Independent director in board
Shareholder nod for royalty payment to related party exceeding 2% of consolidated turnover	
Disclosure of utilisation of funds from QIP/ preferential issue	Reduced maximum no. of listed co directorship to 8 from 10
Disclosure of auditor credentials, audit fee and reasons for resignation of auditors	

OTHER PROPOSALS APPROVED

Congestion charges on algo trading for a prescribed slab	Reduced additional expense to be charged by MFs to 5 bps from 20bps
Physical settlement for all stock derivatives in a phased manner	
	Increased maximum investment amount in venture capital undertakings by an angel fund to ₹10 cr from ₹5 cr

director posts so that both are not held by one person from April 1, 2020 for the top 500 companies.

- *Women director:* The regulator said at least one-woman independent director should be appointed by companies. This will have to be done by April 1, 2019 by the top 500 companies.

- *Shareholder approval:* Besides, shareholder approval will be needed for making royalty or brand payments to related parties exceeding 2% of consolidated turnover.

- *Algo trading:* The board also approved the proposal to impose restrictions on algorithmic trading by introducing a congestion charge for a prescribed slab on trades, make co-location facilities affordable by allowing brokers to share them and provide tick-by-tick data feed to all trading members free of charge.

Conclusion

The acceptance of the recommendations is a good start. Now the step must be taken to bring Indian governance standards not only on par with the best in the world but take a leadership position as well.

4. INTERNATIONAL AFFAIRS

4.1. Sri Lanka Declared State Of Emergency Amid Violence

In News

- Sri Lanka had declared an island-wide state of emergency to curb growing anti-Muslim violence in the country's Central Province.

- The decision came in response to a series of arson attacks targeting dozens of mosques and Muslim-owned shops and homes in Kandy, located in the Central Province.

Key Highlights

- The latest rounds of violence were triggered when Muslim men were accused of killing a man belonging to the majority Sinhala Buddhist community in a road rage.

- The unrest in the Sri Lanka's central Kandy district started after the funeral of a truck driver when a Sinhalese mob attacked Muslim shops.

- In order to rein in the spread of communal violence, Sri Lanka declared a state of emergency for 10 days.

Analysis

- Although the latest rounds of violence seem to have been triggered by road rage incident, the reasons for this violence are much more deep-rooted.

- Tension has been growing between the two communities in Sri Lanka over the past year, with some Buddhist groups accusing Muslims of forcing people to convert to Islam and vandalising Buddhist archaeological sites.

- Some Buddhist nationalist have also protested against the presence in Sri Lanka of Muslim Rohingya asylum-seekers from mostly Buddhist Myanmar, where Buddhist nationalism has also been on the rise.

- Sri Lanka's population of 20 million consists of 10% Muslims. However, there is little or no cultural or religious links between the Sinhalese and the Muslims.

- Although Muslims live with the majority Sinhala population everywhere in the country, most Muslims cannot even speak the language of the majority in the country. The belief that Muslims are reproducing much faster than that of the other communities is common among the Sinhalese. This is one of the key issues of this conflict.

- Different mythological stories and legends strengthen Sinhalese Buddhist belief that Lord Buddha designated the island of Sri Lanka as a repository for Theravada Buddhism. It claims that the Sinhalese were the first humans to inhabit the island and are thus the true "sons of the soil". All of these legacies have had ramifications for the trajectory of political Buddhism and Sinhalese Buddhist nationalism.

- This provided space to the hardline Buddhists group Bodu Bala Sena's (BBS) to rise and spread anti-Muslim feeling. The International Crisis Group has already stated that the BBS's attacks on the Muslim community will lead to an increase in Islamic fundamentalism in the country.

Conclusion

- Declaring an emergency – which will permit security forces to be deployed in restive areas and conduct searches and arrests without warrant – will send a message of resolve to contain the violence.

- However, the government also needs to address the systemic cause of these interethnic riots and attacks. This means delivering on the promises made including at the United Nations Human Rights Council to address enforced disappearances, expedite land returns, and bring justice and redress to victims on all sides, including the often-forgotten Muslim minority.

- The government should also order an independent investigation into the violence and hold those responsible – even those belonging to influential Buddhist sects or with loyalties to powerful political leaders – to account.

- The government needs to protect the human rights of all ethnic groups to ensure that the ugly communal violence that presaged Sri Lanka's long civil war does not return.

4.2. Pakistan Elects Its First Dalit Woman Senator

In News

- Kirshna Kumari Kolhi from Pakistan's Sindh province has become the first-ever Hindu Dalit woman Senator in the Muslim-majority country.

- Kolhi from Thar is a member of Bilawal Bhutto Zardari-led Pakistan People's Party (PPP).

Key Highlights

- 39-year-old Kolhi won the election for the reserved seat for women from Sindh province.

- Kolhi belongs to a remote village in Nagarparkar district of Thar in Sindh province.

- Kolhi also actively participated and worked for the rights of downtrodden people of marginalised communities living in Thar and other areas.

- She is from the family of the valiant freedom fighter Rooplo Kolhi, who had waged a war against the invading British colonialist forces when they had attacked Sindh from Nagarparkar side in 1857. Subsequently, he was arrested and hanged by the Britishers on August 22, 1858.

- Her election represents a major milestone for women and minority rights in Pakistan.

- Earlier, PPP had elected first Hindu woman named Ratna Bhagwandas Chawla as a senator.

Hindus makeup just two percent of the total population of Pakistan and have long complained of victimisation. Hindu lawmakers have for long protested the forcible conversion of poor Hindu girls to Islam by some landowners and their religious leaders particularly in interior Sindh and Kolhi has also been working to highlight this problem.

4.3. Marshall Islands to Issue World's First Legal Tender

In News

- The Marshall Islands is all set to launch the world's first legal tender cryptocurrency.

- It will be world's first sovereign cryptocurrency that can be used as legal tender.

Key Highlights

- This cryptocurrency will be called Sovereign (SOV). The country's parliament passed a law to approve SOV as its new currency.

- The digital currency has been developed in partnership with Israeli startup Neema.

- This will be the nation's second federally recognized legal tender, on par with the US dollar.

- The government has scheduled an initial currency offering (ICO) for later this year to distribute SOV to residents of the island. In addition to free allocation of the digital currency to locals, the state will allow the participation of global investors afterward.

- The launch of the SOV is part of Government's much broader 'E-Conomy vision' which aims to establish an economy based on the extensive use of blockchain to manage the cryptocurrency, secure recorded biometric IDs, and later on the voting system, ownership, and even licensing.

- As a recognized national currency, SOV can be used to repay all debts in the Marshall Islands, including private and public loans.

- Half of the 24 million coins will go to the government and the other half to the Israeli financial technology startup helping with the plans.

- Six million SOVs will be made available to international investors, with the money raised used to help pay the budget, invest in anti-global-warming projects, and supporting people still affected by US nuclear testing. Residents will receive 2.4 million SOVs.

- Unlike most popular cryptocurrencies, such as Bitcoin or Ethereum, the SOV will require currency holders to identify themselves, hopefully avoiding problems of regulating an anonymous currency.

> Different from Petro cryptocurrency:
> - The launch of SOV follows Venezuela's launch of the Petro cryptocurrency in February. Investors supposedly shelled out $735 million (€600 million) for the oil-backed, sanction-skirting currency.
> - Unlike the Petro, the SOV will be recognized in law as legal tender, holding equal status as the US dollar, which is the Pacific island nation's current currency.

4.4. <u>Philippines To Withdraw From International Criminal Court</u>

In News

- The Philippines has announced its withdrawal from the International Criminal Court (ICC).

- The decision was announced by President Rodrigo Duterte after ICC prosecutors, in March 2018, opened a preliminary examination into the president's "war on drugs", which has led to the death of thousands since it began in July 2016.

- The Philippines is not the first country to quit the ICC. Burundi, Russia, South Africa and Gambia all moved to withdraw from the court.

Key Highlights

- The Southeast Asian nation has notified the United Nations secretary-general of its decision to withdraw from the ICC.

- The Philippine leader has cited "outrageous" attacks by U.N. officials on sovereignty of Philippine and violations of due process as reasons for its withdrawal.

- About 4,000 Filipinos have been killed by police in the past 19 months in a brutal crackdown that has alarmed the international community. Activists believe the death toll is far higher.

- Although the government of Philippines is terming this crackdown as war on drugs, however, international community has accused President Rodrigo Duterte of encouraging extrajudicial killings and other rights abuses in his bid to rid the country of drugs since his election in 2016.

- The bloody nature of the drugs crackdown has drawn the ire of advocates and international human rights authorities.

- The ICC announced in February it would begin a preliminary inquiry to determine whether an investigation was needed.

Background

- Mr. Duterte campaigned for president promising to eliminate drug traffickers and dump their bodies into Manila Bay.

- After taking office, he promised to protect the police from prosecution for killing drug suspects.

- The crackdown was initially popular, but deaths of three teenagers at the hands of police officers led to public anger and street protests. One of the teenagers was seen on CCTV footage being led away by officers before his death, though the police had said there was a shootout.

- Those killings forced Mr. Duterte to temporarily put the antidrug campaign in the hands of the Philippine Drug Enforcement Agency.

- But in December, he put the police back in charge, saying the drug problem could not be handled by the agency alone. Since then, the police have carried out almost nightly raids, and the number of deaths has continued to rise.

International Criminal Court (ICC)

- The ICC in The Hague has been part of the global justice system since 2002..

- It was established by Rome Statute and has been ratified by 123 countries. Some countries, like the US, have never joined due to concerns about ceding sovereignty to an international body.

- A number of important countries seem determined not to submit to the jurisdiction of the ICC. Some have not even signed the treaty, such as China, India, Pakistan, Indonesia and Turkey.

- Others, including Egypt, Iran, Israel and Russia, have signed but remain dubious and have not ratified. Only one Arab state has ratified so far - Jordan.

- The International Criminal Court (ICC) investigates and, where warranted, tries individuals charged with the gravest crimes of concern to the international community: genocide, war crimes, crimes against humanity and the crime of aggression.

- The ICC is meant to be a "court of last resort," a place to try dictators and other people who cannot be brought to justice domestically. As a court of last resort, it seeks to complement, not replace, national Courts.

- The ICC is not part of the UN, but the two bodies have a cooperation agreement.

- The court has automatic jurisdiction only for crimes committed on the territory of a state which has ratified the treaty; or by a citizen of such a state; or when the United Nations Security Council refers a case to it.

- The court has no retrospective jurisdiction - it can only deal with crimes committed after 1 July 2002 when the Rome Statute came into force.

- The court's first verdict, in March 2012, was against Thomas Lubanga, the leader of a militia in the Democratic Republic of Congo.

How Does The System Work

- The prosecutor begins an investigation if a case is referred either by the UN Security Council or by a ratifying state.

- He/she can also take independent action, but prosecutions have to be approved by a panel of judges.
- Both the prosecutor and the judges are elected by the states taking part in the court. Each state has a right to nominate one candidate for election as a judge.
- For a country to withdraw from the court, it must formally notify the United Nations secretary general of its decision. It will then be a year before this takes effect. Throughout that time, the country remains a full member of the court and the prosecution of any international crime that it is allegedly linked to can continue.

Criticism

- The ICC has been criticised, particularly by the African Union, for its focus on Africa. In the court's history it has only brought charges against black Africans.
- Although, the ICC denies any bias, pointing to the fact that some cases - such as the LRA in Uganda - were self-referred by the country affected, and some were referred by the UN.
- The ICC has no police force of its own to track down and arrest suspects. Instead it must rely on national police services to make arrests and seek their transfer to The Hague.
- The case of Mr Bashir (Sudanese President against whom the court had issued arrest warrant - the first against a serving head of state) illustrates the problem this can present for the court. Several ICC signatory countries, including Chad and Kenya, have refused to co-operate in his arrest.

4.5. Bidya Devi Bhandari Elected as Nepal President For Second Term

In News

- Nepal's first woman president Bidya Devi Bhandari has been re-elected for a second term in office.
- Incumbent President Bhandari defeated Nepali Congress leader Kumari Laxmi Rai with an overwhelming majority in the presidential election.
- Bhandari took nearly two-thirds of the vote to retain her position as ceremonial head of state as she was backed by the ruling Communist bloc.

Background

- She was first elected president in 2015, shortly after Nepal's post-war constitution was passed, which carves out one-third of seats in parliament for woman and mandates that either the president or vice president must be a woman.
- Her first 3 years in office have been largely uncontroversial. Although, critics say she has not done enough to advance women's rights in deeply patriarchal Nepal —though her role is largely ceremonial.
- Late last year she signed into law a revamp of the country's ancient penal code, which criminalises the dowry system and bans an old Hindu practice that banishes woman from the home while menstruating.

Presidential Election in Nepal

- The promulgation of Nepal's constitution in 2015 initiated Nepal's transition to a federal republic comprised of local, state, and federal governments.
- Elections for the 753 local-level governments, seven state assemblies and the House of Representatives (the lower house of the Federal Parliament) were completed in 2017, and the election of a National Assembly (the upper house of the Federal Parliament) was completed in February 2018.
- As under the new Constitution of Nepal, a new election law was developed, and due to the Nepalese election in 2017 an electoral college could be established, the election took place three years after the previous presidential elections despite the Term of office is actually 5 years.
- The President was elected by an electoral college composing of federal parliament and provincial

assembly members.

4.6.   Russian Presidential Election

In News

- Russian President Vladimir Putin won a landslide re-election victory by garnering 76.7 percent of the vote with more than 99 percent of precincts reporting.

- This would be his fourth term in the office (second consecutive term).

Background

- Putin was first elected Russian president in 2000 after the resignation of Yeltsin. He has remained the head of state for all but four years in the time since.

- He spent a four-year spell (2008–2012) as prime minister, as mandated by Russia's two consecutive term limit.

- In 2012, a constitutional amendment extended presidential term lengths from four to six years, which means that Putin could stay in power until 2024.

Major Issues In The Russian Election

- **Economic angst** - Soaring inflation and Western sanctions have bitten hard in Russia, where a recession led to real wage declines for each of the past three years.

- **Voter turnout** - Voters have scant incentive to show up for elections where the winner is a sure thing, and that's a concern for the Kremlin. The absence of a clear mandate for Putin would make Western accusations of Russian autocracy more difficult to refute.

- An embarrassing turnout could also dent Putin's prospects of holding onto power beyond a second consecutive term. The Kremlin's magic number is 70-70: that's 70% of the votes from a 70% turnout.

Criticism Of The Election Held Recently

- Golos, Russia's most independent election monitoring group, said it received dozens of complaints, reporting more than 2,500 electoral irregularities and violations across the country. The issues included several ballot boxes hidden from view of observation cameras and last-minute changes to voter registration lists.

- There were complaints about employers forcing or pressuring their workers to vote as part of an apparent effort by authorities to boost the turnout and hand Putin a clear mandate.

- France became the first Western country to openly criticize the vote, saying it would not recognize the results in Crimea due to Russia's illegal occupation of the peninsula.

- Critics alleged that officials had compelled people to come to polling booths to ensure that the one-sided contest did not prompt people to stay at home.

- Putin's most vocal critic, opposition leader Alexei Navalny, was barred from taking part in the race because of a criminal conviction that many believe to be politically motivated.

How Do Russians Vote

- There are almost 109 million eligible voters inside Russia for whom there are 94,500 polling stations across the country. An additional 1.8 million voters live abroad and 369 polling stations are based overseas.

- Voters simply need to check a box next to the name of their preferred candidate and submit the ballot.

- Candidates must attain more than half of the vote to win outright, otherwise the top two with the most votes will advance to the second round, which takes place three weeks later.

4.7.   African Continental Free Trade Area

In News

- The **Continental Free Trade Area (CFTA)** was given a green light at a special African Union summit in Kigali, Rwanda.

- Chaired by the current AU leader, President Paul Kagame of Rwanda and the chair of the AU Commission, Moussa F Mahamat, the session saw 44 of the 55 AU member states sign the deal.

- The CFTA will come into effect 30 days after ratification by the parliaments of at least 22 countries. Each country has 120 days after signing the framework to ratify.

Key Highlights

- The CFTA is expected to fulfil a major part of the integration efforts under Project 2063 of the AU.

- Objectives of the CFTA include:

  o Creation of a single continental market for goods and services, with free movement of business persons and investments, and pave the way for accelerating the establishment of the Continental Customs Union and the African customs union.

  o Expand intra-African trade through better harmonisation and coordination of trade liberalisation and facilitation regimes and instruments across RECs and across Africa in general.

  o Resolve the challenges of multiple and overlapping memberships and expedite the regional and continental integration processes.

  o Enhance competitiveness at the industry- and enterprise-level through exploiting opportunities for scale production, continental market access and better reallocation of resources.

- The agreement if signed by all 55 member states of the African Union, will bring together 1.2 billion people with a combined gross domestic product (GDP) of more than $2 trillion.

- The draft agreement commits countries to removing tariffs on 90 percent of goods, with 10 percent of "sensitive items" to be phased in later.

- The agreement will also liberalise services and aims to tackle so-called "non-tariff barriers" which hamper trade between African countries, such as long delays at the border.

Why A Single Market For Africa

- By creating a single continental market for goods and services, the member states of the African Union hope to boost trade between African countries.

- Intra-African trade is relatively limited; UNCTAD, the main UN body dealing with trade, said it made up only 10.2 percent of the continent's total trade in 2010.

- Colonialism created a situation where neighbours stopped trading with each other. The main trading route was between African countries and European countries and between African countries and the US.

- Removing barriers to trade is expected to not just grow trade within African but also grow "the kind of trade this continent needs".

Challenges

- Nigeria has not signed while South Africa has clarified that it needs to get its domestic rules in order. Nigeria is facing a protectionist backlash within as its oil revenues have dipped and it needs its manufacturing and services sectors to be protected.

- Some of the 10 absentees, however, did sign the Kigali declaration, which is the intent document, and this includes South Africa and Zambia.

- There is a fear that some of the more efficient economies in North Africa, which have French and other EU investment, could sap the domestic manufacturing sectors in larger African countries.

- Africa's most advanced countries are at an advantage with their more strongly developed manufacturing capabilities. Allowing them to sell their goods and services to the continent's less developed countries could undercut industrial development there.

- The treaty focusses too much on cutting tariffs, without sufficient consideration of the varying production capabilities of African countries.

Impact on India

- India could be a gainer if this agreement succeeds. India has already provided duty-free tariff preferences to African LDCs. This led to a spurt in Indian investment as well.

- Indian investors have been seen positively as they contribute the most to regional and intra-African trade. Their strength now could be leveraged and a common market would open more doors for Indian projects and investors, albeit also attract more competition.

- Our trade could rise by 12 per cent to 15 per cent on such efforts and our project implementation will need to be spruced up if we are to take better advantage of emerging opportunities.

4.8. Comprehensive and Progressive Agreement for Trans-Pacific Partnership

In News

- Eleven countries in the Pacific region have signed a major Asia-Pacific free trade agreement in Santiago, Chile. The agreement is called the **Comprehensive and Progressive Agreement for Trans-Pacific Partnership, or CPTPP**.

- The deal is a new version of the Trans-Pacific Partnership from which the U.S. withdrew last year.

Key Highlights

- CPTPP is a new free trade agreement between Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore and Vietnam. Once it enters into force, it will be one of the largest free trade agreements and will provide enhanced market access to key Asian markets.

- The deal is aimed at reducing import taxes and putting in place trade rules for member nations.

- The countries represent 500 million people and more than 13 percent of the world economy. With the U.S., the agreement would have covered 40 percent of the world economy.

- It will be world's third largest trade bloc after European Union (EU) and North American Free Trade Agreement (NAFTA).

- It will come into effect 60 days after 6 of 11-member countries ratify the agreement domestically.

Background

- After becoming President, Trump announced withdrawal of US from the original 12-member agreement, known as the Trans-Pacific Partnership (TPP). He said the move was aimed at protecting U.S. jobs.

- The 11 remaining nations finalized a revised trade pact in January. That agreement will become effective when at least six member nations have completed domestic procedures to ratify it, possibly before the end of the year.

CPTPP vs TPP

- The CPTPP incorporates, by reference, the obligations (rules and market access outcomes) contained in the original TPP agreement, except for the list of 22 original TPP provisions the application of which the parties have agreed to suspend upon entry into force of the agreement.

- Agreement of all CPTPP members would be needed for these provisions to take effect in the future.

- Some of the differences include:
  - Pharmaceutical companies are fully protected
  - Businesses cannot sue the Government for investment contract breaches
  - Financial Services claims reduced
  - Copyright term will stay the same
  - There are no data or market protection obligations for new medicines, including biologics
  - More flexibility around what is patentable
  - There are no patent term extension obligations
  - Government procurement processes unaffected
  - Negotiations to expand government procurement coverage delayed
  - No new laws for breaking digital locks on copyright works
  - No change to laws protecting rights management information
  - No obligations around the liability of internet service providers
  - No new laws for cable signals
  - Committed to stopping trade in endangered species
  - No obligation to review customs duties on express shipments
  - Telecommunications dispute regime unchanged
  - Disciplines on postal monopolies will be limited
  - National treatment in intellectual property is aligned with international rules
  - Commitment Starting Dates Adjusted

How Does The CPTPP Compare With RCEP

- The 16-nation Regional Comprehensive Economic Partnership (RCEP) covers nearly 3.5 billion people and account for a third of the world's gross domestic product. It is an Asean-led initiative that seeks to bring into its fold China, Japan, India, South Korea, Australia and New Zealand.

- Seven of them are also CPTPP members, namely Australia, Brunei, Japan, Malaysia, Singapore, New Zealand and Vietnam.

- The RCEP was conceived in 2012. If approved, the free trade agreement will be the largest trade bloc in terms of population. The RCEP countries make up 46 per cent of the global population and are worth 24 per cent of global GDP.

- Like the CPTPP, the RCEP also does not include the US.

- Unlike the CPTPP, the RCEP deal lacks protection for labour, human rights and the environment.

5. INDIA AND WORLD

5.1. Visit Of The King Of Jordan To India

In News

- The King of the Hashemite Kingdom of Jordan, King Abdullah II bin Al-Hussein visited India from 27 February-01 March 2018.

- During this visit, the two sides discussed the entire gamut of bilateral relations as well as regional and international issues of mutual interest.

Key Highlights

- The Jordanian King's visit to India came nearly three weeks after Indian PM travelled to Jordan as part of his trip to West Asia, including Palestine.

- During the visit, a number of MoUs were signed which include:

o **MoU on Defence Cooperation** - Purpose of the MoU is to promote cooperation between India and Jordan in the field of Defence by defining the scope of such cooperation and making provisions for implementation of the cooperation in some of the recognized areas like training; defence industry; counter-terrorism; military studies; cyber security; military medical services, peace-keeping etc.

o **Visa waiver for diplomatic and official passport holders** - This Agreement provides for permitting the diplomats and Official passport holders of India and Jordan to enter into, exit and transit through the territory of each other without requirement of visa.

o **Cultural Exchange Programme (CEP)** - This programme for the period 2018-2022 provides for exchanges between India and Jordan in the areas of music and dance; theatre; exhibition, seminars and conference; archaeology; archives, library, museum, literature, research and documentation; Science museums; festivals; mass media, and; youth programs.

o **Manpower Cooperation Agreement** - This MoU provides for cooperation between India and Jordan with a view to promote best practices in the administration of the cycle of contract employment of the Indian nationals in Jordan.

o **MoU for cooperation in the field of Health and Medicine between India and Jordan** - The objective of this MoU is to establish and encourage cooperation in the fields of health, medical science, medical education and research on the basis of equality and mutual benefits in accordance with respective legislations and regulations of India and Jordan.

o The various recognized areas of mutual cooperation include Universal Health Coverage (UHC); Services and IT in Health; Health Research; National Health Statistics; Diagnosis, Treatment and Medication of TB, and; Regulation of Pharmaceuticals and Medical Devices etc.

o **MoU for setting up of the next generation Centre of Excellence (COE) in Jordan** - Purpose is to set up next generation Centre of Excellence (COE) in Jordan for training of minimum 3000 Jordanian IT professionals over a period of 5 years, and setting up of resource centre in India for Training of Master trainers in IT field from Jordan.

o **MoU for long term supply of Rock Phosphate and Fertilizer/NPK** - Such an MoU ensures long term and sustained supply of rock phosphates to India.

o **Customs Mutual Assistance Agreement**

o **Twining Agreement between Agra and Petra (Jordan)** - By this Agreement, the two municipalities of Agra and Petra pronounced to work jointly for promotion of social relations by identifying the activities for mutual cooperation in tourism, culture, sports and economic sectors.

- o **Cooperation between Indian Institute of Mass Communication (IIMC) and Jordan Media Institute (JMI)**
- o **MoU between Prasar Bharati and Jordan TV**
- o **MoU between University of Jordan (UJ) and ICCR regarding setting up of a Hindi Chair at the University**

Significance Of This Visit From India's Point Of View

- India is putting in significant diplomatic capital by engaging key Islamic countries on de-radicalisation. Known to be against Islamic extremism, King Abdullah could be of great help to India in counter-terror operations. Although on Kashmir issue, Jordan has held a very neutral position since 1970.

- Being a leading voice on moderation in Islam, his special address on 'Promoting Understanding and Moderation', organised by India Islamic Center, in Delhi, could be of great importance to strengthen internal security in India.

- From perspective of defence cooperation, India and Jordan are currently in process of negotiating a defence framework agreement. Abdullah's visit is expected could fast track the exercise.

- Jordan is not only a harbinger of stability in a volatile Palestine region but is also among the few Muslim majority countries having diplomatic ties with Israel, India's strongest ally in middle-east.

- With Abdullah's support, India can deepen security ties with Jordan to leverage its unique strategic location in the Levant, with access to the Red Sea and the eastern Mediterranean.

- Jordan also plays an important role in India's food security through provision of fertilisers and phosphates. Indian investors have taken advantage of Jordan's free trade agreements with the US and are trying to make it a hub of textile exports.

- This visit also provide an opportunity for leaders of both the countries to explore ways of deepening trade ties, which holds importance as twenty textile industries from India have invested around USD 300 million in Jordan.

India-Jordan Relations

The 3 day visit by King Abdullah II bin Al-Hussein of Jordan to India starting Feb' 27, 2018 is testimony that India's "Think West" policy, like its "Act East" initiative, is progressively getting robust and vigorous.

Background

- India and Jordan established diplomatic relations in 1950 after India became a Republic, although the first bilateral agreement on cooperation and friendly relations was entered into soon after Indian independence in 1947.
- The exchange of bilateral visits at high political and senior official levels declined significantly after King Abdullah's productive visit in 2006. The relationship has failed to realize the huge, untapped potential.
- Recent years have, however, witnessed a decisive impetus to the bilateral partnership. The first ever visit by an Indian Head of State to Jordan took place in 2015.
- Prime Minister Modi's visit to Jordan in early February 2018 occurred 30 years after Prime Minister Rajiv Gandhi's visit to Amman in 1988.

Political Ties

- Both India and Jordan face the common threat of terrorism and extremism. King Abdullah has established himself as a staunch opponent of Takfiri ideology - the so-called radical practice of declaring one's enemies to be infidels – which has earned him wide respect and support around the world.
- He has recently launched the Aqaba process to promote deradicalisation in which India is an active

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participant.

- During her visit to India in 2006 accompanying King Abdullah II, Queen Rania had described India as the "rising star of Asia" and Jordan's "natural partner".
- On India's role in the Middle East, she had stated that the region "yearns for India to play a greater role", and added that "India has an important role because you have always had contact with us and understand our sensitivities."
- The refrain for India to play a more decisive and resolute role to bring peace and stability to West Asia has risen further in recent years, not only from Jordan but from several other countries from different sides of the divide.

Economic Relations

- India is Jordan's fourth largest trade partner after Iraq, Saudi Arabia and China. Bilateral trade totalled USD 2.2 billion in 2014-15.
- India exported 1.4 billion worth of goods to Jordan, and imported 857 million. Since 2012-13, the balance of trade has been in India's favour.
- Trade volume over the last two years has declined on account of weak international performance. A target of USD five billion has been set for 2025.
- Jordan Phosphate Mines Company (JPMC) and Indian Farmers Fertilisers Cooperative (IFFCO) established a joint venture project worth USD 860 million for manufacturing Phosphoric Acid.
- As of January 2016, Indians owned around 25 textile mills in Qualified Industrial Zones (QIZs) in Jordan at a total investment of USD 300 million.
- These mills employ over 10,000 people. ICT, renewable energy, financial/banking services, leather, automobile, higher education, tourism, Bollywood, pharmaceuticals and construction sectors present good potential for increased trade and investment.

Conclusion

- Terrorism, lack of employment opportunity, weak governance, conflicts and civil war are depriving the region and its people of their right to live in peace and prosperity. India and Jordan can collaborate effectively to mitigate the adverse impact of these negative developments.
- The rapidly transforming political and security dynamics in the Middle East with US President Donald Trump cozying up to Saudi Arabia and coming out openly in support of Israel while making threatening pronouncements about jettisoning the nuclear deal with Iran have introduced major uncertainties in the region.
- The Shia-Sunni divide between Iran and some Sunni states led by Saudi Arabia and the Israel-Iran rift have forced countries to look around for reliable and trustworthy partners. Under these circumstances, India, which is one of the few countries that maintains strong and vibrant ties with Washington DC, Riyadh and Tel Aviv as well as with Tehran, Abu Dhabi and Moscow, has emerged as a partner of choice for several countries in the region. Jordan is one of the few countries in West Asia that maintains diplomatic relations with Israel and has cordial relations with the West as well as its neighbours.
- India and Jordan can be termed as natural allies as both countries are peaceful, stable and are witnessing rapid economic growth and have similar positions on regional and global affairs.

5.2. Know India Programme

In News

- Forty Indian-origin students from nine countries met Railways Minister Piyush Goyal as part of Know India Programme (KIP).

- The programme is an initiative of the central government to engage with the Indian diaspora in the age group of 18 to 30 years.

- The KIP — a 25-day orientation programme — is organised by the Ministry of External Affairs in partnership with one or two states. The participants are selected on the basis of nominations received and recommendations of Heads of Indian Missions/Posts.

- As part of the 46th KIP, the participants visited Madhya Pradesh as the partner state.

About The KIP

- Know India Programme (KIP) is a flagship initiative for Diaspora engagement, which familiarizes Indian-origin youth (18-30 years) with their Indian roots and contemporary India, through a three-week orientation programme organised by the Ministry.

- In 2016, the scheme was revamped to increase duration from 21 to 25 days, with a 10-day visit to one or two States and preference given to PIOs from Girmitiya countries.

- A maximum of 40 Indian Diaspora youth are selected for each programme and provided full hospitality in India. 90% of the total cost of international airfare is also paid by the Ministry. The entire process of applying, processing etc. is now through a portal (kip.gov.in).

5.3. India-Pakistan Diplomatic Tussle

In News

- India and Pakistan have traded charges of harassing diplomats against each other.

- Recently, Islamabad had called back its High Commissioner to India Sohail Mahmood for consultations after alleged incidents of harassment of its diplomatic staff in New Delhi.

Background

- The diplomatic fix is said to have started after India lashed out at Pakistan at the 37th session of the UN human rights council, where it accused Pakistan of protecting terrorists. The gunfight on the border had also escalated tensions between the two countries.

- Indian diplomats in Pakistan allege that India's residential complex was not only illegally raided by Pakistani agencies, but power and water supply were also cut off for over two weeks.

- High Commissioner Ajay Bisaria alleges harassment by the Pakistani security agencies. Reportedly, Pakistani agencies had recently stopped Bisaria's car in the middle of a busy road to prevent him from attending a lunch the Bohra community had hosted in Karachi.

- The Indian diplomats accuse the Pakistani side of intruding their private space with aggressive surveillance. They further allege that the diplomats stationed in Islamabad have been receiving obscene phone calls and messages.

- The Pakistani diplomats have accused the Indian security personnel of following them. They further allege that even their wives and kids are being followed.

- Pakistani diplomats have claimed that in one such incident of harassment, a Pakistani diplomat's kid was stopped on his way to school and the driver was harassed by the Indian security agencies.

- The ongoing tussle between diplomats serving in both countries came merely days after Pakistan agreed to the Indian proposal to exchange elderly, women and mentally unstable prisoners.

Analysis

- Between two countries, some laws are followed assiduously even in the times of war. One of them include diplomatic norms.

- However, India has so far issued 17 note verbales, protesting against incidents of harassment, while Pakistan has claimed 52 such incidents in just 15 days between March 7 and 22.

- Whether it is cross-firing across LoC between the armies or harassment of diplomats in respective capitals, none of these incidents are new. Prior to 1997, such incidents were regular features.

- The incidents had almost stopped when Inder Kumar Gujral became prime minister in 1997. Known for his expertise in foreign affairs and more particularly Pakistan affairs, he issued strict instructions to security agencies involved in counter espionage to avoid targeting diplomats unnecessarily. The gesture was reciprocated in Islamabad.

- But now, the recurrence of such incidents after 21 years is a matter of concern. This only shows the **extent of communication breakdown** between the two nuclear-armed neighbours.

- It is not just diplomats alone. Media persons stationed in the respective capitals too have borne the brunt of the hostilities between India and Pakistan.

- It is high time for two neighbours to learn to behave like mature nations. If diplomats are subjected to such harassment and thrown into a situation of helplessness, how can they infuse confidence in relations and help people?

Current Status

- India and Pakistan has mutually agreed to resolve matters pertaining to the treatment of diplomats by both sides.

- The matter would be resolved as per 1992 Code of Conduct for the treatment of diplomatic/consular personnel in India and Pakistan.

- According to code of conduct, two countries will ensure "smooth functioning of their diplomatic and consular officials in conformity with recognised norms of international law and practice".

- The two governments will also ensure that there is "no violation of privileges and immunities of their diplomatic and consular officials" and there should be "no offences against their dignity and person".

5.4. Vietnam President Visit to India

In News

- Vietnam President Tran Dai Quang visited India on invitation of his Indian counterpart Ram Nath Kovind.

- The three-day visit was aimed to strengthen their partnership to ward off China's growing influence.

Background

- PM Narendra Modi had visited Vietnam in 2016. The two countries had signed 12 agreements in a wide range of areas covering IT, space, double taxation and sharing white shipping information.

- India also extended a USD 500 million Line of Credit to Vietnam for facilitating deeper defence cooperation between the two sides.

- In 2017, India and Vietnam celebrated 45 years of its diplomatic ties.

Key Highlights Of The Visit

- The delegation level talks between Vietnam and India reflected the significant deepening of bilateral relations and enhanced multidimensional engagement since the successful visit of Prime Minister

Modi to Vietnam in 2016 and elevation of the relationship to a Comprehensive Strategic Partnership between the two countries.

- Both sides expressed their satisfaction at the excellent state of Comprehensive Strategic Partnership between the two countries, and commended various commemorative activities held in both countries in the Year of Friendship 2017 to celebrate the forty-fifth anniversary of diplomatic relations and tenth anniversary of the Strategic Partnership.

- President Tran Dai Quang lauded the organising of the "Vietnam Days in India" on this occasion which concluded successfully the Year of Friendship.

- MoUs signed between the two countries include:

o MoU on Economic and Trade Cooperation - The purpose of the MoU is to establish a framework for enhancing economic and trade promotion.

o Work Plan for the years 2018-2022 between the Indian Council of Agricultural Research (ICAR) and Ministry of Agriculture and Rural Development of Vietnam. The purpose of this Work Plan is to promote cooperation in transfer of technology and exchange of visits of technical experts in the fields of agriculture and allied.

o MoU on Cooperation between the Global Centre for Nuclear Energy Partnership, India (GCNEP) and the Vietnam Atomic Energy Institute (VINATOM). The purpose of the MoU is to strengthen the technical cooperation in the field of atomic energy for peaceful purposes.

Defence And Security

- Both sides agreed to operationalise of the Memorandum of Understanding signed between the National Security Council Secretariat of India and the Ministry of Public Security of Vietnam and initiate the Deputy Ministerial level dialogue to enhance cooperation in traditional and non-traditional security matters and undertake training and capacity building programmes.

- Both sides agreed to expedite the implementation of the US$100 million Line of Credit for building of high-speed patrol boats for the Viet Nam Border Guards and urged for early signing of a framework agreement on the US$ 500 million Line of Credit for defence industry.

- Both sides agreed to further enhance defence ties, including through exchanges of senior level defence delegations, regular senior level dialogues, cooperation between the two armed forces, port calls of naval and Coast Guard ships, capacity building projects, procurement of equipment, transfer of technology and cooperation in regional fora, including ADMM plus.

- In the spirit of the proposal for an ASEAN-India Strategic Dialogue on Maritime Cooperation made at the Commemorative Summit held in New Delhi in January 2018, the two sides agreed to further promote Viet Nam-India bilateral consultation on maritime issues.

- The two sides further agreed that they would cooperate in building a strong consensus for early adoption of the Comprehensive Convention on International Terrorism (CCIT).

Economic Relation

- Both sides agreed that enhancing strong trade and economic engagement is a strategic objective, a core element of the Comprehensive Strategic Partnership and are essential for strengthening bilateral ties.

- In order to realize potential to both increase the volume of trade and diversify its composition, they requested the relevant ministries and agencies on both sides to explore substantive and practical measures to achieve the trade target of US$15 billion by 2020, including but not limited to utilising

established mechanisms, strengthening exchanges of trade delegations, business-to-business contacts, regular organisation of trade fairs and events.

- The two sides agreed to intensify cooperation to increase productivity, quantum and content of science and technology in agricultural products.

Development Cooperation

- India has increased scholarships to Vietnamese students, researchers, academic professionals and government officials, especially through the Indian Technical and Economic Cooperation (ITEC) programme, the Mekong - Ganga Cooperation (MGC) framework, as well as the projects under the fund of Quick Impact Projects (QIPs), etc.

- Prime Minister Modi had announced at the ASEAN-India Commemorative Summit in January 2018 of undertaking a pilot project on rural connectivity in the CLMV countries which would create Digital Villages and for offering 1,000 fellowships to students and researchers from the ASEAN member states for studying integrated PhD programmes in Indian Institutes of Technology.

Energy Cooperation

- President Tran Dai Quang welcomed Indian businesses to expand their oil and gas exploration and exploitation activities on land and in the continental shelf and Exclusive Economic Zone (EEZ) of Viet Nam and to this effect suggested that relevant Indian companies file concrete proposals for the blocks offered by the Vietnamese side.

- Both sides agreed to actively pursue the signing of a Memorandum of Understanding on collaboration in oil and gas exploration projects in third countries.

- Vietnam thanked India for extending support to Viet Nam in building a research reactor for the purpose of peaceful uses of atomic energy.

- The Vietnamese side took note of the request by the Indian side on actively considering signing the Framework Agreement of the International Solar Alliance with a view to strengthening the cooperation in the renewable energy space.

Connectivity

- The Indian side urged Viet Nam to utilise various initiatives of India for CLMV countries, including the US$1 billion line of credit for physical and digital connectivity projects.

- The two sides agreed to explore the possibility of extending the India-Myanmar-Thailand Trilateral Highway further to Viet Nam through Cambodia and Lao PDR.

- The two sides stressed the importance of the early signing of an ASEAN-India Maritime Transport Cooperation Agreement. They sought acceleration of the establishment of direct shipping routes between the sea ports of India and Viet Nam.

- They also welcomed the commencement of direct flights between New Delhi and Ho Chi Minh City during the visit and urged the airlines of both countries to soon open more direct flights between major cities of the two countries.

Regional Cooperation

- Underscoring the significance of sub-regional frameworks in strengthening bilateral cooperation and complementing regional cooperation through ASEAN frameworks, both agreed to optimally develop and utilise existing sub-regional frameworks, especially the Mekong-Ganga Economic Corridor.

Multilateral Cooperation

- Both sides reaffirmed their mutual support for each other's candidatures as non-permanent members of the United Nations Security Council- Viet Nam for the term 2020-2021, and India for the term 2021-2022. The Vietnamese side reiterated its consistent support for permanent membership of India in a reformed Security Council.

- They also reiterated the importance of, and the need for complete compliance with international law, notably the United Nations Convention on the Law of the Sea 1982 (UNCLOS), including the implementation of international legal obligations in good faith, the maintenance of freedom of navigation and over-flight in the South China Sea.

- Both leaders welcomed the adoption of the 2030 Agenda for Sustainable Development and reiterated their commitment to the realisation of the Sustainable Development Goals (SDGs).

5.5. Visit Of President Of The French Republic To India

In News

- President of the France, H.E. Mr. Emmanuel Macron Visited India from 9-12 March 2018.

- The last visit of the French President to India was in January, 2016, when the French President was the Chief Guest at the Republic Day celebrations. The Indian Prime Minister last visited France in June 2017, immediately after President Macron was elected President.

- The visit of President Macron is aimed at strengthening the bilateral economic, political and strategic dimension of our engagement.

Key Highlights

- The two leaders co-hosted Founding Summit of International Solar Alliance in Delhi in March 2018.

- On the occasion of the 20th anniversary of the strategic partnership between India and France, the first to be established by India, the two leaders reaffirmed their commitment to furthering it and decided to take it to a new level by agreeing to hold biennial summits between the Prime Minister of India and the President of the French Republic.

- List of MoUs/Agreements signed includes:

o Agreement between India and France on the Prevention of Illicit Consumption and Reduction of Illicit Traffic in Narcotic Drugs, Psychotropic Substances and Chemical Precursors and Related Offences - The Agreement shall facilitate the two countries in combating illicit traffic and consumption of drugs and will also impact on financing of terrorism.

o India-France Migration and Mobility Partnership Agreement - It will facilitate temporary circular migration based on mobility and the encouragement for a return of skills to the home country.

o Agreement between India and France to facilitate Mutual Recognition of Academic Qualifications - The purpose of this Arrangement is to facilitate the mutual recognition of educational qualifications.

o MoU between Ministry of Railways and SNCF Motilities, France on technical cooperation in the field of Railways - The purpose of this MoU is to build upon and deepen the mutual cooperation and focus on priority areas of high speed and semi-high speed rail; station renovation modernisation of current operations and infrastructure; and suburban trains.

o Letter of Intent between India and France for creation of a permanent Indo-French Railways Forum

o Agreement between India and France regarding the provision of reciprocal logistics support between their Armed Forces

- o MoU between India and France on cooperation in the field of Environment - The MoU aims to establish a basis for exchange of information between the Governments and technical experts of the two countries in the field of environment and climate change.

- o Agreement on cooperation in the field of Sustainable Urban Development

- o Agreement between India and France regarding the exchange and reciprocal protection of classified or protected information

- o Implementing Arrangement between Indian Space Research Organisation (ISRO) and Central National D'EtudesSpatiales (CNES) for pre-formulation studies of a Maritime Awareness Mission – The Agreement would provide end-to-end solution for detection, identification and monitoring of vessels in the regions of interest for France and India.

- o Bilateral Arrangement between India and France on cooperation in the matter of Hydrography and Maritime Cartography

- o Credit Facility Agreement between India and France of Euros 100 million for funding of the Smart City Projects through a Challenge Process

- o Memorandum of Understanding between National Institute of Solar Energy (NISE), Ministry of New & Renewable Energy and the National Solar Energy Institute (INES), France

- • Strategic Partnership:

- o Both side has signed an "Agreement between the Government of the Republic of India and the Government of the Republic of France regarding the Exchange and Reciprocal Protection of Classified or Protected Information", reflecting the high level of strategic trust between the two countries. Both sides also agreed to create an annual defence dialogue at the ministerial level.

- o Both countries have released the "Joint Strategic Vision of India-France Cooperation in the Indian Ocean Region", as a guiding beacon for partnership in maritime domain.

- o An "Agreement between the Government of the Republic of India and the Government of the Republic of France for the provision of reciprocal logistics support between their Armed Forces" has been signed.

- o This agreement seeks to extend logistical support on reciprocal access to respective facilities for Indian and French armed forces. The agreement is symbolic of the strategic depth and maturity reached in India-France defence ties.

- o Both sides noted ongoing discussions between DRDO and SAFRAN on combat aircraft engine and encouraged necessary measures and forward looking approaches to facilitate early conclusion.

- o The two leaders in addition to pursuing the excellent cooperation between the intervention forces (NSG-GIGN) and the investigation agencies of the two countries, agreed to enhance operational cooperation between the Indian and French counter-terrorism agencies and launch a new cooperation effort to prevent and fight radicalization, in particular online.

- o They also agreed to strengthen counter-terrorism in Multilateral Fora such as UN, FATF, G20 etc.

- o In pursuance of the 2008 Agreement on the Development of Peaceful Uses of Nuclear Energy between India and France as well as the January 2016 roadmap of cooperation, both side concluded Industrial Way Forward Agreement between NPCIL and EDF for the Implementation of six nuclear power reactor units at Jaitapur, Maharashtra, India.

- • Space Cooperation -

- o Both countries signed the "India-France Joint Vision for Space Cooperation" which spells out the concrete areas of future cooperation in this field.

o They acknowledged, in particular, the ongoing cooperation between their space agencies to realize the third joint satellite mission – TRISHNA, meant for eco-system stress and water use monitoring and also accommodation of French instrument on India's OCEANSAT-3 satellite.

- Economic Exchanges –

o Both sides noted with satisfaction the growth in bilateral trade during the recent period, and expressed their desire that this momentum be sustained with the aim of raising trade in goods to 15 billion euros by 2022. They encouraged SMEs and mid-cap companies to play a growing role in the economic and commercial exchanges between the two countries.

- Educational and S&T Cooperation –

o Both countries signed an agreement for the mutual recognition of degrees, which will facilitate the pursuit of higher education by Indian students in France and French students in India and enhance their employability.

o Both leaders welcomed the holding of the Knowledge Summit, the first Indo-French conference on research and higher education, in New Delhi on 10th and 11th March 2018.

o In order to expand the scope and content of the bilateral cooperation in science, technology and innovation, the leaders emphasized the need to convene the Joint Committee on S&T in 2018.

- Cultural Exchanges – Noting the importance of literature in the promotion of friendly relations between the two countries, the leaders welcomed the participation of India as a Guest of Honour in the 42nd edition of 'Salon du Livre de Paris' (French Book Fair) in the year 2020. Reciprocally, France will participate as a Guest of Honour in New Delhi World Book Fair in 2022.

India-France Joint Vision for Space Cooperation
- To enable and guide the future direction of bilateral strategic partnership in space, India and France have agreed on a Joint Vision for Space Cooperation. The vision includes:
o Bringing societal benefits of space technology
o Imaging Earth in high resolution
o Space domain and situational awareness
o Addressing the Global Challenges including climate change
o Cooperation in satellite navigation and related technologies
o Exploring the solar system and beyond
o Cooperation on Space Transportation Systems
o Developing technologies for human exploration of the universe
o Cooperation on International issues
- India and France undertake to implement and take forward their cooperation in the above agreed areas through suitable existing or new joint mechanisms, including with inter-agency representations, led by ISRO and CNES respectively. The progress and outcomes will be reported to the bilateral Strategic Dialogue for review and assessment.

5.6. Visit of President of Germany to India

In News

- Dr. Frank-Walter Steinmeier, President of Germany, visited India on March 22-25. This was his first visit to India as the President of Germany.

- The last German President to visit India was Joachim Gauck in Feb' 2014. This visit was significant as it was President's first visit after the new German Government was sworn in on March 14, 2018.

Background

- After having established Strategic Partnership since 2000, successive Governments on the two sides have endeavoured to broaden and deepen this relationship.

- This has found expression in having biennial Summit level Inter-Governmental Consultations (IGC), which Germany has with select countries only.

- India-Germany bilateral economic cooperation has been robust. Germany is India's largest trading partner in Europe and the 6th largest trading partner in the world.

- India was ranked 24th in Germany's global trade. India's current priorities in most areas match with German expertise, such as renewable energy, skills development, Smart City, water & waste management, cleaning of rivers, railways, etc. These could be synergised for tangible, result-oriented outcomes.

- In 2016-17 the bilateral trade turnover was US$ 18.76 billion. In 2016-17, India exported goods worth US$ 7.18 billion to Germany and imported goods worth US$ 11.58 billion.

- Germany is the 7th largest foreign direct investor in India. Cumulative German FDI in India from April 2000 to December 2017 is USD 10.71 billion or 2.91% of total FDI.

5.7. Visit of President Of India to Mauritius

In News

- The President of India visited Mauritius on March 11 -14. He has been invited as the Chief Guest to the commemorative events marking the 50th anniversary of the independence of Mauritius.

- The visit is part of India's continuing engagement with the Government of Mauritius at the highest level. Given our special and unique relationship built on the foundation of a strong diaspora linkage, the visit will provide further momentum to our bilateral engagement.

Key Highlights

- India announced a new Line of Credit of USD 100 million for defence procurement by the Government of Mauritius. It offered a Multi-Purpose Offshore Patrol Vessel (MPOPV) to Mauritius to augment its security capacity. This would be financed through the new defence LOC announced today, and also with an additional grant component of USD 5 million.

- The other Agreements/MoUs exchanged were:

o an MoU on cooperation between Nalanda University in Bihar and Mauritius;

o an MoU on the establishment of an Ayurveda Chair at the University of Mauritius;

o an MoU between the Union Public Service Commission (UPSC) in India and the Public Service Commission of Mauritius, whereby the UPSC will provide necessary assistance for capacity building to its Mauritian counterpart;

o an agreement to facilitate cultural exchanges between the two countries.

- Indian President also inaugurated World Hindi Secretariat. The 11th World Hindi Conference will be held in Mauritius, and it is the only country apart from India which is hosting the conference for the third time. Hindi gets the push as it would help keep alive the diasporic ties.

- The President also laid foundation stones for two important, India-aided projects—a social housing scheme and an ENT hospital.

Significance of Mauritius for India

- The relationship between India and Mauritius is a multi-dimensional relationship that remains embedded in a rich shared past, but continues to pulsate in the living present and points to a shining future.

- The multilayered ties between India and Mauritius are reflected in the National Day of Mauritius on March 12, which celebrates the launch of the salt satyagraha by Mahatma Gandhi 85 years ago, a revolutionary step that culminated in the freedom of India in 1947 and provided inspiration to Mauritius that became independent in 1968.

- Mauritius' importance in the new India government's foreign policy was more than clear as then Prime Minister Navinchandra Ramgoolam was the only non-SAARC leader to be invited for the swearing-in ceremony of Prime Minister Modi in New Delhi in May 2014.

- **Strategy and Defence** - With its strategic location, Mauritius forms the lynchpin of India's vision of the Indian Ocean as a zone of peace and security. India has forged extensive defence relations with Mauritius to safeguard sea lanes of communication, which trawls over 70 per cent of India's energy imports, from depredations of terrorists and pirates.

- The growing presence of China in IOR also increases the importance of Mauritius for India

- With its multifarious relations with Africa, India also sees Mauritius as a gateway to a vibrant and resurgent continent. Mauritius, with membership of regional economic communities (RECs) such as SADC and COMESA, is a key plank for accelerating India's economic and strategic engagement with Africa.

- **Indian Diaspora** – In Mauritius, 68% of the 1.296 million people are people of Indian Origin. It all started on November 2, 1834 when the first batch of Indian labourers arrived in the island country aboard MV Atlas to work on sugar plantations. Mauritius now celebrates November 2 every year as the 'Apravasi Divas.'

- **Business Matters** - India is Mauritius' largest trading partner, and has been the largest exporter of goods and services to Mauritius since the last eight years. Mauritius has been the single largest source of Foreign Direct Investment (FDI) into India.

5.8.   Visit of President of India to Madagascar

In News

- The President of India visited Madagascar on March 14 on the second leg of his two-nation state visit to Africa and the Indian Ocean Region.

- This is the first ever visit by a President or Prime Minister of India to this country.

Key Highlights

- The President of India was conferred the Grand Cross of the Second Class by the President of Madagascar. This is the highest honour Madagascar bestows on a non-citizen. This special gesture will go a long way in strengthening warm and friendly relations between the two countries.

- List of MoUs/Agreements signed during the visit included:

o MoU on Cooperation in the Field of Defence - The purpose of the MoU is to establish a framework to strengthen the existing bilateral relationship through defence co-operation and to promote co-operative activities in the field of defence.

o MoU on Cooperative Marketing Arrangements - The purpose of the MoU is to make addition to the existing Air-Service Agreement for cooperative marketing arrangements.

- India gifted the "Bhabha-tron", a cancer therapy machine, to Madagascar for improving healthcare facilities.

- To facilitate its financial assistance programme, India has decided to offer Madagascar a USD 80.7 million LoC for agriculture and mechanisation.

- The defence agreement between the two countries focuses on friendly visits by Indian ships to Madagascar, and capacity building and training of Madagascar's personnel.

- The Indian President inaugurated the Centre for Geo-informatics Applications in Rural Development. This Centre will support communities in Madagascar in using geospatial technologies for a host of applications in rural development, and will strengthen bilateral cooperation in agriculture and related areas.

Background

- India established a consulate general in Madagascar in 1954 which was upgraded to an Embassy in 1960 upon Madagascar's independence.

- Madagascar is the fourth largest island in the world. The country is strategically located in India's extended neighborhood in the Indian Ocean along Mozambique Channel.

- Madagascar is blessed with incredible bio-diversity. It holds about 4 percent of the world's bio-diversity and has enormous natural and mineral resources including Nickel, Cobalt, Graphite, Iron ore, precious and semi-precious stones and is the largest producer of Sapphire in the world.

- There are also recent discoveries of oil in Madagascar which have generated immense interest.

- The country is also a member of major regional bodies that is common market for East and Southern Africa. SADC which is Southern African Development Community, Organization of Francophone Countries, AU as well as WTO.

- Madagascar is a member of International Solar Alliance family and has both signed and ratified the ISA instrument. India has been providing aid assistance in the form of disaster relief and Malagasy candidates have been attending capacity building and training programs in India.

- As far as trade and economic relations are concerned, Madagascar is a beneficiary of duty-free tariff preference scheme of India.

- Our total bilateral trade as of now is not huge, it is roughly $330 million but there is tremendous potential for further growth. Indian companies have been investing in mining, telecom and health sector and are keenly watching the emerging opportunities in Madagascar.

- Under our cultural outreach program we have had the first ever festival of India in Madagascar in 2015 and this year for the first time a large group from Madagascar also participated in the International Surajkund Crafts Mela.

- As regards diaspora there are about 15 -20 thousand persons of Indian origin in Madagascar who are contributing greatly to the Malagasy economy and their contribution is appreciated by Madagascar at all levels.

- Madagascar has extended support to India in various multilateral forums and is an important member of Indian Ocean Rim Association and the India Ocean Naval Symposium.

5.9. MoU between India and South Asia Cooperative Environment Programme

In News

- The Union Cabinet has approved signing of a Memorandum of Understanding (MoU) between India and South Asian Cooperative Environment Programme (SACEP) for cooperation on the response to Oil and Chemical Pollution in the South Asian Seas Region.

- It intends to promote closer cooperation between India and other maritime nations comprising the South Asian seas region namely Bangladesh, Maldives, Pakistan and Sri Lanka for protection and preservation of marine environment in the region.

Key Highlights

- Indian Coast Guard (ICG) will be the Competent National Authority and national operational contact point for implementation of "Regional Oil Spill Contingency Plan" under the MoU and shall respond to oil and chemical spills on behalf of Government of India.

- Further, ICG Maritime Rescue Coordination Centres (MRCCs) will be the national emergency response centre for marine incidents.

About SACEP

- South Asia Co-operative Environment Programme (SACEP) is an inter-governmental organization, established in 1982 by the governments of South Asia to promote and support protection, management and enhancement of the environment in the region.

- SACEP member countries are Afghanistan , Bangladesh , Bhutan , India , Maldives , Nepal , Pakistan and Sri Lanka.

- The SACEP was created to fulfill a vision based on the following three assumptions

o Recognition of environmental degradation caused by factors like poverty, over population, over consumption and wasteful production threatening economic development and human survival,

o Integration of environment and development as essential prerequisites to Sustainable Development, and

o Importance of co-operative action in the South Asian region where many ecological and development problems transcend national and administrative boundaries.

- Since its creation, SACEP has implemented a number of projects and programmes in the areas of environment education, environment legislation, biodiversity, air pollution, and the protection and management of the coastal environment. SACEP is also secretariat for the South Asian Seas Programme.

6. **SUMMITS AND ORGANISATION**

6.1. **Arctic Seed Vault**

In News

- In February 2018, the Svalbard Global Seed Vault in Norway celebrated the 10th anniversary of its official opening.

- The Norwegian government has planned to spend about $13 million to upgrade the vault.

- On February 27, the Svalbard Global Seed Vault in the Arctic Circle got a delivery of more than 76,000 seed batches from gene banks in 22 countries.

Key Highlights

- The Svalbard Global Seed Vault is meant as a natural deep freeze to back up the world's gene banks in case of disasters ranging from nuclear war to global warming. It has about 900,000 seed samples.

- The vault is not exactly at the North Pole, but it is nearer to it than just about anywhere else, and well inside the Arctic Circle on the Norwegian archipelago of Svalbard.

- This beguiling structure juts out from a mountain near the town of Longyearbyen, which is reputed to be the northernmost permanent settlement on Earth.

- The proposal to revamp the vault stems from flooding at the entrance from an unexpected thaw in the permafrost in late 2016.

- The revamp would cover "construction of a new, concrete-built access tunnel, as well as a service building to house emergency power and refrigerating units and other electrical equipment that emits heat through the tunnel.

- Each seed has its own genetic makeup, and the value of these stocks is in their DNA. If a new disease or pest were to wipe out a strain of wheat, for example, it is probable that the germ plasm at Svalbard could be used to breed in resistance.

- Climate change poses another tangible threat, as extreme weather events, rising waters and shifts in temperatures require the development of new varieties to handle the challenges.

- In 2015, researchers made a first withdrawal from the vault after Syria's civil war damaged a seed bank near the Syrian city of Aleppo. The seeds were grown and re-deposited at the Svalbard vault last year.

- This itself demonstrated that the seed vault is a worldwide insurance for food supply for future generations.

Where Is India's Seed Vault?

- At Chang La in the Himalayas, at a height of 17,300 feet, there is a storage facility with over 5,000 seed accessions. One accession consists of a set of seeds of one species collected from different locations or different populations.

- The vault is a joint venture of the National Bureau of Plant Genetic Resources (which comes under the Indian Council of Agricultural Research) and the Defence Institute of High Altitude Research (under Defence Research and Development Organisation).

How Are The Seeds Stored?

- When a seed needs to be stored for few years, maintaining it at just 10 degree Celsius is enough.

- But in the long run, for 10 to 20 years, they need to be kept at a minus 15 to minus 20 degree Celsius (range). Chang La has a prevalent temperature in this sub-zero range.

6.2. Kerala's Energy-positive Campus

In News

- The Energy Management Centre (EMC), an autonomous institution under the Kerala government campus has been listed as one of the recent achievements in the deployment of key technologies for energy-efficiency in buildings.

- The 'Global Status Report 2017: Towards a zero-emission, efficient, and resilient buildings and construction sector,' published by the United Nations Environment Programme (UNEP) has mentioned this achievement.

Key Highlights

- The 40,000-square foot building is the only one from India to figure in the list, along with five other projects worldwide.

- According to the report, the EMC's energy-positive campus was designed to allow natural cross-flow ventilation from building forms and openings.

- The campus is equipped with a 30-kilowatt grid-connected solar capacity that exports around 50 kWh a day on an average, with a doubling of the capacity under implementation.

- The EMC campus uses daylighting controls, CFC-free heating, ventilation and cooling systems, along with a halogen-free fire-fighting system.

- Solar reflectance index coating, combined with high-albedo painting and turbo-vents for passive cooling, has been used, and tropical rainforest trees help create cool surroundings.

- Only certified green construction materials, recycled wood boards, low-emitting paints and adhesives, and green-plus certified carpets have been used.

- Built with assistance from the Global Environment Fund, the EMC campus is the only LEED Gold certified building in the government sector in Kerala. Up to 94% of the built-up space is daylight illuminated.

- The other five projects recognised by the UNEP include the Sierra Crest development in Fontana, California, the Association of Nubian Vaults in Sub-Saharan Africa, a construction and demolition waste recycling project in Paris, the Palm Tree eco-development project in Hanoi, Vietnam, and the Higashi-Matsushima Smart ecotown in northern Japan.

Facts:

Building-related carbon emissions have been rising by around 1% per year since 2010, and more than four million deaths are attributable to illness from household air pollution.

Global Environment Fund

- Global Environment Fund is a private equity and venture capital firm specializing in seed start up middle market, emerging growth, buyouts and growth equity.

- It seeks to invest in clean energy and environmental services, natural resources, independent power, gas distribution, consumer products and services, resource efficiency, sustainable forestry, timberland, agricultural processing, transportation logistics, and emerging markets in businesses that provide cost-effective solutions to environmental and energy challenges.

United Nations Environment Programme (UNEP)

- The United Nations Environment Programme (UN Environment) is the leading global environmental authority that sets the global environmental agenda, promotes the coherent implementation of the

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- environmental dimension of sustainable development within the United Nations system, and serves as an authoritative advocate for the global environment.
- It was established in 1972. Headquartered in Nairobi, Kenya, the organization also has encouraged participation by the private sector to promote the sustainable use of the world's natural resources.
- One of UNEP's most widely recognized activities is Earthwatch, an international monitoring system designed to facilitate the exchange of environmental information among governments.
- UNEP played a major role in initiating negotiations on reducing ozone-depleting chemicals.
- UNEP provides the technical assistance for a variety of international conventions, including the Montreal Protocol on Substances That Deplete the Ozone Layer (1987), the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1989), and the UN Convention on Biological Diversity (1992).
- As the secretariat for these conventions, UNEP services the conferences, implements the decisions, monitors implementation, and provides data and information.
- Together with the Food and Agriculture Organization, UNEP helps to implement the Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (1998).
- UNEP also coordinates the work on UN agencies with respect to desertification and the regional seas (with special attention to the Mediterranean Sea).

6.3.   **WEF Energy Transition Index**

In News

- World Economic Forum's Energy Transition Index (ETI) has been released. India has been ranked at 78th among 114 countries on the index.

- The report titled "**Fostering Effective Energy Transition**", ranks countries on how well they are able to balance energy security and access with environmental sustainability and affordability.

Key Highlights

- The ETI provides benchmarks across a country's energy system performance, based on energy security and access, environmental sustainability, and economic development and growth – dubbed the "energy triangle".

- Countries are also assessed on their transition readiness, which measures the future preparedness of a country's energy systems.

- Of the countries evaluated, 93 have experienced improved performance, the ETI shows, with 45 nations improving their energy systems across all metrics outlined in the energy triangle.

- The overall list was topped by Sweden, followed by Norway at the 2nd position and Switzerland at the 3rd rank.

- Other countries on the top 10 include Finland (4th), Denmark (5th), the Netherlands (6th), the UK (7th), Austria (8th), France (9th) and Iceland (10th).

- Referred to as "leading countries" in the report, these front runners are typically more advanced in terms of environmental sustainability, with comparatively big improvements in the carbon emissions category. In Norway, for example, carbon emissions are relatively low thanks to almost all electricity being generated from hydropower.

- At the opposite end of the scale, the report highlights 14 countries that are facing potential challenges, largely around environmental sustainability.

- Rankings of **BRICS** Countries in ETI: Brazil (38th), Russia (70th) and China (76th).

- The report argues a reduction of fossil fuel subsidies, improved energy access and quality of supply could allow countries to start improving performance scores in security and access and, to some extent, economic development and growth.

India Specific Observation

- The report said that India is at the crossroads in its energy transition journey. Energy needs in the country are primarily met by fossil fuels with implications for environmental sustainability and increasing energy import costs.

- Furthermore, a considerable share of India's population still lacks access to electricity and clean cooking fuel, it noted.

- According to the report, in the Energy Transition Index (ETI), India ranks in the third performance quartile and third readiness quartile, making it an emerging country that is approaching the leapfrog category.

- The report noted that between 2013 and 2018, India improved its performance score by 5.6 percentage points, mainly with improved energy access, reduced subsidies and reduced import costs.

- It further added that recent initiatives to improve electricity access have experienced some success and the outlook is positive; however, the road to continuous access to power and clean cooking fuel for all is long.

- India has the largest government-mandated renewable energy programme, with a target of 175 GW renewable energy capacity by 2022, and it announced plans to shift completely to electric vehicles by 2030.

Seven Steps Suggested By The Report For An Effective Energy Transition

- Convene – Identify and engage influential energy sector champions

- Align – Apply the fact-base framework for an effective energy transition to foster a common understanding of national energy transition imperatives and enablers.

- Structure – Establish an operational structure to drive ongoing collaboration among the stakeholders of energy system.

- Plan – Define specific milestones and action plans to deliver impact on the ground, including a framework to measure progress against goals

- Implement – Accelerate policy formulation and business decision making by piloting inclusive public-private collaboration models and building business cases to ensure value creation for society

- Track – Monitor and evaluate improvements in the energy system to determine corrective actions

- Refine – Adjust roadmaps and action plans as well as the operational structure as needed to seize new opportunities over time.

6.4. International Competition Network Annual Conference

In News

- India hosted 17th Annual Conference of International Competition Network 2018 (ICN2018) from 21st to 23rd March 2018 in New Delhi.

- This was the first time India has hosted the ICN2018 Annual Conference since it joined International Competition Network (ICN) in 2009.

- With globalisation and digitalisation blurring the geographical boundaries for business, need for international cooperation and experience-sharing has increased.

- In this context, the Conference provided an opportunity to exchange ideas and strategies for effective enforcement of competition law and for strengthening cooperation amongst the competition authorities as they strive to promote and sustain competition in rapidly changing markets.

International Competition Network:
- ICN is an informal network of competition agencies which focuses on competition law enforcement, where non-governmental advisors - including international organizations such as UNCTAD (Competition and Consumer Policies Branch) and the OECD, business associations, consumer organizations, academics and practitioners - also participate.
- It was established in 2001 after the publication of a Final Report of the International Competition Policy Advisory Committee to the US Attorney General and Assistant Attorney General for Antitrust.
- Its first annual conference was held in Naples, Italy in September 2002.
- The ICN advocates adoption of superior standards and procedures in competition enforcement around the world, formulates proposals for procedural and substantive convergence, and facilitates effective international cooperation to the benefit of member agencies, consumers and economies worldwide.

6.5. JS Rajput Nominated to UNESCO Executive Board

In News

- The Ministry of Human Resource Development has nominated former NCERT director JS Rajput as India's representative to the Executive Board (EXB) of UNESCO.

- Rajput, who was awarded the Padma Shri in 2014, recently completed a project aimed at achieving religious amity through education and is also known for regulating the B.Ed correspondence courses as the first chairman of NCTE and for starting the innovative two-year B.Ed course.

- He has been awarded the Maharishi Ved Vyas award by the Madhya Pradesh government for his contributions in the education sector.

- The Executive Board has a four-year term and 58 seats. It is one of the constitutional organs of UNESCO and is elected by the General Conference.

- The board examines the work for the organisation and the corresponding budget estimates. In practice, it is the main organ responsible for all policies and programmes of UNESCO.

- The elections of members of the EXB for the term 2017-21 took place on November 8, 2017, in which India won with 162 votes in Group IV during the 39th session of the General Conference held from October 30 to November 14, 2017.

About UNESCO
- UNESCO (United Nations Educational, Scientific and Cultural Organization) is responsible for coordinating international cooperation in education, science, culture and communication. It strengthens the ties between nations and societies, and mobilizes the wider public so that each child and citizen:
o has access to quality education; a basic human right and an indispensable prerequisite for sustainable development;
o may grow and live in a cultural environment rich in diversity and dialogue, where heritage serves as a

bridge between generations and peoples;
- o can fully benefit from scientific advances;
- o and can enjoy full freedom of expression; the basis of democracy, development and human dignity.
- It is a specialized agency of UN and is headquartered at Paris.
- UNESCO has 195 member states and ten associate members. It pursues its objectives through five major programs: education, natural sciences, social/human sciences, culture and communication/information.

7. DEFENCE AND SECURITY

7.1. Myanmar Puts Off Border Pact With India

In News

- Myanmar has indefinitely deferred signing an agreement with India to streamline the free movement of people within 16 km along the border.

- It has cited "domestic compulsions" and has asked more time before the agreement is sealed.

Background

- Earlier, on January 3, the Indian Cabinet had approved an agreement between India and Myanmar on land border crossing. To give it shape, the Centre had asked four States — Arunachal Pradesh, Nagaland, Manipur and Mizoram — that share the unfenced border with Myanmar to distribute "border pass" to all the residents living within 16 km from the border.

- The Memorandum of Understanding (MoU) has been deferred twice in the past seven months.

About The Agreement Between India And Myanmar On Land Border Crossing

- As per the proposal, there would have been no restrictions on the movement of people across the borders.

- The domiciles were to be allotted border passes and those going across for agriculture, work or to meet relatives should carry the pass at all times.

- The Agreement will facilitate regulation and harmonization of already existing free movement rights for people ordinarily residing in the border areas of both countries. It will also facilitate movement of people on the basis of valid passports and visas which will enhance economic and social interaction between the two countries.

- It is expected to provide connectivity and enhance interaction of the people of North Eastern States of India with the people of Myanmar.

- The Agreement would give a boost to the economy of the North East and allow us to leverage our geographical connections with Myanmar to boost trade and people to people ties.

- The Agreement will safeguard the traditional rights of the largely tribal communities residing along the border which are accustomed to free movement across the land border.

> India and Myanmar share a 1,643 km unfenced border along Arunachal Pradesh (520 km), Nagaland (215 km), Manipur (398 km) and Mizoram (510 km) and permit a 'free movement' regime upto 16 km beyond the border.

India-Myanmar Border Problems

- Even though the international boundary between the two countries had been formally delimited and demarcated following the boundary agreement on March 10, 1967, the boundary has not crystallised on the ground as lines separating two sovereign countries.

- This is because like most of the boundaries that India shares with its neighbours, the India-Myanmar boundaries is also an artificial line which is superimposed on the socio-cultural landscape of the borderland.

- As a result, the boundary line cuts across houses and villages thus dividing several tribes such as the Singphos, Nagas, Kukis, Mizos, etc., and forcing them to reside as citizens of different countries. These tribes, however, refuse to accept the artificial line and continue to maintain strong linkages with their kith and kin across the border.

- The border traverses a region which is infested with numerous insurgencies. These insurgencies have hampered the nation building process in this part of India. This in turn, has delayed the crystallisation of the international border with Myanmar and has contributed towards sustaining these insurgencies for so long.

- The India-Myanmar border has a unique arrangement in place called the Free Movement Regime (FMR). The FMR permits the tribes residing along the border to travel 16-km across the boundary without visa restrictions. While the FMR has helped the tribes continue maintain their age-old ties, it has also become a cause of concern for the security establishment.

- Another provision in the FMR, which allows tribal people to carry head load has also facilitated smuggling of arms and narcotics from across the border as these head loads are seldom checked.

- Over the years, the India-Myanmar border has become the main conduit for the trafficking of arms and high quality heroin from Myanmar.

- Smuggling of ephedrine and pseudo-ephedrine and trafficking of women and children from the Northeast to Myanmar and further to Southeast Asia are also rampant along the border.

- The policymakers in Delhi have not given adequate attention to the India-Myanmar border and as a result it continues to be poorly managed.

- The Assam Rifles which has been deployed along the border to guard the boundary has also been straddled with responsibility of maintaining internal security.

- The Assam Rifles functions more like a counter insurgency force rather than a border guarding force. As a result, they fail to dominate the border and prevent widespread infiltration and smuggling.

- Similarly, infrastructural facilities at Moreh and Zokhawatar – the two designated points for normal trade and border trade respectively – is poor.

- These infrastructural deficiencies along with a restrictive trading list and opening of Namphalong market by Myanmarese government on the other side of the border have been adversely affected normal trade at Moreh and has given rise to informal trade.

- Most importantly, India has been unsuccessful in garnering the cooperation of Myanmar for managing the border. Even though both the countries have set up a number of bilateral institutionalised mechanisms at various levels to discuss issues related to border security and management, these interactions have not borne any fruit.

- The border dispute which essentially involves disagreements over the placement of nine border pillars has remained unresolved.

7.2. Crime-Free Zone Along India-Bangladesh Border

In News

- India and Bangladesh has jointly inaugurated a "crime-free" stretch of 8.3 kms along the international border in West Bengal. This is the first-of-its-kind along any international border.

- The aim of creating a crime-free zone is to have select border locations that are clear of illegal, anti-social and criminal activities by integrating the efforts of the BSF and the BGB, with assistance from the district administration, NGOs and border population of both the countries.

- The 8.3-km "crime-free" zone stretches between the BSF border posts at Gunarmath and Kalyani and the BGB posts at Putkhali and Daulatpur.

- The decision to launch a project of creating such sanitised zones along the India-Bangladesh frontier was taken by the border guarding forces of the two countries -- the BSF and the BGB -- during their bi-annual director general-level talks that were held here in October 2017.

- Once the pilot project succeeded, similar crime-free zones would be created all along the 4,096-km border that ran across various states.

Significance

- This is a positive and constructive way of border management, which will be an example for the whole world.

- This stretch is one of the most vulnerable with cattle smuggling and other criminal activities prevalent. The idea is to target the more difficult areas along the 913 km of Indo-Bangladesh border under the BSF's South Bengal Frontier.

- For the first time, two border liaisoning posts have been set up smack on the border. These will be manned round-the-clock and if there is any emergency, both forces will move together.

7.3.   Draft Defence Production Policy 2018

In News

- The Defence Ministry has come out with a draft policy on defence peoduction.

- It envisages achieving a turnover of Rs 1,70,000 crore in military goods and services by 2025 by promoting the domestic defence industry.

Key Highlights

- It proposes to increase the foreign direct investment (FDI) cap in niche technology areas to 74% under the automatic route, in a bid to boost local manufacturing and catapult India into the league of countries housing top defence and aerospace industries.

- At present, the FDI cap for the defence sector is 49% under the automatic route for all categories.

- The draft policy sets out ambitious goals, such as:

o Making India one of the world's top five defence manufacturers and a global leader in cyberspace and artificial intelligence;

o Achieving self-reliance by 2025 in complex weaponry like helicopters, fighters, warships, tanks, and missiles;

o Raising defence exports to $5 billion annually by 2025

o Producing defence goods and services worth $26 billion by that year to create employment for two-three million people.

- Noting that India is emerging as a "top destination for research & development (R&D) centres in the world," the draft policy proposes that this strength "be channelised for creating domestic (intellectual property) for defence needs."

- It promises that the tax regime will be rationalised to make domestic manufacturing attractive by ensuring that there is no tax inversion. The draft also promises to rationalise taxes on the import of capital goods and services, inputs and components used in defence production.

- Increasing indigensation content in a product has always been an important component of Make In India, with the draft Policy 2018 increasing the minimum indigenous content from 30 to 40 per cent.

- The policy also attempts to make it easier to do business. It calls for increased participation of MSMEs, start-ups and other players from the private sector in the defence industry.

- It has also planned strategies, portals and platforms such as 'Competency Mapping', 'Defence Investor Cell' and 'Technology Perspective Capability Roadmap' to facilitate indigenisation of defence production.

- The Simplified Make-II would be facilitated easily through this draft policy and will it launch itself as an initiative to make it easier for industries to enter defence sector.

- The policy will also liberalise licences that will be provided to defence industries. The draft also says that the requirements for renewal of licences will be pruned and that companies with a track record will be given favourable consideration. The policy will also liberalise the FDI regime in the defence sector.

- It aims to create open competition in the industry. By opening the sector to private players, the policy is determined to create a driving force for increased productivity and innovation.

- With India's defence budget limited in its ability to absorb the planned levels of defence production, the draft policy plans to export $5 billion in defence goods through assiduous marketing, offering lines of credit to buyer countries, setting up a Defence Export Organisation jointly with industry, and easing export clearances.

Criticism

- The promises contained in the recently released draft are so intertwined that a comprehensive action plan would be required to implement all of them almost simultaneously for achieving the policy objective.

- For example, the efficacy of the Defence Investor Cell established in the first week of February 2018 depends on competency mapping of the private defence industry, which has been promised in the draft but for the completion of which no timeframe has been prescribed.

- Experience shows that policy decisions often get derailed by delays in working out the modality of implementing them or because many loose ends are left untied while notifying the scheme.

- For instance, the Defence Acquisition Council (DAC) had decided to tweak the 'Make II' procedure in January 2018 to permit the MoD to entertain suo moto proposals from the industry. The draft policy refers to this decision, but the formal amendment to the Defence Procurement Procedure (DPP) does not appear to have been notified so far.

- The process to identify the Indian entities under the Strategic Partnership Model is yet to begin, just about Rs 1 crore has been received by way of FDI in defence in the last four years, and industrial licenses were held up for a long time because of the row between the DIPP and the Ministry of Home Affairs on the question of jurisdiction to issue the license under the Industrial (Regulation and Development) Act, 1951 and the Arms Act, 1959.

- Hence, easing the process of industrial licensing, for example, is important but this is, at best, just a minor reason for stagnation in defence production.

- The achievability of the stated objectives and goals in the draft policy does not seem to be in sync with the current trajectory of defence budget outlays.

- The credibility of the new defence production policy is inextricably interlinked with the financial viability of the roadmap envisaged therein as well as the ability of the MoD to take hard decisions to remove programme-specific roadblocks. The track record on this count is not very encouraging.

Conclusion

- Many analysts believe that the problem all along has been that policies, strategies and procedures have seldom been based on a dispassionate diagnosis of the malady afflicting defence production: disjointed efforts, never factoring financial viability, and tardy implementation – all largely because of structural issues within the MoD.

- Merely formulating a policy will not work. The government must take necessary steps to address these issues.

7.4. MHA May Relax Protected Area Permit Rules

In News

- The Union Home Ministry may soon relax the protected area permit (PAP) regime to enable foreign tourists to access border areas.

- The permit is being relaxed by the Centre following several requests by Arunachal Pradesh, Himachal Pradesh, Sikkim, Uttarakhand, Nagaland, Manipur and the Tourism Ministry.

- The move is being initiated to promote tourism, create job opportunities for the locals and generate revenue for the states.

Protected Areas And Protected Area Permit

- Under the Foreigners (Protected Areas) Order, 1958, all areas falling between the 'Inner line' and the International Border of the State have been declared as a 'Protected Area.'

- It is applicable to Arunachal Pradesh and Sikkim, parts of Himachal Pradesh, Jammu and Kashmir, Manipur, Mizoram, Nagaland, Rajasthan and Uttarakhand.

- For Indian citizens who are not residents of the inner line areas would require an Inner Line permit to travel to some of these places.

- Every foreigner, except a citizen of Bhutan, who wants to enter and stay in a Protected Area, is required to get a special permit.

- Citizens of Afghanistan, China and Pakistan and foreign nationals of Pakistani origin are not issued the permit without the Home Ministry's approval.

- Necessary powers have been delegated to various authorities to issue such special permits without prior approval of MHA to facilitate foreign tourists. However, in cases of foreign diplomats, including members of United Nations and international organisations holding diplomatic or official passports, Ministry of External Affairs (MEA) issues special permits.

7.5. National Conference on Drug Law Enforcement

In News

- The first ever National Conference on Drug Law Enforcement was inaugurated in New Delhi.

- It was a two-day event, which focused on various topics such as 'Wider context of drug trafficking in India', 'Financial Investigations' and 'Foreign & Cyber Investigations'.

- The conference is being organsied by the Narcotics Control Bureau (NCB), Ministry of Home Affairs.

Issue of Drug Abuse in India

- India is caught in the vicious circle of drug abuse, and the numbers of drug addicts are increasing day by day.
- According to a UN report, One million heroin addicts are registered in India, and unofficially there are as many as five million.
- In India persons addicted to opiates are shifting their drug of choice from opium to heroin. The intravenous injections of analgesics like dextropropoxphene etc. are also reported from many states, as it is easily available at 1/10th the cost of heroin. The codeine-based cough syrups continue to be diverted from the domestic market for abuse.

Reasons For Widespread Drug Abuse In India

- **To escape from hard realities of life** - The disintegration of the old joint family system, absence of parental love and care in modern families where both parents are working, decline of old religious and moral values etc lead to a rise in the number of drug addicts who take drugs to escape hard realities of life.
- **Loosening of the traditional methods of social control** - The processes of industrialization, urbanization and migration have led to loosening of the traditional methods of social control rendering an individual vulnerable to the stresses and strains of modern life.
- **Cultural acceptance in some part of the country**- In states like Punjab, Haryana or North eastern States like Manipur use of opium has been widely accepted. Not only that in many states of India,Bhang(Hemp) is distributed during some festivals like Holi, Janmashtami,Shivratri, and consuming bhang at such occasions is common.
- **Peers pressure** – Many youths start using drug under the pressure from their friends, seniors at educational institutions, or by members of their informal groupings.
- **Easy Availability** - India is poorly situated in the sense that on its west is the '*Golden Crescent*' and on east is the '*Golden Triangle*'. The usage of drugs in India is increasing, particularly in the border areas due to their porous nature.
- **Economic prosperity** – The agricultural reforms and other industrial activity has led to increase in income in regions like Punjab, Haryana, Maharashtra etc. Increase in disposable money and easy availability of drugs has led to increase in its use.

Impacts:

- Increase in the crime rate - Addicts resort to crime to pay for their drugs. Drugs remove inhibition and impair judgment egging one on to commit offences. Incidence of eve- teasing, group clashes, assault and impulsive murders increase with drug abuse.
- Loss in terms of human potential - With most drug users being in the productive age group of 18-35 years, the loss in terms of human potential is incalculable. The damage to the physical, psychological, moral and intellectual growth of the youth is very high. Adolescent drug abuse is one of the major areas of concern in adolescent and young people's behaviour.
- Rise in disease burden - The introduction of synthetic drugs and intravenous drug use leading to HIV/AIDS has added a new dimension to the problem, especially in the Northeast states of the country. Increase in incidences of HIV, hepatitis B and C and tuberculosis due to addiction adds the reservoir of infection in the community burdening the health care system further.
- Increase in suicide rates – The data provided by NCRB tells that India sees 10 suicides related to drug abuse every day.
- Impact on women - Women in India face greater problems from drug abuse. The consequences include domestic violence and infection with HIV, as well as the financial burden.
- Money laundering and terrorism - Today the drug business generates the highest illegal fund flows and leads to Narco-Terrorism, which poses a serious threat to global security and endangers peace, health and

stability across regions. Recently, in Pathankot attack, there were allegations that it was mixed up with drug trade and drug mafia and that is how they could enter India.

Need of the Hour:

- Cooperation among BRICS members to increase information exchange on synthetic drugs, money laundering, banking channel, etc. Synthetic drugs have become a problem for India, South Africa and Russia.
- Money laundering channels should be targeted. The billions of black money are converted to white money which is detrimental to the economy. Cooperation among BRICS countries would be helpful.
- Best practices to tackle Drug Abuse
- o Intelligence sharing: Usually the last point peddlers get into police net. The real movers or illegal traders get away. So to identify those people and isolate them, the countries have to cooperate.
- o To vain people away, drug rehabilitation and Society awareness programmers are very important.
- o Global cooperation for AIDS has been successful. It is not a menace now as it was a decade back. It is due to the focused attention against its spread, prevention and taking care of AIDS patients. Africa had a big problem, but now it has been contained due to education and preventive methods.
- Effective implementation of
- o Law and Order: If any drug carriers and masterminds have been caught, we should find out what are his/her travel links. This information can be shared.
- o Revenue intelligence: Huge amount of money is getting transferred across borders and somehow it is getting done through banking channels. Hawala money is also there. There are concerted efforts from India to curb Black money. Wherever there are tax havens, they need to be plugged.
- Health issues: Any one consuming drugs suffer physically and mentally. Treating those people and bringing them back to normal health is very important.
- Social welfare and rehabilitation: It includes rehabilitation of drug addicts as most of them are very poor and bringing them back into society. Ministry of Social Justice and Empowerment task is involved here.

Conclusion

There has been a multipronged effort to contain narcotics problem. If the BRICS countries try to coordinate their position, then with a greater voice they can speak in other international forum like United Nations Office on Drugs and Crime in Vienna and try to set the agenda and make them take steps which we feel would curb this menace.

Narcotics Control Bureau

- The Narcotics Control Bureau (NCB) is the nodal drug law enforcement and intelligence agency of India responsible for fighting drug trafficking and the abuse of illegal substances.

- It was established 1986 to enable the full implementation of The Narcotic Drugs and Psychotropic Substances Act, 1985 and fight its violation through the Prevention of Illicit Trafficking in Narcotic Drugs and Psychotropic Substances Act, 1988.

- The law was established to fulfill India's treaty obligations under the Single Convention on Narcotic Drugs, Convention on Psychotropic Substances, and United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances.

7.6. India Emerges As World's Largest Importer Of Arms

In News

- According to a latest research released by the Stockholm International Peace Research Institute (SIPRI), India has emerged as the largest importer of major arms.

- According to the study, India became the world's largest importer of major arms in 2013-17 accounting for 12 per cent of the total global import.

Key Highlights

- There has been significant increase of 24 per cent in India's weapon import between 2008-12 and 2013-17.

- The country that accounts for the maximum arms import of India is Russia with 62 per cent.

- However, the rise in arms import from the US has been significant during the 2013-17 period. Imports from the country increased by as much as 557 per cent, making America the second largest arms supplier to India.

- According to the report, the tension in recent past with both Pakistan and China have led to the increase in growing demands of weapon, which India does not produce itself.

- On the other hand, Pakistan's arms imports went down by 36 per cent between 2008–12 and 2013–17.

- The study said, "Pakistan accounted for 2.8 per cent of global arms imports in 2013–17. Its arms imports from the USA dropped by 76 per cent in 2013–17 compared with 2008–12.

- The report further said that China has increasingly been becoming capable of producing its own weapons, and maintaining itself as a supplier in the region by maintaining good relations with Pakistan, Bangladesh and Myanmar.

- China has also emerged as the fifth largest arms exporter, with exports rising by 38% between 2008-12 and 2013-17.

- The US emerged as the world's top exporter of weapons accounting for 34 per cent of global arms sales in the last five years, according to the study.

- Russia accounted for 20 per cent of the export ranking second in the list.

Stockholm International Peace Research Institute (SIPRI)

- SIPRI is an independent international institute dedicated to research into conflict, armaments, arms control and disarmament.

- Established in 1966, SIPRI provides data, analysis and recommendations, based on open sources, to policymakers, researchers, media and the interested public. Based in Stockholm, SIPRI also has a presence in Beijing, and is regularly ranked among the most respected think tanks worldwide.

- Its mission is to:
  o undertake research and activities on security, conflict and peace;
  o provide policy analysis and recommendations;
  o facilitate dialogue and build capacities;
  o promote transparency and accountability; and
  o deliver authoritative information to global audiences.

7.7. India's First Coastal Policing Academy

In News

- The country's first national academy to train police forces in effectively safeguarding the Indian shoreline will start functioning in Devbhumi Dwarka district of Gujarat from April 2018.

- The Union Home Ministry recently sanctioned the launch of the National Academy of Coastal Policing (NACP) from a campus of Gujarat's Fisheries Research Centre located in coastal Okha.

Key Highlights

- It will be the first-of-its-kind institution of the country will be created and run by a multi-agency team of paramilitary and defence forces and sharpen the response and skills of the marine forces of multiple states which have sea lines.

- While the Union home ministry's policing think tank -- the Bureau of Police Research and Development (BPRD) -- will pilot the establishment and running of the academy, the Border Security Force (BSF), that guards the Indian frontier in Gujarat with Pakistan, the navy and the Coast Guard will form the core to run the academy.

- The BSF will also provide security to the campus, which on the Arabian Sea coast and is at a flying distance from the Pakistan coast.

7.8. Ex Samvedna

- It is a Multilateral Air Force exercise, which was spearheaded by Indian Air Force and conducted by Southern Air Command (SAC) from 12 to17 Mar 2018.

- It was aimed to ensure better understanding and sharing of response procedures between a number of friendly neighbouring nations.

- It was the first Humanitarian Assistance and Disaster Relief (HADR) exercise of the Indian Air Force (IAF) in association with South Asian Region nations.

- It involved representatives from air forces of Sri Lanka, Bangladesh, Nepal and the UAE.

- The entire settings of the exercise were based on a scenario of a tsunami in the western coast of India originating from an earthquake in Makran subduction zone and resulting in post-tsunami disaster management along the western coast and western islands of India.

7.9. MILES-18: First Ever Multi-Nation Naval Exercise At Sea Held In Andaman

- The first ever multi-nation naval exercise at sea called MILES-18 was held in the Andaman Sea as part of the tenth edition of MILAN 2018.

- Its theme was **'Friendship across the seas'**.

- Australia, Bangladesh, Indonesia, Malaysia, Myanmar, Singapore, Sri Lanka and Thailand were the participating countries.

- Apart from enhancing inter-operability, the exercise was aimed at honing of search and rescue operations procedures, maritime interdiction operations, core operational skills and exercise a variety of maritime security scenarios.

> MILAN:
> - Milan' was first held in 1995 with the participation of just five navies.
> - The aim of the initiative was to have an effective forum to discuss common concerns in the Indian Ocean Region and forge deeper cooperation among friendly navies.
> - 10th edition of MILAN saw participation of 8 countries.

7.10. Saposhi

In News

- Cybersecurity agencies have detected a new malware called Saposhi.

- It is capable of taking over electronic devices and turning them into 'bots', which can be then used for any purpose, including a Distributed Denial Of Service attack which, with enough firepower, can cripple entire industries.

Key Highlights

- Saposhi is similar in its intensity to Reaper, which was taking over millions of devices at the rate of 10,000 devices per day.

- This virus seeks to infect devices and make them part of its botnet. A botnet is a network comprised of devices infected by the virus and used for a singular purpose (such as the conducting of DDoS attacks).

- Although currently there is not too much information available with regards to Saposhi, the virus is said to be a highly advanced malware threat capable of silently taking over an infected device and forcing it to carry out tasks without the user's permission.

- It is expected that CERT (Computer Emergency Response Team) will issue guidelines on how to keep one's devices protected against the newly-emerged malware threat.

Distributed Denial of Service

- A DDoS (Distributed Denial of Service) attack is an illegal large-scale cyber campaign where a big number of devices are used to create traffic to a certain server.
- If the number of devices involved is big enough, the overwhelming traffic would be more than what the targeted server is capable of handling.
- In such a case, the server would get overburdened which would lead to crashes. After a successful DDoS attack, the customers of the service that had its servers targeted would not be able to use/access the said service due to the server crash triggered by the DDoS attacks.
- In July 2016, small and medium internet service providers in Maharashtra fell prey to a DDoS attack, which caused disruption in the services of several Internet Service Providers (ISP) in the State.
- In 2016, Mirai, using a botnet of 5 lakh devices, had caused the servers of Dyn, a leading domain name service provider, to crash, affecting services of popular websites like Twitter, Netflix and Reddit.

How A Malware Works

- A malware is released into cyberspace, with specific instructions programmed into it. The instructions direct the malware to take over as many devices connected to the internet as possible.
- Depending on its programming, the malware turns internet-connected devices into 'bots', and starts building a botnet.
- Malwares like Reaper and Saposhi are capable of identifying weaknesses in devices and exploiting them to turn the devices into bots.
- Once a large enough botnet is created, simultaneous pings are sent to a single server, causing a server failure, which is called a Distributed Denial of Service attack.
- Depending on the size of the botnet, malwares can execute multiple DDOS attacks at the same time, or over a period of time.


7.11. Lamitye 2018

- Joint military exercise **'Lamitye'** was held between India and Seychelles. It is conducted biennially between the two countries.

- This exercise is the eighth in the series of bilateral exercises being conducted at Mahe Island in Seychelles archipelago.
- The aim Lamitye 2018 was fighting insurgency, terrorism and piracy threats.
- India and Seychelles have been conducting this joint exercise since 2001 with the aim of enhancing military cooperation and interoperability between the armies of the two countries.
- The focus of the ongoing exercise is to conduct counter-insurgency and counter-terrorist operations in semi-urban environment under the United Nations (UN) Charter.

7.12. Varuna-18
- The navies of India and France conducted a joint bilateral exercise, "Varuna-18", in the Arabian Sea off the Goa coast from 20th to 24th March.
- It was meant to explore the measures to facilitate the operational-level interactions between their respective armed forces and increase mutual cooperation, considering the common global threats
- It was conducted in three sea areas -- the Arabian Sea, the Bay of Bengal and the South Western Indian Ocean.
- The naval forces of India and France have been conducting joint bilateral exercises since 1993. Since 2001, these exercises are called "Varuna" and 15 editions of the same have been held till date.
- The Varuna series of exercises has grown in scope and complexity over the years and provide an opportunity to both Navies to increase interoperability and learn from each other's best practices.
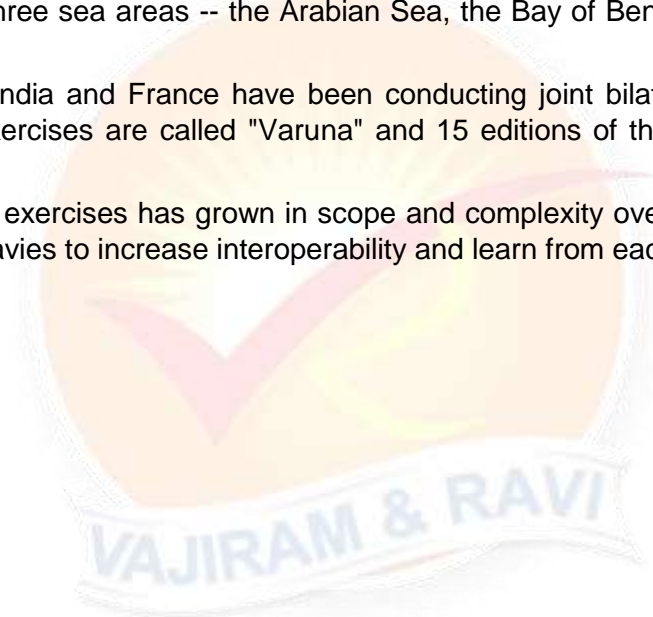
8. SCIENCE AND TECHNOLOGY

8.1. India-Based Neutrino Observatory Project Gets Centre's Approval

- In a major development, India-based Neutrino Observatory (INO) project in Theni district has been cleared by the Expert Appraisal Committee (EAC) of the Union Ministry of Environment, Forests and Climate Change (MoEF&CC).

- **The proposed INO project in India primarily aims to study atmospheric neutrinos in a 1,300-m deep cavern in the Bodi West Hills in Theni district, Tamil Nadu.**

- **If completed, the INO would house the largest magnet in the world, four times more massive than the European Organization for Nuclear Research, CERN's Compact Muon Solenoid (CMS) detector's magnet.**

- While granting environmental clearance, the committee stipulated specific conditions, of which two are key for the project to take off. One is the consent to establish and operate to be obtained from the Tamil Nadu Pollution Control Board (TNPCB). In the past, INO project proponents had complained that the TNPCB had been sitting on the file for years without taking any action

- Also, the INO team has to obtain the necessary forest and National Board for Wild Life clearances as per law. The Mathikettan Shola National Park in Idukki district, Kerala, is situated within five km from the project site.

- Neutrinos are one of the universe's essential and most abundant ingredients. **Born from violent cosmic events like exploding stars and gamma ray bursts,** they can move as easily through lead as humans can move through the air.

- **Neutrinos are nearly mass less particles don't interact with any of the particles in one's body. It is an elusive elementary particle that travels at near light speed.**

- **They are unaffected by Magnetic field.**

- **Neutrinos are affected only by a "weak" sub-atomic force of much shorter range than electromagnetism, and are therefore able to pass through great distances in matter without being affected.**

- The combination of this abundant yet elusive presence and the important role they play in the universe is why neutrinos can help scientists understand some of the most fundamental questions in physics, such as understanding the evolution of the universe, figuring out the energy production mechanism in the Sun and why the universe is made up of matter, not antimatter**.**

- Nicknamed the **'blueprint of nature'** by scientists, neutrinos are also an important tool for mankind to learn how matter evolved from simple particles into more complex composites, creating everything around us**.**

8.2. Russia Test-Fires Hypersonic Kinzhal Missile

- Russia successfully launched high-precision aeroballistic Kinzhal hypersonic missile from a MiG-31 supersonic interceptor jet. During the test, the missile launch was normal and it hit preset target on the test site. It also met its performance characteristics and time indicators.

- The Kinzhal missile is one of array of new weapons developed by Russia. Kinzhal, the name means double-edged Russian dagger. It can fly 10 times the speed of sound and has range of 2,000km. It is equipped with high-precision aeroballistic missiles supporting air strikes without entering enemy's air defence zone. It can overcome air-defence systems**.**

8.3. India Successfully Tests 3rd-Gen Anti-Tank Missile NAG In Desert Conditions

- India on successfully test-fired Anti Tank Guided Missiles (ATGM) Nag in desert conditions. The Nag ATGM has been developed by the Defence Research and Development Organization (DRDO**).**

- The Fire and Forget 3rd generation ATGM NAG is incorporated with many advanced technologies including the Imaging infrared (IIR) Seeker with integrated avionics, the capability which is possessed by few nations in the world**.**

Anti Tank Guided Missiles (ATGM) Nag

- ATMG Nag is one of five missile systems developed indigenously by DRDO under integrated guided missile development programme (IGMDP). The other four missiles are Agni, Akash, Trishul and Prithvi. It is manufactured by India's sole missile producer, state-owned Bharat Dynamics Limited**. It has operational range of 500m to 4km (Land version) and 7-10km (when air-launched).**

- **The helicopter launched version, known as NAG (HELINA),** can be fired from Dhruv advanced light helicopter (ALH) and HAL Rudra attack helicopter. The land-based version of missile is at present available for integration on the Nag missile carrier (NAMICA).

8.4. CCRAS Developed AYUSH Drug QOL-2C for Cancer Patients

- Central Council for Research in Ayurvedic Sciences (CCRAS), an autonomous body under the Ministry of AYUSH has undertaken development of a coded **drug AYUSH QOL-2C** for improving the quality of life in cancer patients.

- CCRAS is autonomous body under the Ministry of AYUSH. It is apex body in India for formulation, coordination, development and promotion of research on scientific lines in Ayurveda and Sowa-Rigpa system of medicine. It undertakes scientific activities through its 30 Institutes/Centres/Units located all over the country and also through collaborative studies with various Universities, Hospitals and Institutes. It is headquartered in New Delhi.

- CCRAS has developed and commercialized the following two drugs:

  a) AYUSH 82 an Anti Diabetic Ayurvedic Formulation

  b) AYUSH SG an Anti-Rheumatoid Arthritis preparation.

### 8.5. India's First Cloned Assamese Buffalo Born

- The Central Institute for Research on Buffaloes (CIRB) claimed that a cloned Assamese buffalo male calf was born for the first time in India. A team of researchers used unique methods and produced the **clone calf Sach-Gaurav** through a normal delivery.

- The calf was born to a Murrah buffalo. It is also the first to be born in the field. The genotype of calf was confirmed through microsatellite analysis (parentage verification) and chromosome analysis.

8.6. A New State Of Matter Created

An international team of physicists have successfully created a "giant atom" and filled it with ordinary atoms, creating a new state of matter termed **Rydberg polarons**. These atoms are held together by a weak bond and are created at very cold temperatures.

How Was The New Polaron Created

- It uses ideas from two different fields: ***Bose Einstein Condensation and Rydberg atoms.***
- BEC (Bose Einstein Condensate) is a liquid-like state of matter that occurs at very low temperatures. A BEC can be perturbed to create excitations which are akin to ripples on a lake.
- Electrons in an atom move in orbits around the nucleus. A 'Rydberg atom' is an atom in which an electron has been kicked out to a very large orbit.
- There is use of laser light on a BEC of strontium atoms so that it impinges on one strontium atom at a time. This excites an electron into a large orbit, forming a Rydberg atom. This orbit is large enough to encircle many other strontium atoms inside it.
- As the electron moves around many strontium atoms, it generates ripples of the BEC. The Rydberg atom becomes inextricably mixed with these ripples and forms a new super-atom called a 'Rydberg polaron'
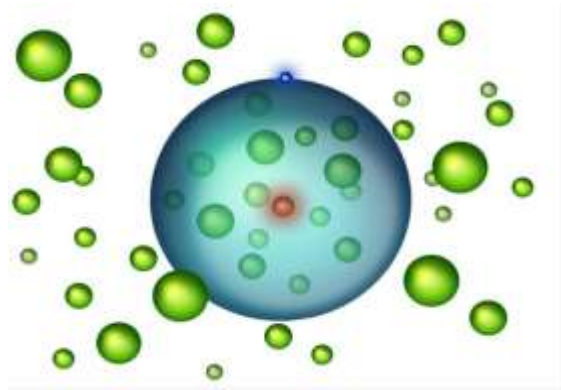
What Will Be The Use Of These Rydberg Polarons?

A particularly interesting implication is for cosmology. Our universe is believed to be filled with a mysterious 'dark matter', which exerts a gravitational force on other matter. Some theories of dark matter postulate that it is a cosmic Bose Einstein Condensate, perhaps composed of an as-yet-unknown type of particle. If we are indeed living in an invisible all pervading Bose Einstein Condensate, this experiment can suggest ways to detect it.

8.7.   Space Travel May Cause Genetic Changes: NASA

- NASA scientists in an unprecedented study have found that space travel may alter gene expression. The study involved astronaut Scott Kelly, who spent a year in space and his identical twin Mark who stayed on Earth.
- The changes that are likely attributable to Scott's time in orbit include alterations to gene expression, DNA methylation, the reversible addition of a chemical marker that can affect gene expression, and other biological markers. Scott's telomeres, end caps of chromosomes that shorten as one ages, actually became significantly longer in space

8.8.   Egyptian Vultures Wintering In India Undergo A Change In Drug-Resistance Pattern

- The *E. coli* seen in over 90% of Egyptian vultures that migrate to northwest India to spend the winter (October to March the next year) tend to show significant difference in resistance pattern within a single season, a study shows. The resistance pattern showed significant difference between one year and the succeeding year.
- The diversity of *E. coli* community in vultures changed and became homogenized by the end of the wintering period. This is due to the environment that the vultures were exposed to - carcasses, garbage, and domestic animals.
- This is an important study because people had predicted that there would be a change in bacterial community in wild species in environment. There is not much difference in the % resistance to multiple antibiotics that are commonly used but there is a change in the pattern of resistance.

- The vultures were resistant to certain antibiotics when they arrived and developed resistance to certain other antibiotics when they left. Their sensitivity to certain antibiotics also changed within a few months**.**

- The vultures that use human-dominated landscape as part of life history are likely to act as "reservoirs and melting pots of bacterial resistance". Wild birds travelling thousands of kilometres across continents often carry disease-causing microbes such a H5N1 (bird flu)-causing virus and cause the spread of the disease. These birds could also carry different drug-resistant bacteria.

- The present study helped show that vultures are able to incorporate and reflect resistance determinants at the site of wintering and during the period of sampling. "So guidelines to restrict antibiotic use in both humans and animals by one country or region alone will be inadequate when wild birds can spread drug-resistant bacteria.

> Escherichia coli (abbreviated as E. coli) are bacteria found in the environment, foods, and intestines of people and animals. E. coli are a large and diverse group of bacteria. Although most strains of E. coli are harmless, others can make one sick. Some kinds of E. coli can cause diarrhea, while others cause urinary tract infections, respiratory illness and pneumonia, and other illnesses.

8.9.   China Develops Rocket Tech-Powered Artificial Heart

- Chinese scientists have developed an artificial heart using rocket technology and it is currently undergoing testing after thorough experiments on animals.

- The heart was developed jointly by the China Academy of Launch Vehicle Technology (CALT) and the Teda International Cardiovascular Hospital in North China's Tianjin.

- The artificial heart uses magnetic and fluid levitation from a rocket system. The magnetic and fluid levitation technology can reduce the friction in the device to increase the working efficiency and extend the life span of the power generator.

- This technology used can reduce damage to the blood and enable the blood pump to work longer.

8.10.   Navy Warship INS Ganga Decommissioned In Mumbai

- INS Ganga, an indigenously built frigate of the Indian Navy, was decommissioned after over three decades of service. Commissioned on December 30, 1985, the ship represented a big step forward in the nation's warship building capability.

- **INS Ganga (F22) was a Godavari-class guided-missile frigate of the Indian Navy.** It was built by Mazagon Dock Limited, Mumbai and was commissioned into Indian Navy on 30 December 1985. **The Godavari class was first indigenous warship design and development initiative of Indian Navy**.

## 8.11.   Chandrayaan-2 Launch Delayed For More Tests

- The launch of India's second lunar mission 'Chandrayaan-2' has been postponed to October as the experts have suggested some tests the Indian Space Research Organisation (ISRO).

- The Chandrayaan-2 mission is said to be much more challenging than the first one.

- **This time the spacecraft will be carried by heavy-payload lifter GSLV Mk II, unlike the first time when the spacecraft was launched by a PSLV rocket.**

- The GSLV Mk II will launch the spacecraft that will weigh about 3,290kg, which includes an orbiter, a rover and a Lander to the moon.
- The Chandrayaan-2 is being readied at ISRO's satellite center in Bangalore.
- It will carry 13 scientific instruments, which will study the moon.
- The soft-landing on the lunar surface of the moon will be most complex part of Chandrayaan 2 mission. *Only the US, Russia and China* have been able to soft-land spacecraft on lunar surface.

8.12.   TESS: NASA, SpaceX Collaborate To Search For Exoplanets

- The search for the cosmic real estate is about to begin anew with NASA and SpaceX joining hands for their all-new combined mission. **NASA's little spacecraft, the Transiting Exoplanet Survey Satellite**, or TESS, will ascend on a Falcon 9 rocket of the SpaceX to go up in the space.

- TESS is the latest effort to answer questions that have intrigued mankind for the last 30 years: Is there life outside the Earth? Are there other Earths or is it the only planet with humans?

- The primary mission objective of TESS is to survey brightest stars near Earth for transiting exoplanets over two-year period. With TESS, it will be possible to study mass, size, density and orbit of large cohort of small planets, including sample of rocky worlds in habitable zones (goldilocks zone) of their host stars. This will reveal whether planets are rocky (like Earth), gas or Jovian giants (like Jupiter) or something unusual.

- NASA's spacecraft, Kepler, discovered
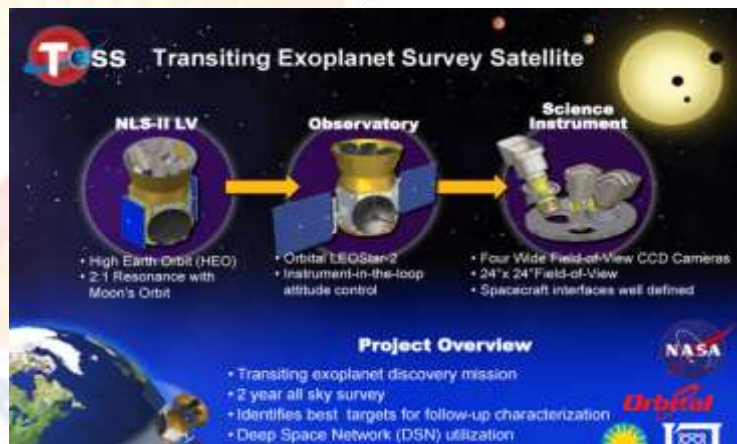
near about 4,000 possible planets in the Milky Way galaxy, after it was launched in 2009. Due to this Kepler's discovery, astronomers now think there are other potentially habitable planets in our galaxy, meaning the nearest one could be as close as 10 to 15 light-years from here.

8.13. Hot, Metallic Earth-Sized Planet Discovered

- **Scientists have discovered a hot, metallic, Earth-sized planet orbiting a dwarf star located 260 million light years away. Named K2-229b**, it is almost 20% larger than Earth, but has a mass over two-and-a-half times greater. It reaches a day side temperature of over 2000 degrees Celsius. It is located very close to its host star, which itself is a medium-sized active K dwarf in the Virgo Constellation. K2-229b orbits this star every fourteen hours.

- **Scientist had employed Doppler spectroscopy technique also known as 'wobble method to discover and characterize this far away planet.** K2-229b orbits its star every fourteen hours. Its day side temperature reaches over 2000 degrees Celsius. Scientists calculated size, position and mass of K2-229b by measuring radial velocity of star and finding out starlight 'wobbles' during orbit, due to gravitational tug from planet, which changes depending on planet's size.

- The dense, metallic nature of K2-229b has numerous potential origins, and one hypothesis is that its atmosphere might have been eroded by intense stellar wind and flares, as the planet is so close to its star. Another possibility is that K2-229b was formed after a huge impact between two giant astronomical bodies in space billions of years ago - much like the theory that the Moon was formed after Earth collided with a body the size of Mars**.**

- Discovering details about far-flung planets across the universe gives us more clues as to how planets in our own solar system formed.

8.14. ISRO–BHEL Tie up for the Production of Space Grade Lithium-Ion Cells

- ISRO has entered into a Technology Transfer Agreement (TTA) with Bharat Heavy Electricals Limited (BHEL), which is one of the country's leading PSUs, to transfer the technology for the manufacture of space grade Li-Ion cells.

- ISRO uses Li-Ion batteries as power sources for satellite and launch vehicle applications due to their high energy density, reliability and long cycle life. This Li-ion cell Technology Transfer will enable BHEL to produce space grade Li-Ion cells which can meet the country's space programme requirements. This technology can also be adopted to cater to the Li-Ion cell requirement for other national needs.

Li-Ion Battery

- Lithium-ion battery or Li-ion battery is type of rechargeable battery that contains several cells. Each cell consists of cathode, anode and electrolyte, a separator between electrodes and current collectors. In it, lithium ions move from negative electrode to positive electrode during discharge and back when charging. Li-ion battery use intercalated lithium compound as one electrode material.

- The lithium-ion battery is light weighted and is one-third the weight of lead acid batteries. It is nearly 100% efficient in both charging and discharging as compared to lead battery which has 70% efficiency. It completely discharges i.e. 100% as compared to 80% for lead acid.

- The rechargeable lithium-ion battery has life cycle of 5000 times or more compared to just 400-500 cycles in lead acid. It also maintains constant voltage throughout the entire discharge cycle whereas voltage in lead acid battery drops consistently throughout its discharge cycle. It is much cleaner technology and is safer for environment as it does not have environmental impact as lead acid battery.

8.15. BIRAC Celebrates Its 6th Foundation Day

- The **Biotechnology Industry Research Assistance Council (BIRAC)** celebrated its 6th Foundation Day in New Delhi. **Themed as 'Sustaining Innovation – A Market Driven Pathway**', the event was attended by a large number of dignitaries from the scientific and industry sectors both from within the country and overseas.

- Biotechnology Industry Research Assistance Council (BIRAC) is a not-for-profit Public Sector Enterprise, set up by Department of Biotechnology (DBT), Government of India as an Interface Agency to strengthen and empower the emerging Biotech enterprise to undertake strategic research and innovation, addressing nationally relevant product development needs.

- BIRAC is a new industry-academia interface and implements its mandate through a wide range of impact initiatives, be it providing access to risk capital through targeted funding, technology transfer, IP management and handholding schemes that help bring innovation excellence to the biotech firms and make them globally competitive

8.16. GSLV Successfully Launches GSAT-6A Satellite

- Indian Space Research Organisation, India's latest communication satellite **GSAT-6A** was successfully launched using the Geosynchronous Satellite Launch Vehicle (GSLV-F08) from Satish Dhawan Space Centre (SDSC) in Sriharikota in Andhra Pradesh. **The purpose of the satellite is to provide mobile communication applications in S-band in five spot beams and C-band in one beam during its 10-year lifespan**. GSAT-6A was similar to the GSAT-6 put into orbit in 2015.

- The GSLV is a three stage/engine rocket. The core of first stage is fired with solid fuel while the four strap-on motors by liquid fuel. The second stage is the liquid fuel-propelled and the third is the cryogenic engine.

- According to ISRO, two improvements - induction of high-thrust Vikas engine and electromechanical actuation system - have been made in the rocket's second stage this time around. One of the crucial rocket engines is the cryogenic engine, designed and developed by ISRO, and more efficient than the other two variants as it provides more thrust for every kilogram of propellant burnt.

> **S-Band**
> S-band is electromagnetic spectrum covering frequencies from 2 to 4 gigahertz (GHz). It is very useful and is used globally for 4G service and is extremely valuable for mobile broadband services. It crosses conventional boundary between Super High Frequency (SHF) and Ultra High Frequency (UHF) bands at 3.0 GHz.

8.17. NASA To Send Its First-Ever Mission To Study Deep Interiors Of Mars

- In a bid to study the deep interior of the Red Planet and find traces of how it was formed, NASA is all set to send a first-ever such mission to Mars. Scheduled to launch on May 5, NASA's **Interior**

Exploration using Seismic Investigations, Geodesy and Heat Transport (InSight), a stationary lander will be dedicated to explore Mars' deep interior.

- **It will be the first NASA mission since the Apollo moon landings** to place a seismometer, a device that measures quakes, on the soil of another planet.
- InSight (Interior Exploration using Seismic Investigations, Geodesy and Heat Transport) is a Mars lander full of geophysical instruments. Using a seismometer, heat flow probe, and precision tracking it seeks to explore the deep interior of Mars and improve our understanding of the formation of terrestrial planets.

8.18. Scientists Just Discovered A New Human Organ

- **Scientists have discovered new organ in human body and have named it as 'interstitium'**. It will be the 80th organ in the human body. It might be also the biggest organ in human body. The discovery of interstitium will help to explain how cancer spreads in body and pave way for new ways to detect and treat the disease.

- Scientists used a special live imaging technique called a Probe-based Confocal Laser Endomicroscopy (pCLE) to locate the interstitium in various parts of the body such as lungs and digestive tract.

- Interstitium, the organ is mesh-like layer made up of collagen and fluid-filled compartments. It can be found just under the skin, surrounding veins, arteries and the tissue between muscles, as well as lining the digestive tract, lungs and urinary systems. The organ was previously thought to be connective tissue.
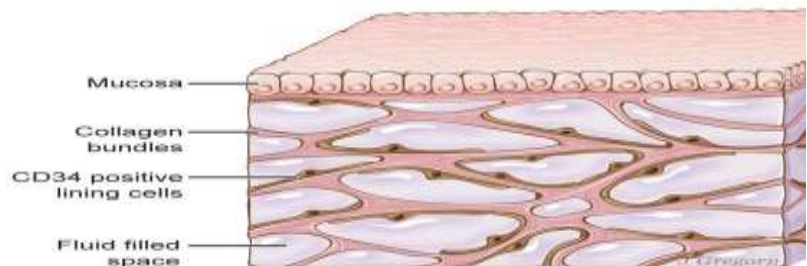
- The new organ's interstitial spaces are organized by collagen mesh which allows it to shrink, expand making it as shock absorbers. It also acts as fluid 'highway' i.e. thoroughfares to transport critical fluids within organs and around body. It also plays important role in carrying lymph, a fluid that supports immunity and also travels through lymphatic vessels**.**

8.19. Pakistan Tests Nuclear-Capable, Submarine-Launched Missile

- **Pakistan has conducted a test of its nuclear-capable, submarine-launched cruise missile (SLCM), Babur**, which has a range of 450 km, which provides country a "credible second strike capability**.**

- The development of second strike capability reflects Pakistan's response to provocative nuclear strategies and posture being pursued in the neighbourhood through induction of nuclear submarines and ship-borne nuclear missiles, leading to nuclearisation of Indian Ocean region.

- The Babur missile was fired from an underwater dynamic platform and successfully engaged its target with precise accuracy. This is only the second time that Pakistan has announced a test of the submarine launched Babur-III missile, with the first test being conducted in January 2017. During the first test, the Babur-III was launched from an unidentified underwater mobile platform. **The Babur-III is the naval variant of the land-based Babur-II, which was tested in December 2016.**

- India, which has a no-first use policy for its nuclear arsenal, began working on second strike capability soon after its nuclear tests in 1998. It has completed its nuclear triad and has the capability to launch strategic weapons from land, air and sea**.**

8.20. Electricity From Soil Bacteria And Reading Lights From Plants

- A group of researchers at the Wageningen University in the Netherlands has hit upon a method that generates electricity from living plants and the microbes that live beneath them in the soil, where the plants drop their roots.

- The plant above the ground does photochemistry, the bacteria beneath do electrochemistry, generating positive and negative ions. The researcher has placed positive and negative electrodes in appropriate positions and obtains an electric current, just as we do with batteries. **This method of producing electricity is through what is termed as plant microbial fuel cells (PMFC).**

- Another dramatic advance, this one directly from the plants themselves rather than the microbes underneath. This is an audacious idea, namely, "how to make plants glow with light".

- A firefly glows because it has an enzyme that converts a molecule called luciferin into oxyluciferin, and the energy released in this reaction comes out in the form of visible light. The enzyme is called luciferase. Now, plants do not have luciferin or luciferase. If we can somehow inject into a plant luciferin and luciferase, perhaps the plant too will emit light.

- Taking watercress and spinach as experimental plants, this group first packaged luciferase in nanoparticles made of silica. Then, they packed luciferin in another set of nanoparticles made of the polymer PLGA. Each of these nanoparticles carried a tag that would allow it to go to one specific part of the plant cells. Then they also devised a third nanoparticle system, packed with molecules called co-enzyme A, which was to remove a product of the luciferin reaction, which inhibits or stops the reaction from proceeding.

- They now immersed the plant in water, added the three sets of nanoparticles, and applied high pressure so that these will enter and position themselves in appropriate places inside the plants. Now, the reaction proceeded and the plant emitted feeble glow.

8.21. Silver Copper Telluride (Agcute): A Thermoelectric Compound

- Researchers have developed silver copper telluride (AgCuTe**), a novel compound that exhibits poor thermal conductivity in the 25-425 Celcius range but shows good electrical conductivity**. The new material made from silver, copper, and tellurium shows high levels of thermoelectric performance that the scientists are hoping could someday be harnessed to extract electricity from waste heat of chemical, thermal, or steel power plants.

- Due to the low thermal conductivity of AgCuTe, one end of the 8 mm-long rod that is contacted with waste heat remains hot while the other end maintains a cold temperature. The temperature difference is essential for the generation of electrical voltage. At the same time, the material exhibits good electrical conductivity like metal.

- The compound, silver copper telluride (AgCuTe), shows promise as a thermoelectric material for converting waste heat into electricity. Potential applications of the thermoelectric technology are in automobile industry, chemical, thermal and steel power plants where large quantities of heat are wasted.

8.22. Coming Soon an 'Indian Brain Template'

- A team of neuroscientists at Haryana's **National Brain Research Centre (NBRC) are trying to prepare a one-of-its-kind Indian Brain Template (IBT).** These scientists are going to construct a prototype of the Indian brain from at least 150 brain scans of Indians from different regions from India, including women. These will be Magnetic Resonance Imaging (MRI) scans of one person from each state and union territory in India.

- There are variations in the size, volume and location of certain brain regions in Indian populations compared to the Canadians. This new archetype will guide researchers into further knowledge about human brains.

- Scientists have been pointing towards the fact that brain images across different regions show significant variations in the location of key brain regions and the density of neurons in various brain areas. China, South Korea and Canada too have their brain templates.

8.23. India Joins Europe's Satellite Data Sharing Pool

India has joined Europe's mega global arrangement of sharing data from earth observation satellites, called Copernicus**.**

What is Copernicus

- *Copernicus* is the European Union's Earth Observation Programme, looking at our planet and its environment for the ultimate benefit of all European citizens. It offers information services based on **satellite Earth Observation and in situ (non-space) data**.
- The Programme is coordinated and managed by the European Commission. It is implemented in partnership with the Member States, the European Space Agency (ESA), and the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT), the European Centre for Medium-Range Weather Forecasts (ECMWF), EU Agencies and Mercator Ocean.

- **Sentinel Satellites**: The Sentinel Satellite Fleet is part of the Copernicus program – the European Commission's Earth Observation Program formerly known as GMES (Global Monitoring for Environment and Security). Copernicus aims to achieve an autonomous and operational Earth observation capacity.
- The Copernicus emergency response mapping system was activated on at least two Indian occasions during the October 2014 floods in Andhra Pradesh and after the 2013 storm in Odisha.
- **The free and open data policy**:- Under this arrangement, the European Commission intends to provide India with free, full and open access to the data from the Copernicus Sentinel family of satellites using high bandwidth connections. Reciprocally the Department of Space will provide the Copernicus programme and its participating states with a free, full and open access to the data from ISRO's land, ocean and atmospheric series of civilian satellites (Oceansat-2, Megha-Tropiques, Scatsat-1, SARAL, INSAT-3D, INSAT-3DR) with the exception of commercial high-resolution satellites data.

9. ECOLOGY AND ENVIRONMENT

9.1. NBA Calls For Plan To Manage Import Of Exotic Fish

- Expressing concern over the increase in the import of ornamental fishes to the country, which is posing a threat to India's native fish populations, **the National Biodiversity Authority (NBA)** has urged the government to come up with quarantine facilities at major seaports and airports.

- The huge market for **Invasive Alien Species (IAS)** is turning out to be major threat to India's aquatic biodiversity.

- **Kolkata and Chennai have emerged as a major hub for the trade of ornamental fish** in the country and that an assessment of the online market for ornamental fish and aquariums will establish the presence of over 1,000 exotic fish species being traded in India

- For example of **suckermouth catfish, an ornamental species known as a 'tank cleaner'** of aquariums, has spread to almost all freshwater ecosystems and outnumbers other native fish by feeding on their larvae and competing with them for food resources.

- Under the **Centre for Biodiversity and Policy and Law (CEBPOL**), the NBA is trying to bring out a national list of IAS**.** So far, no attempt has been made by any scientific organisation to have a national IAS list across different categories like terrestrial plants, aquatic plants, inland fisheries, marine organisms, insects and microbes.

- CEBPOL is a bilateral collaboration between the Indian and Norwegian governments, and focuses on biodiversity policies and laws.

- While the Zoological Survey of India (ZSI) and the Botanical Survey of India (BSI) have come up with some tentative lists for animal and plant IAS, there remains a debate on how to standardise the invasiveness of specific species.

- The National Biodiversity Authority (NBA) is a statutory autonomous body under the Ministry of Environment and Forests, established in 2003**,** to implement the provisions under the **Biological Diversity Act, 2002**, after India signed Convention on Biological Diversity **(CBD) in 1992.**

- Headquartered in Chennai, India, **it acts as a facilitating, regulating and advisory body to the Government of India "on issues of conservation, sustainable use of biological resources** and fair and equitable sharing of benefits arising out of the use of biological resources.

- Invasive alien species are plants, animals, pathogens and other organisms that are non-native to an ecosystem, and which may cause economic or environmental harm or adversely affect human health. In particular, they impact adversely upon biodiversity, including decline or elimination of native species - through competition, predation, or transmission of pathogens - and the disruption of local ecosystems and ecosystem function
- Since the 17th century, invasive alien species have contributed to nearly 40% of all animal extinctions for which the cause is known.

9.2. Previously Unknown 'Supercolony' Of Adélie Penguins Discovered In Antarctica

- For the past 40 years, the total number of **Adélie Penguins, one of the most common on the Antarctic Peninsula**, has been steadily declining -- or so biologists have thought. A new study led by researchers from the Woods Hole Oceanographic Institution (WHOI), however, is providing new insights on of this species of penguin.

- Recently, the scientists announced the discovery of a previously unknown "supercolony" of more than 1,500,000 Adélie Penguins in the **Danger Islands, a chain of remote, rocky islands off the Antarctic Peninsula's northern tip.**

- Not only do the Danger Islands hold the largest population of Adélie penguins on the Antarctic Peninsula, they also appear to have not suffered the population declines found along the western side of Antarctic Peninsula that are associated with recent climate change.

- **Penguins** are a group of aquatic, flightless birds. **They live almost exclusively in the Southern Hemisphere, with only one species, the Galapagos penguin, found north of the equator**. Highly adapted for life in the water, penguins have countershaded dark and white plumage, and their wings have evolved into flippers. Most penguins feed on krill, fish, squid and other forms of sea life caught while swimming underwater.

- The **largest living** species is the **emperor penguin** and The **smallest penguin** species is the **little blue penguin**

9.3.   Only 13% Of Tiger Conservation Areas Meet Global Standards

- Only 13 per cent of the tiger conservation areas met the global standards of an accreditation system, the Conservation Assured | Tiger Standards (CA|TS), a new survey of current management methodologies at 112 sites located in 11 tiger-range countries, including India, said.

- The survey is the first and largest rapid assessment of site-based tiger conservation across Asia and has been driven by 11 conservation organisations and tiger-range governments that are part of the CA|TS coalition.

- Under the accreditation system of CA|TS, tiger conservation areas provide evidence under seven pillars and 17 elements of critical management activity to demonstrate that they meet a range of criteria for effective conservation management.

- CA|TS was developed by tiger and protected area experts. Officially launched in 2013, CA|TS is an important part of Tx2, the global goal to double wild tiger numbers by the year 2022.

- **To date, three sites - Lansdowne Forest Division in Uttarakhand, India, Chitwan National Park in Nepal and Sikhote-Alin Nature Reserve in Russia - have been awarded CA|TS Approved status.**

- The CA|TS was developed in response to the need for stringent conservation procedures for protection of the big cat through a partnership between governments and conservation organisations to assess the levels of effective management, among others. Of the 112 global sites surveyed, only 12.5 per cent was currently able to meet the full CA|TS criteria.

- Positive findings highlight the fact that tiger monitoring is being implemented in 87 per cent of the sites and all sites surveyed in South Asian and East Asian countries like Bangladesh, Bhutan, China, India, Nepal and Russia have management plans**.**

- However, several sites in Southeast Asia, including countries such as Cambodia, Indonesia, Malaysia, Myanmar and Thailand, did not have management plans and about 85 per cent of the sites also had no systems for assessing management effectiveness.

- Despite poaching being one of the greatest threats faced by big cats, 85 per cent of the areas surveyed do not have staff capacity to patrol the sites effectively and 61 per cent of the areas in Southeast Asia have a very limited anti-poaching enforcement

- The accreditation of Lansdowne Forest Division, Uttarakhand, in May 2017, the third CA|TS accredited site globally and the first in India, is significant since it is a crucial link between the Rajaji and Corbett tiger reserves.

9.4.   World Wildlife Day – Wildlife Under Threat

- Every year **March 3 is celebrated as World Wildlife Day** to raise awareness about our planet's flora and fauna.

- The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) was finalised on March 3 and the day has been celebrated as World Wildlife Day since 2014.

- **CITES is an international agreement between the governments of 183 countries to protect wild plants and animals and ensure their survival**. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival.

- Although **CITES is legally binding on the Parties –** in other words they have to implement the Convention – **it does not take the place of national laws**. Rather it provides a framework to be respected by each Party, which has to adopt its own domestic legislation to ensure that CITES is implemented at the national level.

- This year the **theme is "Big cats — predators under threat."**

- UN World Wildlife Day 2018 featured a star-studded cast — cheetah, clouded leopard, jaguar, leopard, lion, puma, snow leopard, tiger. These most majestic predators on our planet are facing many and varied threats, primarily caused by human activities, be it habitat loss, poaching, human-wildlife conflict or climate change.

9.5.   Newton-Bhabha Fund For Arsenic Research In Ganga Basin

- An India-UK Joint Team has won the Newton-Bhabha Fund for a project on Groundwater Arsenic Research in Ganga River Basin.

- The Department of Science and Technology has undertaken the project with the Natural Environment Research Council, UK, to find solutions to the water challenges faced in the pervasively arsenic-affected Ganga River Basin.

- The Newton Bhabha Fund, provided by the British Council, aims to bring together the UK and Indian scientific research and innovation sectors to find joint solutions to the challenges facing India in economic development and social welfare.

- The team members involved with the project will try to assess how the problem of arsenic poisoning can get aggravated in the next 25 to 30 years, influence groundwater management practices, and suggest water remedial technologies accordingly.

- To begin with, the project will be conducted from three sites - Bijnor and Varanasi in Uttar Pradesh and Nadia in West Bengal.

- Arsenic is an element that occurs in organic and inorganic compounds. According to the International Agency for Research on Cancer, its presence in inorganic compounds is highly toxic and carcinogenic.
- Chronic arsenic poisoning can lead to cancer, depending on factors such as the dose, how long it is consumed, a person's nutrition levels and any genetic predisposition. Arsenic has been linked to various forms of cancer in India, the most common being skin cancer, followed by cancers of the bladder, kidney and lung.
- Common symptoms of arsenic poisoning include pigmentation and keratosis, a condition that leads to hardening of the skin on the palms and soles of the feet. **Arsenic poisoning can also lead to respiratory**

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diseases, vascular diseases, neuropathy and liver fibrosis.

Arsenic Contamination Of Ground Water In India

- Before the 1970s in India, surface water from tanks, ponds and open wells was used for drinking. But since then, millions of tubewells were installed in the Ganges delta, to prevent gastrointestinal diseases such as diarrhea from surface water.

- People soon became dependent on groundwater. The cause of the upsurge in arsenic concentration is the overuse of groundwater for irrigation and drinking, which happens when withdrawal rates exceed recharge rate.

- These changes mean **arsenic** -- **which previously occurred in a relatively harmless insoluble conjugate with iron called arsenopyrite --** then split due to overuse, contaminating the groundwater with a soluble ionic form of arsenic that has since been consumed by millions of people for decades.

- **Within India, arsenic concentration is particularly high in and around the Ganges delta in eastern and northeastern India, affecting the states of Bihar, West Bengal, Jharkhand, Uttar Pradesh, Assam, Manipur and Chhattisgarh**. This is due to silt from the Himalayas containing arsenopyrite

9.6. Government Unveils Draft National Forest Policy

In News

- India's environment ministry has unveiled a draft of the new National Forest Policy (NFP).

- National Forest Policy will be an overarching policy for forest management, with the aim of bringing a minimum of one-third of India's total geographical area under forest or tree cover. The first National Forest Policy in independent India took effect in 1952, with a second edition in 1988.

Key Highlights

- The draft policy proposes to restrict "schemes and projects which interfere with forests that cover steep slopes, catchments of rivers, lakes, and reservoirs, geologically unstable terrain and such other ecologically sensitive areas**".**

- "The ecologically sensitive catchment areas shall be stabilized with suitable soil and water conservation measures, and also by planting suitable trees and grass like bamboo," the draft suggests.

- It also suggests setting up of two national-level bodies—**National Community Forest Management (CFM) Mission and National Board of Forestry (NBF**)—for better management of the country's forests.

- Once finalized, the policy will guide the forest management of the country for the next 25-30 years.

- Earlier draft released in June 2016 had proposed a **green tax** for facilitating ecologically responsible behaviour, and supplementing financial resources essential to address forestry woes.

- It had also called for safeguarding forest land by exercising strict restraint on "diversion for non-forestry purposes" like mining and industrial projects. Besides, it had suggested launching a **national forest streams revival programme** in mission mode to tackle the water crisis.

- However, the latest draft of National Forest Policy has omitted any reference to a green tax or a national stream revival programme. But it continues to speak about private participation in forest management, which was criticized in 2016, while noting that productivity of forest plantations are poor in most states.

- The new draft also says efforts will be made to achieve harmonization between policies and laws like **Forest Rights Act (FRA) 2006** . This can certainly once again put environmentalists and

bureaucracy at loggerheads as the former may see it as an attempt to weaken role of gram sabhas (village councils).

- "Forests influence and in-turn are influenced by activities and functions of different sectors such as tribal affairs, mining, water, roads, tourism, agriculture, rural development, industry, irrigation and transmission lines etc.

- As far as community forest resources management under Forest Rights Act is concerned, the new policy will address the same under participatory forest management and the same will be addressed through the proposed community forest management mission," the draft said.

- It further noted that India has a rich and varied experience in participatory forest management and thus there is need to further strengthen this participatory approach, for which a National **Community Forest Management (CFM) Mission** will be launched.

- This mission will have a legal basis and an enabling operational framework. The national, state and local level development programmes shall be converged. All efforts to ensure synergy between gram sabha & **JFMC (Joint Forest Management Committee)** will be taken for ensuring successful community participation in forest management.

- On the issue of finances required for management of forests, the draft stated that the compensatory afforestation fund which is being transferred to the states would be a major source of funds for taking up afforestation and rehabilitation works in degraded forest areas as well as for bringing new areas under forest and tree cover.

- Efforts for tapping funds from other national sectors like rural development, tribal affairs, national highways, railways, coal, mines, power, etc., will be taken for appropriate implementation of linking greening with infrastructure and other development activities.

> The 1952 policy stressed on the production and revenue generation aspects of the forests while the 1988 version aimed at ensuring environmental stability and maintenance of ecological balance.

- The draft National Forest Policy says the objective of the latest version is to safeguard the ecological and livelihood security of people, of present and future generations, based on sustainable management of the forests for the flow of ecosystem services. It continues with the target of having 33% of India's geographical area under forest and tree cover and in the hills and mountainous regions, the aim will be to maintain two-thirds of the area under forest and tree cover.

- At present, India's forest and tree cover is estimated to be 802,088 sq. km, which is about 24.39% of the country's total geographical area.

- **The 2018 draft also calls for "promotion of trees outside forests and urban greens"**, while stating that it will be taken up in "mission mode".

- It addressed the issue of forest fires, stating that "adequate measures would be taken to safeguard ecosystems from forest fires, map the vulnerable areas and develop and strengthen early warning systems and methods to control fire, based on remote sensing technology and community participation."

- It emphasized on integrating climate change concerns into forest management while noting that forests acts as a natural sink of carbon dioxide thereby assisting in climate change mitigation.

- The policy also stressed that "wildlife rich areas and corridors outside protected areas would be identified and maintained for ensuring ecological and genetic continuity."

- To tackle rising human-wildlife conflict, the draft outlined short-term and long-term actions. Quick response, dedicated teams of well equipped and trained personnel, mobility, strong interface with

health and veterinary services, rescue centres, objective and speedy assessment of damage and quick payment of relief to the victims would be at the core of the short-term action.

- Monitoring and management of population of wildlife would be adopted on a long-term basis within and outside forests for maintaining the balance.

9.7. Government Issues Dust Deadline: March 31 Or Face Suspension

The Environment Ministry has asked major infrastructure agencies, including the National Highway Authority of India (NHAI), to implement measures for dust mitigation by March 31 or face suspension of construction work.

Background

- On January 25, the ministry notified an amendment to the environment protection rules making it mandatory for all projects that require clearance to implement dust mitigation measures.

- Among the measures listed in the notification are paved roads at construction sites, wind breakers of appropriate height, adequate water sprinkling systems, prohibition of grinding and cutting of building materials in the open area and covering all vehicles carrying construction material and waste.

The rules state: "No building or infrastructure project requiring environmental clearance shall be implemented without approved Environmental Management Plan inclusive of dust mitigation measures." The rules are applicable in all cities where particulate matter, PM 10 and PM 2.5, exceeds limits prescribed in the National Ambient Air Quality standards.

- The annual PM 10 limit is 60 micrograms per metre cube. For PM 2.5 it is 40 micrograms per metre cube. The daily cut-off for both is 100 micrograms per metre cube and 60 micrograms per metre cube, respectively.

- **According to an article published in the Indian Journal of Community Health** major concerns for human health from exposure to PM 10 include effects on breathing and respiratory systems, damage to lung tissue, cancer and premature death. Elderly persons, children and people with chronic lung disease, influenza or asthma are especially sensitive to the effects of particulate matter."

- Two months ago, failure to check air pollution led to India being ranked the fourth worst country in the world in terms of curbing environmental pollution, according to Environmental Performance Index.

- India ranked 177 out of 180 countries, in contrast to a rank of 141 two years ago. The EPI rankings were published on the sidelines of the World Economic Forum in Davos.

9.8. Awash In Water Crises

- As **World Water Day draws closer (March 22), this year's World Water Development Report makes it clear that nature-based solutions** — which are also aligned with the principles and aims of the 2030 Agenda for Sustainable Development — **can offer answers to our most pressing water-related challenges.**

- Nature-based solutions hold great promise in areas which also include sustainable food production, improved human settlements, access to drinking water supplies and sanitation, water-related disaster risk reduction, and helping to respond to the impact of climate change on water resources.

- The water-related challenges we face today are immense. The world's population is expected to increase from 7.6 billion (2017) to between 9.4 and 10.2 billion people (2050), with two-thirds of them living in cities. UN estimates are that more than half of this anticipated growth will be in Africa (1.3 billion) and Asia (0.75 billion). Therefore, those most in need of water will be in developing or emerging economies.

- Climate change is also impacting the global water cycle with wetter regions generally becoming wetter and drier regions drier. An estimated 3.6 billion people now live in areas that could face water scarcity for at least a month in a year, with that number increasing to 4.8 and 5.7 billion by 2050. **The International Water Management Institute estimates that total demand could increase from 680 billion cubic metres (BCM) to 833 BCM by 2025, and to 900 BCM by 2050**.

- By 2050, countries already facing water scarcity challenges may also be forced to cope with the decreased availability of surface water resources. India faces major threats to its water security, with most water bodies near urban centres heavily polluted. **Inter-State disputes over river resources are also becoming more intense and widespread.**

- **Deteriorating water quality**

  o Along with water scarcity, there is the issue of water quality. Since the 1990s, water pollution has worsened in most rivers in Africa, Asia and Latin America, according to the UN Environment Programme (UNEP). An estimated 80% of industrial and municipal wastewater is released without any prior treatment, with detrimental impacts on human health and ecosystems. Given the transboundary nature of most river basins, regional cooperation will be critical to addressing projected water quality challenges.

  o A Central Pollution Control Board report indicates that almost half of India's inter-State rivers are polluted. Sewage from 650 cities and towns along 302 polluted river stretches in the country increased from 38,000 million litres per day (MLD) in 2009 to 62,000 MLD in 2015. It found that the untreated sewage and industrial waste was a major cause of pollution in 16 of 40 inter-State rivers in the country.

Nature-based solutions can address overall water scarcity through "supply-side management," and are recognised as the main solution to achieving sustainable water for agriculture.

- **Constructed wetlands for wastewater treatment can also be a cost-effective,** nature-based solution that provides effluent of adequate quality for several non-potable uses (irrigation) and additional benefits that include energy production & **Natural and constructed wetlands also biodegrade or immobilise a range of emerging pollutants.**

- **Watershed management** is another nature-based solution that is seen not only as a complement to built or "grey" infrastructure but also one that could also motivate local economic development, job creation, biodiversity protection and climate resilience.

- Environmentally-friendly agricultural systems like those which use practices such as conservation tillage, crop diversification, legume intensification and biological pest control work as well as intensive, high-input systems.

Nature-based solutions are crucial to achieving our Sustainable Development Goals. Adopting them will not only improve water management but also achieve water security.

9.9. Introduction of BS VI Fuel

BS VI fuel to be available in Delhi from 1 April and the country from 2020. Hence, it becomes necessary to understand the fuel related issues in detail.

Why The Bharat Stage (BS) Fuel Norms

- India is the third largest consumer of oil after China and the US. India's oil consumption is growing at a steady 4-5% a year despite a surge in renewable sources of energy warranted by more stringent air quality norms to address the effects of pollution.

- The vehicular pollution norms introduced in the early 1990s have been tightened over time, with BS VI scheduled to be implemented in Delhi from 1 April.

- According to the plan, Delhi NCR will have BS VI fuel supplies from April 2019 and the rest of the country from April 2020. The deadline was advanced for Delhi on account of the high level of pollution in the capital.

How Serious Is India's Pollution Problem

According to a January 2018 survey by Greenpeace Environment Trust, 550 million live in areas where particulate matter exceeds the national standard, and many live in areas where air pollution levels are more than twice the stipulated standard. Air quality is measured based on the number of small particles in every cubic metre of air capable of entering the bloodstream through the lungs.

What Is BS VI's Key Improvement In Fuel Quality Over BS IV?

BS VI norms seek to cut down sulphur content to 10 parts per million (ppm) from 50 ppm. Sulphur in the fuel contributes to fine particulate matter emissions. High sulphur content in the fuel also leads to corrosion and wear of the automobile engine. BS VI norms also seek to reduce the level of certain harmful hydrocarbons in the emissions that are produced due to incomplete combustion of fuel.

How Prepared Are Fuel Retailers?

Retailers usually start supplying fuel of superior quality specifications weeks ahead of the deadline to flush out the fuel already flowing through the pipelines. Replenishing the supply chain with the specified quality fuel is a gradual process as new supplies get mixed with the old stock. State-owned refineries in Mathura and Panipat are already producing BS VI fuel. The shift from BS IV to BS VI, skipping a stage, is estimated to cost refiners Rs28,000 crore.

Are Automobile Companies Ready?

- Industry watchers say some automobile manufacturers are already exporting Euro VI-compliant vehicles and that they are ready to sell these in the domestic market. However, it is unlikely that any automaker will launch a BS VI-compliant vehicle before the April 2020 deadline for the national rollout, due to fears that their higher price could result in a loss of market share to a rival who prefers to wait.

- Industry observers add that automakers would prefer to switch to BS VI-compliant vehicles in all cities at the same time as otherwise people would tend to buy cheaper older versions from neighbouring states. To be sure, pre-BS VI vehicles will continue to be in use even after BS VI fuel and compliant vehicles become the standard

9.10. Fighting Forest Fires

- The recent wildfire tragedy in Theni in Tamil Nadu, in which 20 trekkers lost their lives, once again brings into focus forest fires in India. This tragedy raises several other issues — of approaches in fighting fires and ways of mitigating damage.

- When a fire anywhere in the world is detected by **NASA's MODIS (Moderate Resolution Imaging Spectroradiometer) and VIIRS (Visible Infrared Imaging Radiometer Suite) satellites**, the Forest Survey of India (FSI) analyses the data by overlaying the digitised boundaries of forest areas to pinpoint the location to the exact forest compartment. The resolution of these satellites are up to 375m x 375m, which means that such fires can be detected if their extent is above half the pixel, i.e. about seven hectares.

Four Approaches

There are four approaches to fighting forest fires:

✓ The first is what may be called technological, where helicopters or ground-based personnel spray fire retardant chemicals, or pump water to fight the blaze. These are expensive methods and make sense when one is protecting a human community, but are usually not practised in India.

✓ The second is to contain the fire in compartments bordered by natural barriers such as streams, roads, ridges, and fire lines along hillsides or across plains. A fire line is a line through a forest which has been cleared of all vegetation. The width depends on the type of forest being protected. Once the blaze has burnt out all combustibles in the affected compartment, it fizzles out and the neighbouring compartments are saved.

✓ The third is to set a counter fire, so that when a fire is unapproachable for humans, a line is cleared of combustibles and manned. One waits until the wildfire is near enough to be sucking oxygen towards it, and then all the people manning the line set fire to the line simultaneously. The counter fire rushes towards the wildfire, leaving a stretch of burnt ground. As soon as the two fires meet, the blaze is extinguished.

✓ The fourth approach, which is the most practical and most widely used, is to have enough people with leafy green boughs to beat the fire out. This is practised in combination with fire lines and counter fires.

The lesson to be learnt is that if combustibles are removed or burnt under supervision, a fire can be controlled. This is why there are usually no deaths from burns among personnel fighting forest fires. **The danger is asphyxiation, since a vast quantity of smoke is generated, and the lack of oxygen in the immediate vicinity of tall flames can cause breathlessness**. Once a person loses consciousness due to asphyxiation, the danger of being burnt alive becomes real, especially if one is alone. Dehydration is also an issue when fighting flames more than a metre high.

Mitigating Damage

- While communication and response time have been cut down, the actual numbers of Forest Department personnel that are sent to put out fires are woefully inadequate.

- We need to vastly increase the number of firefighters as well as equip them properly with drinking water bottles, back-up supplies of food and water, proper shoes or boots, rakes, spades and other implements, light, rechargeable torches, and so on.

- Seasonal labour could be contracted during the fire season. With adequate training, they would serve to fill gaps along the line. Local villagers would be the best resource.

- The constraint is funds. Vast amounts of funds are used for frivolous purposes like 'planting forests'. In practice, they are mostly diverted to corrupt officials and political parties. After more than half a century of planting forests there is little to show for the funds spent on this activity. Instead, those funds would be more than sufficient to cover the cost of a well-equipped and well-paid forest protection force.

- More Forest Department field staff could be hired to put out fires during the fire season and to patrol the forests during other times. This is the only way to prevent accidents such as the Theni tragedy.

Conclusion

Increasing the field staff of Forest Departments by discontinuing the claimed 'forest plantations' would help control forest fires, which in turn would help rejuvenation of fire-stressed forest ecosystems. This would help indigenous forests grow back. Giving access to the public to reserve forests in their present state would have a salutary effect on the quality of life of our citizenry and the quality of field researchers available within the country.