1. SOCIAL ISSUES

1.1. K. Kasturirangan Panel on National Education Policy

In News

- The Union Government has formed a committee headed by space scientist K. Kasturirangan, to come up with the blueprint for a new education policy.

- The Kasturirangan committee has been mandated to make Indian education contemporary, improve its quality, and internationalize it.

- It could also provide a roadmap for the entry of foreign universities into India.

Background

- The first National Policy On Education (NPE) was promulgated in 1968 by Prime Minister Indira Gandhi, and the second by Prime Minister Rajiv Gandhi in 1986.

- The **First NPE** called for a "radical restructuring" and equalise educational opportunities in order to achieve national integration and greater cultural and economic development.

o The policy called for fulfilling compulsory education for all children up to the age of 14, as stipulated by the Constitution of India.

o The policy called for focus on learning of regional languages, outlining the "**three language formula**" to be implemented in secondary education - the instruction of the English language, the official language of the state where the school was based, and Hindi, Language education was seen as essential to reduce the gulf between the intelligentsia and the masses.

o The NPE of 1968 called for education spending to increase to **6% of the national income**.

- The **2ⁿᵈ Education policy** called for "special emphasis on the **removal of disparities** and to equalise educational opportunity," especially for Indian women, Scheduled Tribes (ST) and the Scheduled Caste (SC) communities. It called for a "child-centred approach" in primary education, and launched "**Operation Blackboard**" to improve primary schools nationwide. The policy expanded the Open University system with the **Indira Gandhi National Open University**, which had been created in 1985.

Why India Need A New Education Policy

The 1986 National Policy on Education, as reviewed in 1992, has been the guiding document of central government on the education sector for over two decades now. The 1986-'92 policy, though robust in concept and orientation, has not delivered acceptable outcomes in the education sector. Most objectives and goals have not been realised, even partially, largely due to the absence of a workable roadmap and continuing operational guidance. More significantly, heavy politicisation at every level of operation from the village/block level, accompanied by ever-increasing corruption, permeating every aspect of educational administration, have been the prominent developments in the past three decades or so. This has affected education as follows:

- While gross enrolment in schools as also in higher education institutions has gone up sharply, and even as infrastructure facilities in the school system have significantly improved, there has been little corresponding effect on the **quality of instruction or learning**, especially in government schools. ASER 2014 found that 25 % in Class VIII could not read texts meant for the Class II level; the number of children in rural schools in Class II who could not even recognise the alphabet is up from 13.4 % in 2010 to 32.5 % in 2014.

- There has been a **mushrooming of private colleges and universities**, and many valid questions have been raised about the quality of degrees generally obtained in the system.

- There is no **clearly laid out policy in respect of private participation** in the education system, both at the school and higher education levels. The respective roles to be played by private and public players is not defined.

- In theory, the system persists in reiterating the mantra that *education is not a 'business'*, that the profit motive cannot be the guiding principle for an educational institution. But, the exponential growth of higher education institutions in the past two decades has been fuelled by the 'capitation fee' phenomenon, which thrives on black money and shadowy financial transactions. It is also a fact that many of the so-called 'charitable educational trusts' have a strong, direct financial motive, in most cases in close association with or with the sponsorship of the political class.

- The issue of an *'inclusive' educational system* has also not been seriously addressed.

- While the *Right to Education (RTE) Act* has led to significant increase in enrolment, as also emphasis on infrastructure, new issues in the implementation phase have now arisen, which need to be addressed. In particular, the 'No Detention Policy' needs to be revisited, to ensure that it is optimally and judiciously implemented.

- The *quality of academic research*, overall engagement and accomplishments in the field of research also leave much to be desired.

- Formally linking the development of skills in vocational fields, and bringing in an academic equivalence to *vocational accomplishments*, has not been seriously attempted. This also means that the avenue for horizontal and vertical mobility has not been provided in adequate degree.

- A major new dimension is the advent of information and communication technology. New technologies are now available for information dissemination, enhancement of skills and so many other end-uses, but they are not yet suitably adopted or adapted to the needs of the education sector. There is immense scope for *harnessing technology* to improve quality, teacher preparation, aid to teachers in classrooms, remedial coaching-possibilities that have not yet been seriously addressed. 'Big data' can be harnessed to track student-learning outcomes, link teacher-performance to student learning as aid to assessment of teacher quality, to track the progress of individual schools etc.

Conclusion

Fortunately, the Union ministry of HRD has taken a major initiative to revamp the education sector, and intends to soon declare a new education policy. It is hoped that the ministry's move will give a new direction to the education sector, halt the precipitous decline in standards, and pave the way for much better quality standards. Political will to raise educational standards, and eliminate or minimise political intervention at all levels, could lead India to global standards in just one generation.

T.S.R Subramanian Committee on New Education Policy

The T.S.R. Subramanian committee, entrusted with preparing a new education policy for India, submitted the report to the government in May 2016 suggesting measures that the country must take to improve the sector that caters to over 300 million students in the country. The recommendations are:

- An **Indian Education Service (IES)** should be established as an all India service with officers being on permanent settlement to the state governments but with the cadre controlling authority vesting with the HRD Ministry.

- The outlay on education should be raised to at least 6% of GDP without further loss of time.

- There should be minimum eligibility condition with 50% marks at graduate level for entry to existing B.Ed courses. Teacher Entrance Tests (TET) should be made compulsory for recruitment of all teachers. The Centre and states should jointly lay down norms and standards for TET.

- Compulsory licensing or certification for teachers in government and private schools should be made mandatory, with provision for renewal every 10 years based on independent external

---

testing.

- Pre-school education for children in the age group of 4 to 5 years should be declared as a right and a programme for it implemented immediately.

- The no detention policy must be continued for young children until completion of class V when the child will be 11 years old. At the upper primary stage, the system of detention shall be restored subject to the provision of remedial coaching and at least two extra chances being offered to prove his capability to move to a higher class.

- On-demand board exams should be introduced to offer flexibility and reduce year end stress of students and parents. A National Level Test open to every student who has completed class XII from any School Board should be designed.

- The mid-day meal (MDM) program should now be extended to cover students of secondary schools. This is necessary as levels of malnutrition and anaemia continue to be high among adolescents.

- UGC Act must be allowed to lapse once a separate law is created for the management of higher education. The University Grants Commission (UGC) needs to be made leaner and thinner and given the role of disbursal of scholarships and fellowships.

- Top 200 foreign universities should be allowed to open campuses in India and give the same degree which is acceptable in the home country of the said university.

1.2. 'City Liveability Index' to Rank Indian Cities

In News

- The Ministry of Urban Development launched the 'City Liveability Index' for measuring the quality of life in 116 major cities including smart cities, capital cities, and cities with a population of above one million each.

- The first-of-its-kind index will enable the cities know where they stand in terms of the quality of life and the interventions required to improve it.

- The cities will be assessed on a comprehensive set of 79 parameters, including availability of roads, education, healthcare, mobility, employment opportunities, emergency response, grievance redressal, pollution, availability of open and green spaces, cultural and entertainment opportunities.

- The ranking will be released in 2018.

Mercer 2017 Quality of Living Index

- Indian cities have performed poorly on a globally recognized survey that ranks cities in terms of how it is to live and work in them.

- Hyderabad, the highest ranked Indian city, is down five ranks from last year's 139 in the Mercer 2017 Quality of Living Index.

- New Delhi continues to be ranked lowest, among the surveyed cities, with scores remaining constant.

- The survey highlights that Indian cities that have been part of the survey haven't made much progress on the quality of living scale since last year.

- Parameters such as ease of travel and communication, sanitation standards, personal safety and access to public services etc. are taken into account while forming the index.

1.3. FSSAI Proposes Draft Regulation for Organic Foods

In News

- The Food Safety & Standards Authority of India (FSSAI) has proposed a draft Food Safety and Standards (Organic Foods) Regulation, 2017.

- The proposed regulation seeks to ensure that these food items are actually organic, thereby providing authenticity to these items.

- Currently, consumers do not have any way to check the authenticity of organic food products due to lack of a regulatory framework.

Background

- Currently, certification for food sold as "organic" in India is not mandatory.

- However, there are two prevalent certification systems which are voluntarily followed by those who want to sell food under this category.

- The first system, which is governed by the Union Ministry of Commerce and Industry, is mandatory for exports. It is called the **National Programme for Organic Production (NPOP)** and is also referred to as "Third Party Certification".

- The second system, governed by the Union Ministry of Agriculture and Farmers' Welfare, is called the **Participatory Guarantee System (PGS)** and is meant only for the domestic market.

- The Third Party Certification system is applicable to individual farmers or farmer groups, while the PGS is applicable only to farmer groups and works around the collective responsibility of the group.

Key Highlights

- The draft regulation has defined Organic Agriculture, Organic Farm and Organic Food to remove any ambiguity.

- Organic Agriculture means that no synthetic external inputs such as chemicals, fertilizers, pesticides and synthetic hormones or Genetically Modified Organisms (GMOs) have been used in agricultural production.

- According to it, Organic foods are defined as those food products that are produced in accordance with specified standards for organic production.

- Any food sold as 'organic food' needs to comply with any one of these-

o NPOP

o PGS-India

o Any other system or standards as may be notified by the Food Authority from time to time.

- The draft regulation mandates that labeling of organic foods should convey full and accurate information on the organic status of the product.

- Organic food products should also carry a certification mark or a quality assurance mark given by any of the notified certification bodies. Accreditation Body is an FSSAI recognised body.

- The FSSAI's draft has exempted organic food marketed through direct sale by the original producer or producer organisation to the end consumer from verification compliance. However, this exemption does not apply to processed organic products.

- Organic food imported into India will not require re-certification provided there is a bilateral or multilateral agreement on the basis of equivalence of standards between NPOP and the organic standards of the respective exporting countries.

- The draft regulation has authorized the Food Authority to establish appropriate institutional mechanism to implement these regulations and promote authentic organic food in the country.

Criticism

- Delhi-based non-profit, Centre for Science and Environment (CSE) has disapproved FSSAI's move to make certification of organic food sold in India mandatory. It says that not only will such a move promote just the certification industry but also strike a blow to the organic farming movement in India and impact country's food safety.

- Unlike the direct sale of "fresh organic produce" by producers or producer organizations, the "processed food" is not exempt from the requirement of certification. This means that for any processed food to be sold as "organic" in Indian markets, it will have to be certified either by an agency under the Third Party Certification system or under PGS.

- While both certification systems have a procedure for certification of processed food, practically, as of now, processed food certified under PGS is not a reality. For PGS-certified processed food, the raw produce must belong to the group of farmers and the processing must be undertaken under their supervision. Most PGS farmers are not undertaking any kind of processing and because they cannot not sell their produce for processing outside the group / federation, the certification through PGS becomes challenging.

- The sale of fresh organic food in India is already facing many challenges because of a lack of market linkages. As a result, farmers do not get the premium price they deserve for organic food and they are suffering. In this regard, the proposed regulation overlooks the concerns of farmer.

- The Third Party Certification system is quite expensive. Farmers who are unable to afford third party certification, might continue selling fresh produce despite the discouraging market situation, or worse, may quit organic farming.

- This adverse impact on the organic farming movement will lead to more food grown with the use of pesticides and other chemicals and will impact food safety in India.

Conclusion

The proposed regulation is a welcome step. However, government must address the concerns of farmers and provide incentives to induce them to grow organic products on large scale.

1.4.   India to Become Most Populous Country in the World by 2024

In News

- According to a UN forecast, India's population could surpass that of China's around 2024, two years later than previously estimated, and is projected to touch 1.5 billion in 2030.

- **The World Population Prospects: The 2017 Revision**, published by the UN Department of Economic and Social Affairs, said that currently China with 1.41 billion inhabitants and India with 1.34 billion remain the two most populous countries, comprising 19 and 18 % of the total global population.

Key Highlights

- The new estimates released said that in 2024, India and China are expected to have roughly a population of 1.44 billion each.

- After that, India's population is projected to continue growing for several decades to around 1.5 billion in 2030 and approaching 1.66 billion in 2050, while the population of China is projected to remain stable until the 2030s, after which it may begin a slow decline.

- India's population may eventually see a decline in the half century after 2050 to 1.51 billion by 2100 but it will still be the most populous country in the world.

- In India, life expectancy at birth will be 71 years in 2025-2030, growing to 74.2 years in 2045-2050. The under-five mortality rate will decline from 32.3 deaths under age five per 1,000 live births in 2025-2030 to 18.6 in 2045-2050.

- The report said the current world population of 7.6 billion is expected to reach 8.6 billion in 2030, 9.8 billion in 2050 and 11.2 billion in 2100.

National Population Policy (NPP)

- The *immediate objective* of the policy was to address the unmet needs for contraception, health care infrastructure and personnel, and to provide integrated service delivery for basic reproductive and child health care.

- The **medium-term objective** was to bring TFR (Total Fertility Rate – the average number of children a woman bears over her lifetime) to replacement level of 2.1 by 2010.

- In the long term, it targeted a stable population by 2045, 'at a level consistent with the requirements of sustainable economic growth, social development, and environmental protection.'

- The NPP 2000 is uniformly applicable to the whole country. In pursuance of this policy, Government has taken a number of measures under Family Planning Programme and as a result, Population Growth Rate in India has reduced substantially which is evident from the following:-

i. The percentage decadal growth rate of the country has declined significantly from 21.5% for the period 1991-2001 to 17.7% during 2001-2011.

ii. TFR was 3.2 at the time when NPP 2000 was adopted and the same has declined to 2.2 as per NFHS IV(2015-16).

Factors That Affect Population Growth

- The overarching factor that affects population growth is **low socio-economic development**. For example, UP has a literacy rate of 56%; only 14% of the women receive complete antenatal care. UP records an average of four children per couple. In contrast, in Kerala almost every person is literate and almost every woman receives antenatal care. Kerala records an average of two children per couple.

- **Early marriage** - Nationwide almost 30% of married women were married before the age of 18. Not only does early marriage increase the likelihood of more children, it also puts the woman's health at risk.

- **Level of education** - Fertility usually declines with increase in education levels of women.

- **Use of contraceptives** - According to NFHS IV(2015-16), only 54% of currently married women use some method of family planning in India. A majority of them (37%) have adopted permanent methods like sterilization.

- **Other socio-economic factors** - The desire for larger families particularly preference for a male child also leads to higher birth rates. It is estimated that preference for a male child and high infant mortality together account for 20% of the total births in the country.

- **Reduced Infant Mortality Rate (IMR) and reduced Death rate** due to expansion of health care systems.

Measures to Control Population Growth by Government of India

- The National Population Policy 2000 gave a focused approach to the problem of population stabilization.

- The National Commission on Population was formed in the year 2000. The Commission, chaired by the Prime Minister, has the mandate to review, monitor and give directions for implementation of the National Population Policy.

- The Jansankhya Sthirata Kosh (National Population Stabilization Fund) was setup as an autonomous society of the Ministry of Health and Family Welfare in 2005. Its broad mandate is

to undertake activities aimed at achieving population stabilization.

- Programmes like the National Rural Health Mission, Janani Suraksha Yojana, ICDS (Integrated Child Development Services) etc. have also been launched by the government to tackle the healthcare needs of people. This is also expected to contribute to population stabilization.

- Free contraceptives are also being provided. In addition, monetary incentives are given to couples undertaking permanent family planning methods like vasectomy and tubectomy.

- Nutritional and educational problems are being targeted through programs like the mid-day meal scheme and the recently enacted Right to Education.

- RMNCH Counselors (Reproductive Maternal New Born and Child Health) availability at the high case facilities to ensure counseling of the clients visiting the facilities.

- Accreditation of more private/NGO facilities to increase the provider base for family planning services under PPP.

- Celebration of World Population Day 11th July & Fortnight: The event is observed over a month long period, split into fortnight of mobilization/sensitization followed by a fortnight of assured family planning service delivery and has been made a mandatory activity from 2012-13 and starts from 27th June each year.

Conclusion:

- Providing greater choice and improved access to modern contraceptives should become an inextricable part of India's health and gender-equality programme.

- Public sensitisation campaigns about the benefits of family planning, and replacing coercive surgeries with access to a range of modern reproductive health choices, should form the bedrock of our health strategy.

1.5. India Top Remittance-receiving Country in 2016

In News

- A report recently released by UN IFAD (International Fund for Agricultural Development) indicates that India is the top remittance-receiving ($ 63 billion) country surpassing China.

- Titled "**Sending Money Home: Contributing to the SDGs, one family at a time**", the IFAD report analyses remittance data and migration trends for developing countries over the past decade. It also makes projections about the potential that remittances have of helping countries meet Sustainable Development Goals (SDGs) by 2030.

In News

- Migrant workers are resilient and resourceful –

o In the decade between 2007 and 2016, remittance to India increased by a massive 68.6% – more than 17% higher than the world average of 51%.

o These gains were achieved despite the economic downturn after the 2008 financial crisis, currency market fluctuations and the drop in the oil price, which negatively affected oil-producing countries more recently.

o IFAD comments that migrant workers and their relatives have demonstrated "remarkable resilience and resourcefulness" in adapting to economic downturn.

- Top remittance receivers and senders –

o According to the IFAD report, the four top remittance receiving countries were India (US$63 billion), China (US$61 billion), the Philippines (US$30 billion) and Pakistan (US$20 billion).

- o The top ten sending countries were the US, Saudi Arabia, the Russian Federation, UAE, Germany, Kuwait, France, Qatar, UK and Italy.

- Potent development booster –

- o The ageing populations in developed countries create a continued need for immigrant labor.

- o The fruits of this labor are a much more potent development booster for low- and middle-income countries than official development assistance.

- o Remittances are worth three times the combined official development assistance given to these countries and are worth more than the total foreign direct investment in almost every one of these countries.

- o Migrant workers are gradually bridging the economic divide between have and have-not countries by working, saving and sending home about 15% of their earnings.

- Alleviating poverty –

- o The $200 to $300 that each migrant worker sends home can contribute up to 60% of household income.

- o Three quarters of family remittances are used to keep hunger and cold at bay by providing the means to buy food, shelter and to pay recurring bills.

- o The rest of the money is used to improve health, housing and sanitation, to expand educational opportunities and to set up new businesses.

- Woman power –

- o Women are holding their own in the remittance economy. Half of remittance senders – some 100 million senders – are women.

- o This trend boosts gender equality and empowers women who are steadily gaining financial independence by maximizing employment opportunities.

- The cost of sending money –

- o The increase in remittance flows has had another positive spin-off. Costs have come down by almost 25% over the past decade from 9.81% to 7.45% for sending US$200.

- o The United Nations Sustainable Development Goals have set a 3% remittance cost target by 2030.

About IFAD

- The International Fund for Agricultural Development (IFAD), a specialized agency of the United Nations, was established as an international financial institution in 1977 as one of the major outcomes of the 1974 World Food Conference.

- IFAD is dedicated to eradicating rural poverty in developing countries.

- Working with rural poor people, governments, donors, non-governmental organizations and many other partners, IFAD focuses on country-specific solutions, which can involve increasing rural poor peoples' access to financial services, markets, technology, land and other natural resources

---

1.6. QS World Universities Ranking 2018

- The Quacquarelli Symonds (QS) World University Rankings 2018 has been released. Three Indian universities, the Indian Institute of Technology (IIT)-Bombay, IIT-Delhi and Indian Institute of Science (IISc), Bengaluru, have made it to the top 200 global universities.

- This is for the first time that three prestigious Indian institutions have featured in the list of the top 200 universities as per the QS Rankings.

- IISc Bangalore has been placed at 190 from the152nd place secured last year. Similarly, IIT Delhi have climbed from 185 to 172 and IIT Bombay has jumped from 219 to 179 this year.

- IISc has been ranked number 6 among 959 universities in the QS World University Rankings for 'Citations per Faculty' — where the number of times research papers from a university is cited in the research work of others.

- This year's ranking surveyed 26,000 universities across the globe. In total, 20 Indian institutions have been included in the ranking table this year. The list has a total of 959 top universities.

- The Massachusetts Institute of Technology (MIT) has been ranked as the world's best university for the sixth consecutive year. The second and third place in the overall rankings has been occupied by Stanford University and Harvard University respectively.

> The Quacquarelli Symonds (QS) WUR, a British agency, ranks higher educational institutes, compares top universities in the world based on six performance parameters across for sectors like Research, Teaching, Employability and Internationalisation, plus a considerable 40 point weightage to the institute`s stature.

State of Higher Education: A Perspective

Overview

- Higher Education sector has witnessed a tremendous increase in the number of Universities/University level Institutions & Colleges since independence.

- The number of Universities has increased 34 times from 20 in 1950 to 755 in 2015. India has 45 Central Universities, 318 State Universities, 185 State Private universities, 129 Deemed to be Universities, 51 Institutions of National Importance (established under Acts of Parliament) under MHRD (IITs - 16, NITs – 30 and IISERs – 5) and four Institutions (established under various State legislations).

- The number of colleges has also registered manifold increase of 74 times with just 500 in 1950 growing to 37,204, as on 31st March, 2013.

- The gross enrolment ratio (GER) in higher education in India has improved to 24.5 per cent in 2015-16 from 21.5 per cent in 2012-13. [GER is calculated for the 18-23 years age group. It is total enrolment as a percentage of the eligible population.

- Pupil Teacher Ratio (PTR) in Universities and Colleges is 21 if regular enrolment is considered.

Constitutional Provision On Higher Education

- Entry 63, 64, 65 and 66 of List I deals with the issues regarding higher education.

- Entry 63 is concerned with the control of national library, central universities etc.

- Entry 64 dealt with the scientific and technical institution.

- Entry 65 is related to the establishment of professional, technical and vocational education.

- Entry 66 is concerned with the coordination and determination of standards in institution for higher education or research or scientific andtechnical institution.

- Under list 3, Entry 20 and 25 are also related to the higher education. Entry 20 is regarding to the establishment ofplanning commission, which determines the finance of higher education. Entry 25 is referred to the vocational and technical training of labour.

Steps Taken By The Government

- Launching of **National Institute of Ranking Framework** to rank the universities based on different parameters.

- **IMPRINT INDIA** aims at direct research in the premier institutions into areas of social relevance.

- **Global Initiative for Academics Network (GIAN)** was launched as an initiative to attract the best foreign academics to Indian Universities of Excellence.

- **Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM)**, is a Web portal where Massive Open On-line Courses (MOOCs) will be available on all kinds of subjects. SWAYAM is the Indian electronic e-education platform which proposes to offer courses from the high school stage to Post-Graduate stage in an interactive electronic platform.

- Launch of the Credit framework for Skills and Education as per the *National Skills Qualification Framework* paving the way for certification of skills through the formal system and allowing for multiple exits and entrance into the education system with scope for vertical and lateral mobility.

- The launching of **Choice Based Credit System (CBCS)** will enable students to take courses of their choice, learn at their own pace, undergo additional courses and acquire more than the required credits, and adopt an interdisciplinary approach to learning.

- *Saksham Scholarship Scheme*: The All India Council for Technical Education (AICTE) is implementing Saksham scholarship scheme to provide support to differently abled students to pursue technical education.

- Launch of the **Know Your College** portal is to provide informed decision making opportunity for students along with complete availability of all e-learning resources.

- Under *Campus Connect Programme*, all the Central Universities in the country are going to be connected through WIFI network.

- **Promoting Start-ups**: 37 new start-up parks/research parks would be set up this year with the coordination of Dept of Science and Technology (fund sharing on 50:50 basis) covering all the IITs, NITs and some IIITs/Central Universities. These would incubate the start-ups and hand-hold them till they reach the stage of commercialization, normally for a period of five years.

- **Unnat Bharat Abhiyan** was launched for connecting higher education and society to enable technology and its use for development of rural areas. Under this all technical and higher education institutions have been asked to adopt five villages each; identify technology gaps and prepare plans for innovations that could substantially increase the incomes and growth in the rural areas.

- **Ucchtar Aavishkar Abhiyaan** : For promotion of innovation, all the IITs have been encouraged to work with the industry to identify areas where innovation is required and come up with solutions that could be brought up to the commercialization level.

Issues Pertaining To Higher Education In India

There are many basic problems, pertaining to quality as well as quantity, facing higher education in India today. These are:

- Quality of higher education remains poor barring few top universities such as IITs, IIMs etc.

- Large vacancies in faculty positions and poor faculty thereof.

- Low student enrolment rate.

- Outmoded teaching methods.

- Research in higher education institutions is at its lowest ebb.

- Inadequate infrastructure and facilities.

- Overcrowded classrooms and widespread geographic, income, gender, and ethnic imbalances

- Inadequate and diminishing financial support for higher education from the government and from society.

- Ensuring equitable access to quality higher education for students coming from poor families is a major challenge as they are not academically prepared to crack highly competitive entrance examinations that have bias towards urban elite and rich students having access to private tuitions and coaching.

- The regulatory environment and existing system of accrediting has proved to be inefficient due to:
➢ Centralization of regulating and accrediting institutions
➢ Corrupt practices within regulatory agencies – E.g. MCI president was arrested in 2010 for allegedly taking bribes.
- Not for profit model in higher education in India is often considered as hurdle to attract serious players.

Suggestions For Improving Higher Education Ecosystem In India

- **Industry and Academia Connection**- Industry and Academia connect is necessary to ensure curriculum and skills in line with requirements. Skill building is really very crucial to ensure employability of academia to understand and make sure good jobs.
- Incentives must be given to reachers and researchers.
- We need to appreciate **inter-disciplinarity in higher education**. Specialised training in a particular academic discipline must be complemented by generic inter-disciplinary courses. The government should play a pro-active role in setting up and promoting universities offering inter-disciplinary courses in India.
- A lot needs to be done by our **institutions and regulators** to restore *transparency, coherence and confidence* in the higher education system. At the institutional level, a code of self-regulation and self-restraint has to be adopted. Higher standards of data-sharing and transparency have to be mandated at the policy level, along with empowering prospective and current students to compare institutions.

Conclusion

No country can aspire to become a sustainable superpower without becoming a knowledge powerhouse. Although a few stand-alone institutes like the newly established International Institute for Higher Education Research & Capacity Building (IIHEd) at O.P. Jindal Global University can play an important role in this arena, there is a need for more such institutes in the higher education sector, which provide constructive thought-leadership, policy inputs and subsequent action plans to implement them.

1.7. 'Vatsalya – MaatriAmritKosh' Inaugurated

- The Vatsalya - MaatriAmritKosh, a National Human Milk Bank and Lactation Counselling Centre was inaugurated by the centre.
- This centre would be the largest public sector human milk bank and lactation counselling centre available in North India
- With this donor human milk bank, all newborns in and around Delhi will have access to life saving human milk regardless of the circumstances of their birth.
- VatsalyaMaatriAmritKosh" is established in collaboration with the Norwegian government, Oslo University and Norway India Partnership Initiative (NIPI).
- The early initiation of breastfeeding in India is only 40%, even when the institutional delivery has increased to 78.9%.
- In addition, this facility will protect, promote and support breastfeeding of their own healthy mothers by providing lactation support to mothers through dedicated lactation counsellors.
- This project will not only act as a dedicated centre to support breastfeeding and improve infant survival but also act as the teaching, training and demonstration site for other milk banks to be established under the Ministry Of Health and Family Welfare, Government of India.

Importance Of Breastfeeding During Early Birth Days

- Breastfeeding is a child's first inoculation against death, disease and poverty and according to the latest scientific evidence - breastfeeding is our most enduring investment in physical, cognitive and social capacity development.

- Breastfeeding creates a special bond between mother and baby and the interaction between the mother and child during breastfeeding has positive impact for life, in terms of stimulation, behaviour, speech, sense of well-being, security and how the child relates to other people.

- It improves immune system of the child as well as their Intelligence quotient (IQ).

- Around 20% newborn deaths and 13% under-five deaths can be prevented by early initiation of breastfeeding.

1.8. Super Dads: New UNICEF Campaign

- 'Super Dads,' is a campaign launched by the United Nations Children's Fund (UNICEF) that celebrates a father's essential role in a child's early cognitive development.

- The Super Dads initiative is a part of a larger campaign called **#EarlyMomentsMatter**, which aims to bring awareness to the significance of early childhood experiences on a child's future.

- Sachin Tendulkar will join other global celebrities like Dravid, Beckham, Novak Djokovic, Academy Award winning American actor Mahershala Ali, British Formula One racing driver Lewis Hamilton and Australian actor Hugh Jackman for UNICEF's 'Super Dads' campaign.

- Stars are not the only super dads that will be featured. Moving stories of fathers raising their children under difficult circumstances will be also posted alongside pictures and videos of celebrity dads.

- Children's brains form important neural connections within the first 1,000 days, which could decide their health, learning abilities, and income in later years.

- Good parenting for young children living in highly stressful conditions like conflict or extreme poverty can even provide a buffer, helping them to fully develop despite adversity.

- Research also shows that positive interactions with fathers allow children to have better psychological health and life satisfaction in the future.

About UNICEF

- The United Nations Children's Fund is a United Nations programme headquartered in New York City that provides humanitarian and developmental assistance to children and mothers in developing countries.

- It is a member of the United Nations Development Group.

- The United Nations International Children's Emergency Fund was created by the United Nations General Assembly on 11 Dec 1946, to provide emergency food and healthcare to children in countries that had been devastated by World War II.

- In 1953 it became a permanent part of the United Nations System, and the words "international" and "emergency" were dropped from the organization's name, making it simply the United Nations Children's Fund, retaining the original acronym, "UNICEF".

- UNICEF was awarded the Nobel Peace Prize in 1965 and the Prince of Asturias Award of Concord in 2006.

1.9. IMD To Give Malaria, Chikungunya Alerts

- The India Meteorological Department (IMD) is working on a forecasting system to give 15-day warnings on the likelihood of a malaria or chikungunya outbreak, over different regions.

- Such a service was part of a larger initiative by the department to provide custom, weather-related information to cope with challenges of a global warming and its associated impact of weather.

- Extreme rainfall events were on the rise and this could also mean more instances of humid conditions and water logging that could precipitate vector-borne disease outbreaks.

- IMD will offer this service by teaming up with the Medical Council of India and the Red Cross Society.

- The IMD's National Climate Centre in Pune, traditionally tasked with forecasting the monsoon and documenting monsoon-related statistics, is being reorganised to provide such climate services.

About IMD

- IMD is an agency of the Ministry of Earth Sciences of the Government of India.

- It is the principal agency responsible for meteorological observations, weather forecasting and seismology.

- IMD is headquartered in New Delhi and operates hundreds of observation stations across India and Antarctica.

- IMD is also one of the six Regional Specialised Meteorological Centres of the World Meteorological Organization.

- It has the responsibility for forecasting, naming and distribution of warnings for tropical cyclones in the Northern Indian Ocean region, including the Malacca Straits, the Bay of Bengal, the Arabian Sea and the Persian Gulf.

1.10. DG's Special Recognition Award For Contribution To Tobacco Control

In News

- World Health Organization has conferred Director General's Special Recognition Award to India's Minister of Health and Family Welfare, Mr J P Nadda, for his leadership and commitment to advancing tobacco control.

- The award was presented at the 'National Consultation on Accelerating Implementation of WHO Framework Convention on Tobacco Control (FCTC) for achievement of SDGs'.

- WHO lauded India's recent initiatives such as making graphic health warnings covering 85% of all tobacco products mandatory beginning April 2016; establishing National Tobacco Testing Laboratories last year; launching cessation services in 2015, and, as part of this, a toll-free national tobacco Quit line a year ago.

WHO Framework Convention on Tobacco Control

- The WHO Framework Convention on Tobacco Control (WHO FCTC) is the first international treaty negotiated under the auspices of WHO.

- Adopted by the World Health Assembly in 2003, it entered into force in 2005.

- The WHO FCTC was developed in response to the globalization of the tobacco epidemic and is an evidence-based treaty that reaffirms the right of all people to the highest standard of health.

- It aims to tackle some of the causes of that epidemic, including complex factors with cross-border effects, such as trade liberalization and direct foreign investment, tobacco advertising, promotion and sponsorship beyond national borders, and illicit trade in tobacco products.

- Under it, the Protocol to Eliminate Illicit Trade in Tobacco Products was adopted to address the increasing illegal trade in tobacco products in November 2012.

An Overview Of Tobacco Problem In India

Tobacco is a leading preventable cause of death, killing nearly six million people worldwide each year. This global tobacco epidemic kills more people than tuberculosis, HIV/AIDS and malaria combined.

India's tobacco problem is very complex, with a large use of a variety of smoking forms and an array of smokeless tobacco products. Many of these products are manufactured as cottage and small-scale industries using varying mixtures and widely differing processes of manufacturing. Bidis are mostly manufactured in the unorganized sector while cigarettes are mainly manufactured in large-scale industries.

Tobacco Uses

- India is the second largest consumer of tobacco globally, and accounts for approximately one-sixth of the world's tobacco-related deaths.

- Tobacco related diseases kills about 2500 Indians daily. It is estimated that about 5500 youth and children (as young as 8 years old), initiate tobacco use daily. Currently, India has 12 crore tobacco users, according to the Global Adult Tobacco Survey.

- According to the NFHS 4, the prevalence of tobacco use in India among men has come down to 44.8 % in 2015-16 from 57 % in 2005 - 06 and among women it has come down to 6.8 per cent from 10.8 per cent. The reduction in consumption is due to the tobacco control laws that the Government is implementing over the years and steps taken like 85 % graphic health warnings, increasing prices of tobacco products, sustaining hard-hitting media campaign, smoke Free Rules and Gutka Ban.

Hazards Of Tobacco Use

1. Health: Tobacco smoking causes different types of ailments such as cancer of the lung, oral cavity, nasal cavity and paranasal sinuses etc. There is also sufficient evidence in humans for the carcinogenicity of smokeless tobacco.

2. Environment – Tobacco leads to clearing of forests for cultivation, stripping fuel wood for curing and forest resources for packaging thus damaging the environment. Tobacco depletes the soil nutrients at a very rapid rate and displaces the indigenous flora and fauna thus becoming a source of pests for other crops.

3. Passive Smoking – Second-hand tobacco smoke (SHS) kills 600,000 people each year. The GATS-India shows that 52% of the adults (rural-58%, urban-39%) were exposed to SHS at home. SHS is three- to four-times more toxic per gram of particulate matter than mainstream tobacco smoke. More than 4000 chemicals have been identified in tobacco smoke, at least 250 of which are known to be harmful.

The Economics Of Tobacco

- The tobacco industry claims that it has a major contribution to economy with its employment generation in agriculture and manufacturing and revenues in the form of exports and taxes.

- According to the World Bank Report, the tobacco industry estimates that 33 million people are engaged in tobacco farming, of which 3.5 million are in India.

- Many women and children manufacture bidis and various forms of smokeless tobacco products working from home. It is estimated that bidi manufacturing provides employment to more than 4.4 million workers.

- Despite the above benefits, the losses incurred are more. According to the Ministry of Health and Family Welfare, it estimated that the total economic costs attributable to tobacco use from all diseases in India in the year 2011 amounted to a staggering Rs 1, 04,500 crores — 12 per cent more than the combined state and central government expenditure on health care in the same year.

Government Initiatives

- India became a party to the WHO Framework Convention on Tobacco Control (FCTC) on February 27, 2005. Since then India has implemented a series of measures leading to the current status of increased social awareness.

- Soon after signing the WHO FCTC, smoking was completely banned in many public places and workplaces in India — with the new law permitting establishments to create smoking zones within restaurants, airports and hotels having 30 or more rooms.

- The Indian government has also clamped down on promotion of tobacco consumption, with a complete ban on advertising under the Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 (COTPA).

- National tobacco control programme

- Tobacco Cessation Services - The WHO in collaboration with the MHFW, GOI, set up tobacco cessation centers (TCC) spread across India in diverse settings (cancer treatment centers, psychiatric centers, medical colleges and NGOs) to help people quit tobacco.

- Increasing the tax on tobacco products.

- Launching of a toll-free national tobacco Quitline.

What More Needs To Be Done

- The government needs to implement evidence based tobacco control policies to reduce further tobacco consumption as 10 lakh people die due to tobacco use every year.

- Measures that proved very effective in the developed world, like tax increases on all tobacco products, need to be enforced immediately and the taxes collected should be used to support health promotion and tobacco control programmes.

- In the case of cigarettes, the taxation in India is based on the length of the cigarette. Cigarettes of various lengths are taxed at different specific rates. As a result, longer cigarettes attract the most tax. This taxation structure encourages a company to manufacture cigarettes of varying lengths. Since longer cigarettes attract more tax, consumers shift from longer cigarettes to shorter ones to escape higher taxes. We need to address this aspect.

- Sustained efforts are needed from the Government to strengthen efforts on alternate cropping and alternate livelihoods to replace employment losses that may come up gradually.

- Public health awareness, raising a mass movement against tobacco, sensitizing and educating all health care professionals for tobacco control and cessation by incorporating the topic in medical undergraduate curriculum etc. is vital

Conclusion

The Indian government has enacted and implemented various tobacco control policies at national and sub-national level. Recent award by WHO is an appreciation of these efforts. Nevertheless, there is a need to devise more innovative methods in tobacco control programmes by mobilizing financial and human resources along with evaluation and monitoring of these programmes periodically. The Government of India has to create more adequate provisions for the enforcement of tobacco control laws.

2. POLITY AND GOVERNANCE

2.1. MGNREGA National Award

In News

- Vizianagaram has been selected by Ministry of Rural Development for the MGNREGA annual award for effective implementation of the Mahatma Gandhi National Rural Employment Guarantee Act during 2015-16.

- Vizianagaram, a district in Andhra Pradesh, had generated works for 3,61,668 households in 2015-16 and disbursed Rs 483.42 crore as wages.

- Over 5,000 farm ponds, 240 rainwater-harvesting structures, and 440 watershed works were executed. In addition, 3,427 minor irrigation tanks were de-silted and restored to their original capacity.

- It has used MGNREGA convergence grants to set up 154 fish- breeding units and an equal number of vegetable pandals, along with fodder production, sericulture, and development of horticulture in 5,000 acres of land.

History of Vizianagaram

- The history of Vizianagaram district is connected with hoary past of Kalinga, one of the political divisions of ancient India.

- Only in modern times, the upper part of Kalinga was gradually merged into Orissa State and the lower part into Andhra Region.

- An important event in the history of the district is the 1757 war between the Rajas of Vizianagaram and Bobbili, popularly known as Bobbili Yuddham.

- Another important event in the history of the district is the war between the French and the English fought at Chandurthi in 1758 in which the French were defeated and the Northern Circars were made over to the British under a firmana from the Mughal Emperor, Shah Alam in 1765 which were placed under the then existing Chief and Council at Vizagapatam.

- In 1794, the Chiefs and Councils were abolished and Vizagapatam was arranged into three divisions each under a Collector.

- The rebellion of KorraMalliah, a tribal chief of the Salur area, against the British rule in 1900 is another important event in the struggle against the alien rule.

About MGNREGA

- It was in February 2006 that MGNREGA was for the first time notified on an experimental basis in 200 odd districts across the country.

- The event marked a watershed in the *right-based entitlement framework* of the country and for the first time provided a legal guarantee for wage employment.

Key Features

- The Act guaranteed a minimum 100 days of employment in a year to every willing household, within 15 days of making such a requisition.

- One third (33 per cent) proposed jobs in the scheme have been reserved for the women.

- Inability to provide employment within 15 days from the date had to be compensated through an unemployment allowance.

- The wages as notified by the Central government indexed to CPI was to be done on a weekly basis and not beyond a fortnight in any case.

Advantages Of This Scheme

- **Social Capital**: An institutional platform is provided for enabling the mobilization of all the stakeholders into group action which fosters cooperation and community action.

- **Physical Capital**: Creating durable assets of higher quality, resulting in an improved production base.

- **Economic Opportunities**: Income enhancements, savings and investments become possible through various allied activities.

- **Social empowerment**: Mainly women and people from lower castes got benefit leading to their financial autonomy.

- **Strengthening Democratic Processes**: Convergence awareness and planning at the grass root level has potential for greater ownership of projects.

- **Check on migration**: As rural people get source of employment through this scheme leading to reduction in migration.

- **Insurance against calamities**: In case of draught and other natural calamities this scheme provides an alternate source of income for farmers.

Performance So Far

- The provisions made NREGA one of the best wages for work programme for rural poor and within no time, its reach was expanded to cover almost the entire country barring few 100 % urban centres.

- In the initial years, MNREGA was a true game-changer. Rural wages started climbing and reports also pointed towards a decline in migration to urban centres.

- A total of 1980.01 crore person days have been generated since 2005.

- An NCAER study of 2015 showed that the Act helped in lowering poverty by almost 32 % between 2004-05 to 2011-12 and prevented almost 14 million people from falling into poverty.

- But, after 2009 many analysts said the scheme's performance and its impact on rural economy started waning. MGNREGA's performance in 2014-15 has been dismal, with less than 30 % of the wages paid on time and each household provided work for only 40 days on an average.

- However, renewed focus, after consecutive draughts, led to revival of this scheme. MGNREGA's performance started looking up and in 2015-16, the person day generation is the highest in the second quarter (45.88 crore) and third quarter (46.10 crore) than it has been in the last five years.

- The scheme's convergence with related programmes in the department of agriculture, irrigation, animal husbandry provided strength to this scheme.

Issues With The Scheme

- There is a lack of appreciation of a demand driven, rights-based approach, both among communities and officials leading to inadequate community participation and consultation.

- Poorly attended gram sabhas result in an incomplete or inappropriate list of activities to be undertaken. The participation of women, scheduled castes and scheduled tribes in gram sabha meetings is low.

- While multiple cards being possessed by a single household is observed in some cases, the exclusion of several households is also quite common.

- Delays in raising and approving bills and consequent delays in wage payments have also been quite common.

- Poor capacity of Gram Panchayats, and poorer capacity support from official agencies, are common features.

- Inadequate personnel – especially technical staff – has resulted in poor planning, deficient quality control, and delays in execution of works.

- Inadmissible works were undertaken under MNREGA that included construction of earthen roads, bathing ghats, raised platforms for cattle etc.

Conclusion:

Despite all odds, MGNREGA is alive and kicking and all set to enter a new decade. There is an urgent need to address these issues in order to make it more meaningful.

2.2. Global Peace Index 2017

Sydney-based think tank, The Institute for Economics and Peace, has published its Global Peace Index for the 11th year running.

Key Highlights of the Report

- Among 163 independent states and territories, India has been ranked at 137 in the 2017 Global Peace Index. Last year, India was ranked at 141st place.

- The research shows that India suffers chronically from international tensions and widespread internal conflict. While Maoist movements are one of the biggest threats to India's internal security, sporadic conflict with its neighbours also threatens the country's external security.

- Bhutan, which ranked 13, has been named as the most peaceful country in South Asia, followed by Sri Lanka 80th, Bangladesh 84th, India 137th, Pakistan 152nd and Afghanistan 162nd.

- Their report found that the world became 0.28% more peaceful over the past year.

- This was driven by a drop in state-sponsored violence, including torture and extrajudicial killings, and a decrease in the murder rate.

- According to the report, increased support for populism in Europe corresponded with a deterioration in peacefulness levels, as wealth inequality rises, media freedoms decrease and people's acceptance of the rights of others diminishes.

- Syria is the least peaceful country in the world for the fifth year running. Before the outbreak of civil war there, it was the 65th least peaceful. The other four most violent countries are Afghanistan, Iraq, South Sudan, and Yemen.

- Iceland remained the most peaceful country in the world, a spot it has occupied since 2008. The other four most peaceful countries are New Zealand, Portugal, Austria, and Denmark.

About GPI

- GPI is the product of the Institute for Economics and Peace (IEP) and developed in consultation with an international panel of peace experts from peace institutes and think tanks with data collected and collated by the Economist Intelligence Unit.

- GPI is considered as one of the most comprehensive analysis that captures trends in peace, its economic value, and ways to develop peaceful societies.

- The index gauges global peace using three broad themes: the level of safety and security in society, the extent of domestic and international conflict and the degree of militarization.

- Countries' peacefulness is measured on a wide range of 22 indicators such as Number of deaths from organised conflict, political instability, terrorist activity, homicide rate, the ease of access to weapons, the number of armed services personnel in the population, etc.

- Factors are both internal such as levels of violence and crime within the country and external such as military expenditure and wars. It has been criticized for not including indicators specifically relating to violence against women and children.

2.3. SATH Program Launched by NITI Aayog

In News

- NITI Aayog has recently launched 'Sustainable Action for Transforming Human Capital' (SATH), an initiative through which it will partner with three states and turn them into role models for other states by helping them improve their education and health sectors. The selection of the states will be through a three-stage process.

- The vision of the program is to transform the health and education sectors of the Indian state.

- It is also furthering the agenda for cooperative federalism.

Key Highlights

- According to Niti Aayog, the programme will be implemented by it along with McKinsey & Company and IPE Global consortium, who were selected through a competitive bidding process.

- NITI Ayog will work in close collaboration with their state machinery to design a robust roadmap of intervention, develop a program governance structure, set up monitoring and tracking mechanisms, hand-hold state institutions through the execution stage, and provide support on a range of institutional measures to achieve the end objectives.

- To select the three model states, Ayog has defined a three-stage process – expression of interest, presentations by the states, and assessment of commitment to health sector reforms.

- Several health metrics such as MMR, IMR, the incidence of malaria and others have been considered for determining potential impact. The density of doctors and nurses, compliance to IPHS norms are some of the metrics used to determine the likelihood of success

2.4. Separate Time Zone For the Northeast

In News

- Recently, Pema Khandu, the Chief Minister of Arunachal Pradesh, had demanded a separate time zone for the northeast.

- According to the Chief Minister, the northeastern region of the country loses out on daylight hours while functioning as per the Indian Standard Time.

- The Department of Science and Technology (DST) is conducting a study to assess the feasibility of having different time zones in the country.

- The study is also expected to cover the overall impact, especially on the transportation system.

Arguments In Favour: Separate Time Zone

- Time zone in India is not representative of the geographical vastness of the country. Longitude-wise, there's a difference of 30 degrees between the easternmost and the westernmost points of India - Kibithu in Arunachal Pradesh and Gugariyaa in Gujarat respectively. This means a difference of just four minutes short of two hours between these two tips of the country (One degree shift results in a time difference of four minutes).

- A separate time zone for the northeast would save working day light-time and save electricity. By the time people start their day in the northeast, almost half the day has already passed.

- An early sunset results in the extra use of lights in both homes, offices and public places. If the time zone is changed, the people in northeast could make use of added daylight hours.

- Separate time zone is not an alien concept for India and the world:

- o The British used to follow not one, not two, but **three time zones in pre-independent India**, owing to its vastness - a Bombay time zone, a Calcutta time zone and a 'Tea Garden Time' or baagaan time zone (one hour ahead of the current IST).

- o The United States - covering 4300-km distance from end-to-end - has four separate time zones. Similarly Russia currently has 11 time zones.

- Various reports have supported the claim to have separate time zone. Back in 2006, a planning commission report suggested different time zones in India could improve efficiency. Another report by the Bengaluru-based National Institute of Advanced Studies claimed that such a move could save up to 2.7 billion units of electricity.

- In the current arrangement, social lives of people in north eastern region take a hit too. It gets dark too early. People prefer to stay inside their homes rather than go out and socialise. Productive hours at offices, mainly government offices, are usually for only 7 hours. The location of the states in the time zone means that they eat breakfast late in the day, eat dinner earlier than most.

Arguments Against Separate Time Zone

- There will be a lack of coordination between different parts of the densely populated country.

- Workplaces will have different hours to work and it will create problems in sending information. Broadcasting of different networks over all of the region would be affected.

- It will also pose a logistical challenge in running the railways, airlines, airports, financial traders, etc.

- Farmers have less time to get their wares to markets so it is an inconvenience. More so, cattle and animals have a tough time getting oriented with the new body clock requirements. Sleeping patterns change.

- Worldwide, farmers are most affected by the practice of initiating daylight saving and they have had the toughest time adapting to it. They have been, therefore, the biggest opposers as well in the US, Canada, New Zealand, Europe etc.

- An expert panel constituted by Ministry Of Science And Technology in 2002 rejected the idea of DST as well as a different time zone. It felt that seasonal difference in daylight hours is marginal in countries closer to the equator than those near the poles.

- The idea of having separate time zone runs counter to the idea of *One Nation – One Grid, One Nation – One Tax, and One Nation – One Agricultural Market* (recent initiatives by GoI to unify the country).

- People from northeastern region - due to difference in their customs, languages and many other reasons - feel alienated from rest of the country. Separate time zone for this region will further enhance this difference.

Conclusion

- Very little or no research has been done on societal aspects of a different time zone for the Northeast. It is time that some pilot studies are taken up to study the feasibility of a new time zone in the region.

- Meanwhile, we can also experiment with daylight saving measures like advancing working hours for government offices, commercial establishments and schools. This will give us data on likely impact of a different time zone for the Northeast.

2.5. <u>Government Launches VAJRA Scheme To Attract Indian Scientists Abroad</u>

In News

- In a bid to bring together the Indian scientists abroad and India-based researchers for conducting joint researches in India, the Department of Science and Technology (DST) has launched a scheme named 'Visiting Advanced Joint Research Faculty' (VAJRA).

- Its launch was announced during the 14th Pravasi Bharatiya Divas Convention, by the Prime Minister.

Key Highlights

- It will enable NRIs and overseas scientific community to participate and contribute to research and development in India.

- The Science and Engineering Research Board (SERB), a statutory body of the Department, will implement the Scheme.

- VAJRA faculty will undertake research in S&T priority areas of nation wherein the capability and capacity are needed to be developed. The VAJRA faculty will engage in collaborative research in public funded institutions.

- The residency period of the VAJRA Faculty in India would be for a minimum of 1 month and a maximum of 3 months a year.

- The Indian collaborator and the overseas faculty will jointly frame a research plan, and the application duly endorsed by the Head of the Institution will be submitted online by the Indian collaborator.

- A Selection Committee of eminent scientists will evaluate the applications. The Committee will meet twice a year in January and July and make recommendations. SERB will announce the results in the month of April and September.

- Public funded academic institutions and national laboratories are eligible to host the VAJRA Faculty.

Science and Engineering Research Board (SERB)

- The Science and Engineering Research Board (SERB) is a statutory body established through an Act of Parliament, 2008.

- The mandate is to supports basic research in emerging areas of Science & Engineering.

Objective of SERB

- Serve as a premier agency for planning, promoting and funding of internationally competitive research in emerging areas.

- Identify major inter-disciplinary research areas, and individuals, groups or institutions and funding them for undertaking research.

- Assist in setting up infrastructure and environment for scientific pursuit.

- Enable in order to achieve synergy between academic institutions, research and development laboratories and industry for promoting basic research in science and engineering.

2.6. UN Public Service Award to West Bengal Govt.

In News

- West Bengal government received the highest prize in United Nations Public Service Award for its **KanyashreePrakalpa (Girl Child) scheme**.

- Out of 552 nominations from 62 countries, the United Nations awarded the United Nations Public Service first place winner award in the category on "*Reaching the Poorest and most Vulnerable through Inclusive Services and Participation*" to the West Bengal Government for Kanyashree.

About KanyashreePrakalpa

- KanyashreePrakalpa' is an intiative to improve the life and the status of the girls and help them pursue higher studies by providing financial help to the economically backward families.

- It also aims to prevent child marriage.

- The scheme has covered 40 lakh school and college going girls under its umbrella. Under this scheme, cash transfers have been provided to them as scholarships as long as they continue going to school.

United Nations Public Service Awards (UNPSA)

- It is the most prestigious international recognition of excellence in public service.

- The Awards aim at discovering innovations in governance; reward excellence in the public sector; motivate public servants to further promote innovation; raise the image of public service; enhance trust in government; and collect and disseminate successful practices for possible replication.

- The UNPSA takes into consideration a geographical distribution of five regions. In order to level the playing field for nominations received from countries with varying levels of development and income, the following five regions have been established, including: Africa, Asia and the Pacific, Europe and North America, Latin America and the Caribbean, and Western Asia.

- The Award recognizes achievements and contributions by public service institutions in three categories: **ability to reach the poorest and most vulnerable communities through inclusive services and participation; efforts to promote transparency, accountability and integrity in public service; and innovation and excellence in delivering health services**.

- UNPSA is handed out on June 2017, a day designated by the UN General Assembly as the UN Public Service Day to celebrate the value and virtue of public service to the community.

2.7. BCCI's Panel To Oversee Lodha Reforms

In News

- The Board of Control for Cricket in India (BCCI) has announced the formation of a special 7 member committee to identify the 'few critical points' of the Lodha panel to be considered before they are submitted to the Supreme Court.

- The committee will analyse how 'best and quickly' the Supreme Court order can be executed.

- The principal issues are 'one state one vote', age cap of 70 years, cooling off period after every three years, and reinstatement of a five-member selection panel instead of current three.

Lodha Committee

- After the IPL spot fixing incident, the SC had appointed Lodha Committee to suggest ways for complete overhaul of cricket governance in India.

- The committee was mandated to make recommendations to the BCCI in order to prevent frauds and conflict of interest in cricket administration so as to improve the governance system and bring transparency.

- The committee had recommended sweeping reforms in BCCI's administrative and governance structures from top to grass root levels and on the issue of transparency.

Recommendation by Lodha Panel

- One association of each state will be a full member and will have the right to vote. Through this, it favored the idea of *One State, One Vote*.

- The Lodha panel proposed the relegation of Railways, Services and Universities as Associate members.

- It recommended separating the governing bodies of the Indian Premier League (IPL) and BCCI. It

---

also proposed restricting the powers of the IPL Governing Council.

- The panel stated that BCCI office bearers must not be ministers or government servants and that they must have not held office in the BCCI for a period of nine years or three terms.
- The Lodha committee said that no BCCI office-bearer can have more than two consecutive terms.
- Office-bearers in BCCI should not be beyond the age of 70 years.
- The panel also recommended *legalization betting* with an inbuilt mechanism.
- The report also proposed the constitution and establishment of a players association.
- For the sake of transparency BCCI was asked to upload all its rules and other details on the official website.
- The panel stated that an Ethics Officer will decide on the issue of conflict of interest.
- The panel suggested that the BCCI should come under the purview of the Right to Information (RTI) Act.
- According to the panel, cricketing matters of the BCCI should be handled by former players while non-cricketing matters would be handled by CEO along with six assistant managers and two committees.

2.8.   Kambala Bill Cleared by Centre

- The Union Ministry of Law and Justice has cleared the Prevention of Cruelty to Animals (Karnataka Amendment) Bill 2017. Thus, it has paved the way to legalise Kambala — the traditional slush track buffalo race.
- In November 2016, the Karnataka high court, while hearing a case filed by the People for the Ethical Treatment of Animals (PETA), had banned the Kambala along with bull-cart race in the state citing animal cruelty.
- Amid growing protests for lifting the court stay on Kambala, Karnataka Cabinet had decided to amend the Prevention of Cruelty to Animals Act to pave the way for the traditional sport.
- The Prevention of Cruelty to Animals Act, 1960 (Central Act 59 of 1960) was enacted to prevent the infliction of unnecessary cruelty and suffering on animals. It recognises the need to exempt the application of its provisions in certain circumstances.
- Since the state government brought amendment to the Central act, the bill was sent to the President for his assent.

Arguments Forwarded In Support Of The Bill

- A committee headed by State Law Minister had recommended that Kambala, as also bullock cart race, be permitted as no betting or cruelty to animals was involved and it related to agriculture and farmers' beliefs.
- Significant role played by traditional sports events "Kambala" and "Bulls race or Bullock cart race" in preserving and promoting traditions and culture among the people in the state was highlighted.
- These events played a vital role in ensuring survival and continuance of native breeds of cattle and hence it was decided to exempt the conduct of the races from the ambit of Prevention of Cruelty to Animals Act.

About Kambala

- Kambala is an annual buffalo race which is a tradition in the Karnataka's Dakshina Kannada and Udupi districts' farming community. This area is called Tulunadu (Land of Tulu Language).

- According to one belief, Kambala is a festival that originated in the farming community of Karnataka around 800 years back.

- The festival is dedicated to Kadri's Lord Manjunatha, an incarnation of Lord Shiva. It is believed to be celebrated to please the Gods for a good harvest.

- It is a form of recreational sport for the farming community and also another belief is that it is considered as the Sport of the royal (landlord) Family.

- The festival begins with an inaugural ceremony and a parade of the participating farmers along with their prized buffaloes. Tracks are ploughed into a muddy field that is made slushy with water.

- This annual event starts in November and lasts till March every year. This age-old festival is organized on a large scale and a huge crowd gathers to participate in the celebrations.

What Is The Controversy?

- This age-old tradition of buffalo race is a cause of concern for animal lovers and animal activists. The celebration of Kambala was stopped in Karnataka based on an order of Supreme Court, dated 7th May, 2014. This order was actually meant for the violent game of jallikkatu, a bull taming sport in Tamil Nadu. The order did not mention Kambala.

- Kambala, like jallikattu, was banned last year after animal rights group PETA approached the Karnataka High Court, citing animal cruelty in bull taming and buffalo racing. In view of the apex court verdict on jallikattu, the high court had also stayed this event.

2.9. Web Application For Free Legal Services To Prisoners

In News

- The National Legal Services Authority (NALSA) launched a Web Application for free Legal Services to prisoners, and the Legal Services Management System developed through the NIC.

- The application shall make the legal services system more transparent, will be universally useful for all the relevant authorities to monitor the grant of legal aid to the prisoners in order to ensure that absolutely no prisoner goes unrepresented right from the first day of his production in the court.

Key Highlights

- Through the web application, the State Legal Services Authorities and District Legal Services Authorities shall feed data of each individual prisoner within their jurisdiction, with regard to their being represented through a counsel in the court.

- The software will be able to generate reports showing total number of inmates, number of inmates unrepresented, number of inmates represented by legal services lawyers, and number of inmates represented by private lawyers.

- All the information can be generated state-wise, district-wise and also in respect of each jail.

About NALSA

- The NALSA has been constituted under the Legal Services Authorities Act, 1987 to provide free Legal Services to the weaker sections of the society and to organize Lok Adalats for amicable settlement of disputes.

- Article 39A of the Constitution of India reads as - State shall secure that the operation of the legal system promotes justice on a basis of equal opportunity, and shall in particular, provide free legal aid, by suitable legislation or schemes or in any other way, to ensure that opportunities for securing justice are not denied to any citizen by reason of economic or other disability.

- Articles 14 and 22(1) also make it obligatory for the State to ensure equality before law and a

legal system which promotes justice on a basis of equal opportunity to all. Legal aid strives to ensure that constitutional pledge is fulfilled in its letter and spirit and equal justice is made available to the poor, downtrodden and weaker sections of the society.

- It was in pursuance of these article that the Legal Services Authorities Act, 1987 was enacted.

2.10. EC Joins Facebook To Enroll Voters

- In a first-of-its-kind pan-India initiative by the poll watchdog, the Election Commission of India has joined hands with Facebook to remind Indian voters to register themselves on the electoral rolls.

- From July 1 to 4, a voter registration reminder will be sent to people who are eligible to vote in India, on Facebook. Facebook will activate a unique 'Register Now' button for its Indian users who are eligible to vote.

- While Facebook had earlier implemented such features during state elections of Uttar Pradesh, Uttarakhand, Goa, Punjab, and Manipur, in 2017, for the first time a pan-India drive is being carried out.

- Democracies are stronger when more people are engaged - that's why Election Commission is encouraging everyone who is eligible to register to vote and connecting them with resources.

2.11. Global Innovation Index 2017

In News

- India has been ranked the top exporter of information and communication technology (ICT) services in a new UN report, which highlighted the rise of the country as an emerging innovation centre in Asia.

- The World Intellectual Property Organisation (WIPO) in its 10th edition of the 'Global Innovation Index (GII)' also ranked India 60th on its list of 130 most innovative countries in the world

Key Highlights

- India maintains its top place in Central and Southern Asia, moving up six spots from 66th last year to 60th this year overall.

- The report said that a group of nations including India, Kenya, and Vietnam are outperforming their development-level peers.

- India performed well across a number of parameters, coming to the top spot in ICT services exports. It is ranked 10th in category of graduates in science and engineering, and 27th on e-participation.

- India is 2nd in innovation quality for the second consecutive year.

- The report said India outperformed on innovation relative to its GDP per capita for seven years in a row. India has shown improvement in most areas, including in infrastructure, business sophistication, knowledge and technology and creative outputs.

- According to report, If India now increasingly connects its innovation system to the innovative countries in the East as well as to standing innovation powerhouses in the West, it will make a true difference in Asia's regional role in innovation, and to global innovation more generally.

About Global Innovation Index

- The report is published by Cornell University, INSEAD and the WIPO in partnership with other organisations and institutions.

- The GII provides detailed metrics about innovation performance of 130 countries and economies

around the world. Its 82 indicators explore a broad vision of innovation, including political environment, education, infrastructure and business sophistication.

- In its 10th edition, the GII 2017 focuses on *Innovation In Agriculture And Food Systems*.

India's National Innovation System

- The current national innovation system in India is a vast and complex system comprised of knowledge producers such as science and technology institutions, academia, and innovating individuals and knowledge users (e.g., industry-production/services in the public and private sectors).

- There are various councils and research structures under various ministries, which cater to different research areas and which are distributed around the country. Examples include:

➢ Council of Scientific and Industrial Research (CSIR)

➢ Indian Council of Agricultural Research (ICAR)

➢ Indian Council of Medical Research (ICMR)

➢ Defence Research & Development Organisation (DRDO)

- There are many other publicly funded institutions that perform research and technology development for industries related to steel, oil and natural gas etc.

- There are also more than 1200 privately or state-funded Scientific and Industrial Research Organizations (SIROs).

- In academia, there are universities in the public sector, including institutions of high education such as Indian Institutes of Technology (IITs) and the Indian Institute of Science (IISc), self-financing and deemed universities.

- Furthermore, there are financial institutions such as the Industrial Development Bank of India (IDBI) and the Small Industries Development Bank of India (SIDBI), which lend support for innovation and also for commercialization of innovative technologies besides entrepreneurship.

- Also, various fiscal incentives are offered by the Department of Scientific and Industrial Research towards the R&D activities performed by institutions, academia, and industry for supporting, nurturing and leading their innovations towards fruition.

India's Innovation Ecosystem

- Broadly speaking, an innovation ecosystem is a combination of two distinct but largely separated economies: i) the knowledge economy (comprised of knowledge producers), which is driven by fundamental research, and ii) the commercial economy (comprised of knowledge users), which is driven by the marketplace.

- In India, the innovation ecosystem includes the entire national innovation system described in the previous section, plus individual innovators and entrepreneurs; mentors; government policies; angel, venture capital, institutional, and industrial funding mechanisms etc.

Current Challenges

- Fragmented policy and policy implementation

- Inadequate, difficult, and lengthy funding procedures of R&D

- *Weak linkages between stakeholders*: The linkages between industry, especially medium and small-scale enterprises and R&D or academic institutions are weak. There is no easy exchange of manpower between the industries and academia or R&D institutions, which limits their capacity for mutual understanding and technology transfer.

- *Non-conducive education system*: The general education system is still too focused on grades and careers and is not oriented toward innovation and entrepreneurship. This situation is further

worsened by the inherent problems of lack of infrastructure and good facilities in the educational institutions and delays in the funding system.

- *Poor infrastructure facilities in villages*: Basic infrastructure facilities such as electricity, Internet, roads and rail, and even the availability of a skilled workforce, are not evenly distributed in India and often weak in smaller cities or towns and rural parts of the country. Thereby, there is less scope for innovation and entrepreneurship to flourish in such areas.

- *Risk aversion among entrepreneurs*: Indian entrepreneurs often seek established technology as a basis for starting their business; they are hesitant to take on innovative ideas because of the risks involved, including the low availability and high cost of funds that often arrive too late. As a result, they look for minimum risk and quick returns.

- *Inadequate protection of intellectual property rights*: In India, the intellectual property regime is weak. Innovators do not generally seek protection for their intellectual property unless forced to. For most entrepreneurs, patents and other forms of protection take too long and cost too much.

Steps taken by the Government

- The Government of India declared 2010-2020 as the "*Decade of Innovation*", for which the roadmap was prepared by the newly established National Innovation Council.

- The *Science, Technology and Innovation Policy 2013* outlines the major policy initiatives to strengthen the innovation ecosystem and give a boost to the development of innovation-led entrepreneurship in India.

- To convert India into a knowledge economy, Digital India programme was launched.

- *AIM Platform*: ATAL Innovation Mission (AIM) under NITI Ayog

- *VAJRA* (Visiting Advanced Joint Research) scheme under DST

- *IMPRINT scheme*

- *ASPIRE scheme*

- *SETU (Self-Employment and Talent Utilization) scheme*

Conclusion

- There has been a substantial thrust toward science, technology, and innovation in past 20 years, and many initiatives have been undertaken in that direction.

- However, the investments in science, technology, and innovation are not yet translating into the desired reality. Realizing that the innovation-led entrepreneurship development holds promise for growth, the government has taken major policy initiatives with a strong innovation agenda.

- The policy is in place; now its success depends on its implementation.

3. ECONOMY AND INFRASTRUCTURE

3.1. Growth After Demonetisation

According to recent data released by Central Statistics Office (CSO), India's 4th quarter GDP growth falls to 6.1%. With this, India has lost the crown of fastest growing major economy to China, which grew at 6.9% in between January to March quarter.

Key Highlights

Gross value added (GVA) *is the difference between gross domestic product (GDP) and net indirect taxes*

- GVA growth is at 2-year low.

- Construction and financial services are among the worst affected sectors.

- Growth is being pushed primarily by agriculture and government spending.

- Mining sector showed a sign of picking up in its growth.

- Agriculture output growth has been slow but it stayed strong and healthy.

Implications

- Demonetization has its major impact over private sector investment which can be authenticated by slowdown in economic growth (India's fourth quarter GDP growth fell to 6.1%) & economy is running mainly because of public spending.

- Demonetization showed its impact over manufacturing sector as well as trade, hotels, and transportation showed a slowed down from their preceding quarter levels. This made most of the youth un-employed as these sectors are not in a position to create new jobs.

- Demonetization disrupted businesses of labor-intensive unorganized sectors ***eg***: ***construction sector*** as it is major employment provider for migratory population.

Concerns

- The sharp fall in rural incomes implies that rural demand is constrained & if construction and other informal sector activity does not revive, then consumption demand will be dismal, therefore the problem of excess capacity continues.

- The decline in the share of investment expenditure must be reversed. But, slow expansion of consumption demand does not augur well to pick up in investment.

- Agriculture poses some risk, of the crash in prices which may induce a cutback in sowing of certain crops (pulses), this might lead to a spike in prices which can result in re-start of food inflation.

Conclusion

Government's decision to demonetize (i.e. declaring 86 percent of the currency are not legal tenders), shook already besieged economy & had an adverse impact over demand and top-line growth of India's economic growth which resulted in loosing crown of fastest growing major economy to China

---

Some Facts

GDP numbers are based on a new series of Index of Industrial Production (IIP) and Wholesale price Indices(WPI) with base year of 2011-2012, released by Central Statistical Office, and the Office of Economic Advisor, Department of Industrial Production

Central Statistical Office (CSO)

- Created in May 1951(First five year plan)

- Responsible for coordination of statistical activities in the country and for evolving and maintaining statistical standards.

- Its activities include compilation of National Accounts; conduct of Annual Survey of Industries

---

and Economic Censuses, compilation of Index of Industrial Production, as well as Consumer Price Indices

3.2.   Fiscal Deficit Target

The government has met its fiscal deficit target of 3.5 per cent of gross domestic product for 2016-17. As a percentage of GDP(at current prices) it comes to be 3.52 per cent.

Key Highlights

- Fiscal deficit target has been achieved in spite of higher budget capital expenditure.

- Tax inflows and capital spending exceeded the revised estimates, there by offsetting the anticipated shortfall in non-tax revenue.

> From this financial year, 2017-18, expenditure will be classified into revenue spending and capital spending.

- Tax revenue showed a positive trend, partly due to increased compliance after demonetization.

- Non-debt capital receipts was boosted by divestment returns.

3.3.   Two-Year Sunset For Anti-Profiteering

In News

- The anti-profiteering body under the coming GST regime will be wound up after two years of the roll-out. The mechanism was finalized by the GST Council. This body is required initially only when tax rates change under the new tax regime.

- Anti-profiteering is a mechanism under GST that makes mandatory for businesses to pass on the benefits arising out of lower tax incidence from rate reduction or input tax credit to the consumer. The amount paid as forfeiture will go into a consumer welfare fund.

- The three-stage structure will comprise a standing committee, DG (Safeguards) and a 5-member authority.

- An authority would be constituted, headed by a secretary-level officer, who will have the power to force a reduction in prices or order companies to return money to their customers. It would also be able to impose a penalty and even to order a company to be de-registered. These powers are prone to misuse.

- **THE PENALTY:** Profiteering will be decided on product basis instead of the earnings at an entity level. This means that although a company may be running in losses but found to be profiteering on its two product lines out of four, it could be penalised.

Critics

- The Authority's power even to the extent of de-registering a company is prone to misuse.

- The government has introduced the anti-profiteering clause in a bid to check prices that may rise in the wake of roll-out of the GST. But it is also true that the ***anti-profiteering authority is a bad idea in principle*** and will likely be a problem in practice. In principle, the ***government should not be interfering in the market to this degree;*** if a company feels it can raise prices, then unless it runs afoul of the competition law it should be allowed to do so.

3.4.   Multilateral Tax Agreement In Paris

In News

- India signed a uniform multilateral tax agreement in Paris to check abuse of double tax avoidance agreements (DTAAs) by multinational companies that shift profits from high-tax jurisdictions to those with low (or) no taxes. Bilateral tax treaties are aimed to ensure that taxpayers do not face the burden of double taxation in both countries.

- The deal was signed by more than 65 countries.

- It is part of the Base Erosion and Profit Shifting (BEPS) framework of the Organisation for Economic Cooperation and Development(OECD) to check cross-border tax evasion by global companies by exploiting gaps in tax treaties and tax planning strategies.

- BEPS refers to tax avoidance strategies that exploit gaps and mismatches in tax rules to artificially shift profits to low or no-tax location.

Implications

- It will provide a standard framework for bilateral tax treaties creating common tax regulations for all investors across destinations.
- It will expedite modification of current tax treaties as countries will not be required to amend individual pacts after agreeing to the multilateral instrument.
- The multilateral convention will pave the way for bilateral pacts with other countries and will modify all covered bilateral tax treaties (covered tax agreements) to implement BEPS measures.
- The revenue losses arising on account of base erosion and profit-shifting have been estimated by OECD will be in between 4-10 per cent of global corporate income tax revenues.
- The uniform tax treaty for all investors will create a level playing field for both foreign institutional investors investing in capital markets and private equity players investing in Indian companies.

3.5.   Fuel Prices To Change Daily

In News

- Though oil ministry has been considering for daily revision of oil prices since 2012 the state-run oil marketing companies now decided to revise the prices of petrol and diesel on a daily basis from June 16 across the county. This system is in line with the international practices and is followed in all advanced economies
- The companies adopted the new pricing model after trying it out in five cities, Udaipur, Jamshedpur, Puducherry, Chandigarh and Visakhapatnam where dynamic fuel price model has been adopted since 1st May.

Positives

- Daily price revisions of petrol and diesel will make the retail prices more reflective of the current market conditions
- Politically, daily revision will keep government away from consumer ire that it faces after a steep revision.
- It helps to minimises the volatility in the retail selling price.
- It will lead to increase transparency in the system.
- Enables' smoother flow of products from refinery and depots to retail outlets.

Challenges

- Dealers will not be able to plan how to manage their inventories.
- Not all the outlets in the country are automated, this may affect their margins

- The process will take time to shift to the new price every day. As the dealers first have to wait for the state-run oil companies to convey the new rates, then these would be updated on all the oil dispensing machines and calculators, then the stock position will have to be measured and meter readings noted.

- The dealers were worried because of the declining stock value and were demanding an increase in dealer commission, which is between 2-3 per cent now. In Europe, inventory is managed by companies, where as in US dealers will fix the final prices.

3.6. Monetary Policy Statement

In News

The Reserve Bank of India's (RBI) Monetary Policy Committee (MPC) has kept key interest rate unchanged at 6.25%, but softened its hawkish policy stance after retail inflation and economic growth slowed sharply. The decision was not unanimous as one of the external member in the panel, Ravindra Dholakia, dissented.

MONETARY POLICY COMMITTEE

- Monetary Policy Committee is entrusted with the task of fixing the benchmark policy rate (repo rate) required to contain inflation within the specified target level. RBI Act, 1934 was amended by the Finance Act, 2016, to provide for a statutory and institutionalized framework for a Monetary Policy Committee for maintaining price stability,

- As per the provisions of the RBI Act, out of the six Members of Monetary Policy Committee, three Members will be from the RBI and the other three Members of MPC will be appointed by the Central Government.

Highlights

- Repo rate and reverse repo rate was kept unchanged at 6.25% and 6% respectively.

- RBI has cut the statutory liquidity ratio (SLR) by 50 basis points (bps) to 20%, (**SLR** is the reserve to be maintained by the commercial banks in the form gold, government bonds or cash before lending loans to the customers) might be because of reduction in inflationary pressures.

- Growth forecast for 2017-18 has been lowered to 7.3% from 7.4%.

- RBI has also revised its target for gross value added, (another measure of economic growth) down by 10 basis points to 7.3%**.**

- The central bank cut its forecast for consumer price inflation in the first half to 2-3.5% from 4.5% and to 3.5-4.5% from 5% in the second half.

- RBI cautioned states regarding rush in farm loan waivers which can cause fiscal slippages and spillover of inflation.

- There is risk of inflation due to 7th Pay Commission allowances, geo political scenario & financial risk.

3.7. Stake Sale Of Air India Takes Off

The Cabinet has accepted the recommendations of the NITI Aayog and has given an in-principle nod for disinvestment of Air India and its five subsidiaries but no timeline is given for the process.

Why Now

- The Comptroller and Auditor General of India (CAG), in its recent audit of the Turnaround Plan and Financial Restructuring Plan of the airline, found that the airline has *failed to achieve many of the objectives* in various functional areas which were mandated under the financial restructuring plan which also provided an equity infusion of Rs 30,231 crore till FY21.

- This failure resulted in less revenue generation for the airline leading to requirement of more short-term loans for the airline & also eroded the benefit of financial restructuring plan.

- Some of the findings of CAG -

  o It pointed that Air India is generating l**ess revenue over passengers compared to other airlines.**
  o There has been a mismatch in demand and availability of the airline(i.e **Non-availability of proper aircraft**)
  o It also pointed out that **mismanagement in granting bilateral agreements with foreign countries** (i.e granting more than required number of bilateral seats to carriers of foreign countries) has been hurting Air India's prospects.
  o **Mismanagement of manpower:** Disguised unemployment is more prevalent in Air India.

- **14th Finance Commission** has elaborated to consider the opportunity cost while investing in PSU's and suggested that the government should not be in the business of providing goods and services where the private sector has a vibrant presence. In Air India's case, the cost is much higher as it is making losses consistently and is dependent on the government for its survival.

- Divesting the loss-making Air India will send a strong signal to investors that India is serious about reforms and is no longer willing to throw good money after bad and also set an example and pave the way for disinvestment of other loss-making companies, such as Bharat Sanchar Nigam Ltd (BSNL) and Mahanagar Telephone Nigam Ltd (MTNL).

What Next

The government will now have to set up a group of ministers (GoM), headed by finance minister. It will decide on how much stake will be sold and the process of disinvestment. Some of the issues that the GoM will deliberate upon are

- How to tackle the unsustainable portion of Air India's debt,
- Eligibility criteria of bidders,
- Hiving-off assets to a shell company, and
- Disinvestment of the airline's profit-making subsidiaries.

Suggestions

- The NITI Aayog has suggested complete privatization.
- Delay in the disinvestment will erode Air India's market value, so the process should be expedited.
- The asset-leasing might be best option as it can be implemented quickly and the debt restructuring can be done later.

Conclusion

BACKGROUND

o 1932:JRDTata establishes Tata Airlines
o 1948: The government acquires 49%, starts operation as Air India International
o 1953: The government buys out the company
o 1962:Air India International rebranded as Air India
o 2000: The Atal Bihari Vajpayee government clears proposal to disinvest stake in both Air India and Indian Airlines
o 2007:AirIndia and Indian Airlines merge ;renamed National Aviation Company of India
o 2012:United Progressive Alliance govt approves turnaround plan and decides to infuse Rs 30,000crore till 2021
o 2017:National Democratic Alliance govt gives in-principle approval for disinvestment

Everything that could possibly go wrong with a public sector company has gone wrong with Air India. It is operationally inefficient and unable to compete with private sector operators. The airline has been grossly mismanaged over the years and some controversial decisions taken in the past are being

probed by the CBI. It is tottering under a mountain of debt and is surviving on doles from the government. Therefore the reforms in Air India is indispensable and inevitable.

3.8. Annual Household Survey For Unemployment Data

In News

- NITI Aayog Vice-Chairman said the government had decided to conduct an annual household survey in both rural and urban areas to arrive at the number of employed and unemployed in the country.

- The survey would be updated on a quarterly basis, as till now debate on job creation is happening in the absence of adequate supportive data.

- Inputs will be sought from the Employees' Provident Fund Organisation and the National Pension System for estimates of employment in the formal sector.

Why Need For This Survey

- Despite strong GDP growth in the past few years, the gap between number of jobs created and jobs required has been widened. Big decisions like demonetization may had an adverse impact over occupational availability, but *non availability of high-frequency data for policymakers made difficult for them to judge the depth of the distress, if any.*

- As millions are seeking to leave the increasingly unprofitable and precarious existence provided by the agricultural sector, 17-20 million jobs needed to be created annually; much higher than the rate at which jobs grew until 2012.

- NSSO currently comes out with the employment survey once in five years. Labour survey is also done quarterly and covers only 30 million employees while the total labour force in the country, including agriculture labourers, is over 470 million

- Thus, these existing surveys face limitations. Also they are insufficient as they are not based on any random sample survey and till 2015 covered only 11 states.

- Because of these reasons, this govt decision hold importance.

How The Survey Can Be Made Effective

- Replacement of survey should have to be quicker and more frequent than this survey, as well as more reliable.

- It should also have to look at indicators other than the simple rate of unemployment, which is not very informative in the Indian context. The data will have to be granular, and adapted to the peculiarities of the Indian labour market. *For example, the survey will have to look at activity monitors, reported wages, and the frequency of changing employment*.

- It has to ease out structural factors such as whether employment is found directly or through a middleman.

- Previous surveys suffered from respondents *struggling to respond to questions about the total number of days they worked over the past year*. This "**recall factor**" is one of the things that made the data unreliable. A survey that is conducted with far greater frequency might help deal with that problem.

- Even though 98.5 per cent of enterprises in India have less than 10 employees, these are not covered under the survey.

Suggestions To Increase Employment

- Strengthen network of small enterprises, clusters, introduction of life-long learning systems, social security and technology as enablers to improve job creation in the country.

- The focus needs to be more on the process of creating jobs, than projecting the number of jobs that will be created.

- There could be **cultural factors** at work to explain India's low numbers, because the issue is primarily the unusually low level of women's participation in work outside the home: Barely half the world average of 50 per cent. For men the Indian labour participation rate of 79 per cent is slightly higher than the world average.

> *Across the globe, educating and empowering women has proven to be a catalyst for rapid social and economic growth. If we harness women's potential through skill development, India's growth will be inclusive.*

Conclusion

Labour Bureau quarterly report that is coming out of the sample size is very small as it covers only eight sectors. Further as of now there would be an annual jobs survey and quarterly estimates of urban employment. As this survey is an *enterprise-based survey covering about 10,600 enterprises*, it might help government to take key decisions. It is hoped that these new surveys will be more reliable and comprehensive, and thus be a considerable improvement over the current situation.

3.9. India To Remain Most Favoured FDI Destination: Report

According to a survey released by the United Nations Conference on Trade and Development (UNCTAD), India will remain among the top three investment destinations globally till 2019. Also, India will remain the most favoured destination due to its attractiveness among MNCs for cross border mergers and acquisitions.

Highlights

- UNCTAD's World Investment Report 2017 said India ranked 10th in terms of FDI inflows in 2016, with $44 billion coming in, as in 2015.

- Over the next two years, India will be behind only the U.S. and China in terms of investment attractiveness.

- Global foreign direct investment (FDI) is expected to rise by 5%, to almost $1.8 trillion in 2017.

- The new, more optimistic projections for 2017 are attributed to higher economic growth expectations across major regions, a resumption of growth in trade and a recovery in corporate profits, after FDI flows retreated marginally in 2016 – by 2%, to $1.75 trillion.

UNCTAD

Headquarter : Geneva, Switzerland

- UNCTAD is a permanent intergovernmental body established by the United Nations General Assembly in 1964.

- UNCTAD is part of the UN Secretariat.

- It reports to the UN General Assembly and the Economic and Social Council but has its own membership, leadership, and budget.

- It is also part of the United Nations Development Group.

- Cross-border mergers and acquisitions deals have become increasingly important for foreign multinational enterprises to enter the rapidly-growing Indian market.

3.10. Change Of Fiscal Year Might Happen As Early As 2018

- The government is planning to shift to a January-December financial year, and it could happen as early as January 1 next year. Recently Madhya Pradesh became the first state to switch to the January-December financial year.

- India has been following the April-March financial year since 1867. Before that, the British government had used the May-April period as the financial year.

- This year, the government advanced the date of presenting the Budget for FY18 from February 28 to February 1.

- Officials in the Prime Minister's Office and the Finance Ministry are considering a gradual change. For instance, the Budget for the next financial year (FY19) could be presented by January 1.

- The central government constituted a committee under former chief economic advisor **Shankar Acharya** to examine the "desirability and feasibility" of having a new financial year.

- NITI Aayog concept paper, written by member Bibek Debroy, favoured the change. Sources have confirmed the change would be applicable to the Centre, the states as well as India Inc.

Why Now

The Centre points out some of the arguments depending upon different committees

- Agriculture contributes more than 15% to India's GDP and above 58% rural households depend on farm yields, "In case of a drought, which happens between June and September, a change in the accounting period from January to December will help in better budgeting. If the Union budget is presented in November, then early allocations will help the agro-economy and farmers."

- Most countries use the Gregorian calendar year (January to December) as their financial year, so consolidating financial statements will become easier. The change will also help Indian companies since most of them are associated entities in the overseas jurisdictions.

- Comparison of macro data with other countries will also be much simpler as many multi-lateral agencies such as the IMF and the World Bank give projections for the calendar year.

Against Change

- If there is timely passage of the budget, it will not hamper the construction period since for construction, the monsoon months are a lost period.

- Changing the financial year is not going to insulate India from challenges arising elsewhere as biggest disruptions to budgets, in terms of revenue shortfall or spending overruns, have come during the years of global economic crisis

- Since the dependence over Agriculture has been reducing from time to time, in future dependence over agriculture may be much lesser compared to present scenario, so change in financial year might not be good idea by thinking about future perspective.

What Government Needs To Do

- If this happens, the government would have to amend a number of laws, which includes Income Tax (I-T) Act, Companies Act,

- Cut the current financial year (2017-18) short to three quarters.

- It would also have to rework the Centre's balance sheet, start a new assessment year for taxes.

Conclusion

Implementation of change in financial year should be well planned to prevent any disruptions which we had witnessed in the recent demonetisation & it might be a good ideal to put off the changeover until companies have settled down with the GST laws and new accounting standards .

3.11. Aadhaar Must For Kerosene Subsidy, Atal Pension Yojana

- The Aadhaar card has now been made mandatory for government subsidy on purchase of kerosene and also to avail benefits of Atal Pension Yojana.

- The Ministry of Oil and Natural Gas has introduced direct benefits transfer through which subsidy is transferred directly to the bank accounts of the beneficiaries, who purchase the PDS kerosene at non-subsidised rate.

- The decision to make Aadhaar mandatory for these two schemes will prevent leakages of subsidies and ensure that the beneficiaries get their due.

- The Centre allocates subsidised kerosene to the states and UTs as affordable cooking fuel for domestic use, mainly to those living below the poverty line.

- Atal Pension Yojana can be subscribed by the citizens in the age group of between 18-40 years bracket. From the age of 60 years, the subscriber would receive a minimum guaranteed pension of Rs 1,000 to 5,000 per month, depending on his contribution. It is administered by the Pension Fund Regulatory and Development Authority (PFRDA).

3.12. Entry Norms For FPI's To Be Eased By SEBI

- The Securities and Exchange Board of India (SEBI) is planning to ease entry norms for foreign portfolio investors who are willing to invest directly in Indian stock markets.

- The market regulator proposed to register category-I FPI's from countries which have diplomatic tie-ups with India and are FEMA (Foreign Exchange Management Act) compliant.

- Category I FPIs are typically government and related entities or multilateral agencies.

- SEBI said that those multilateral agencies may not require to pass any jurisdiction check since they are highest quality and low-risk investors with long-term investment horizon.

- SEBI has also proposed to rationalise 'fit and proper' criteria for foreign investors. The regulator said since category I and II are government and regulated entities, any additional documentation and procedural requirements may not be required from such investors.

- The move may give a fillip to foreign investment in the country as it would end procedural delays faced by FPIs while registering in India.

3.13. Black Money & Switzerland

- Switzerland ratified automatic exchange of financial account information with India and 40 other jurisdictions to facilitate immediate sharing of details about suspected unaccounted money even as it sought strict adherence to confidentiality and data security.

- By adopting AEOI, a global convention for automatic information exchange on tax matters, the Swiss Federal Council said the implementation is planned for 2018 and the first set of data would be exchanged in 2019.

- The council will soon notify the Indian government about the exact date from which the automatic exchange would begin.

- The decision is not subject to any referendum which means there should be no further procedural delay in its implementation.

- Last November India and Switzerland inked the pact for the implementation of AEOI. The joint declaration was signed with New Delhi stepping up efforts to clamp down on black money.

3.14. Fin Min Asks PSBs To Explore Acquisition Of Smaller Banks

In News

- Enthused by the success of the State Bank of India (SBI) merger, the Finance Ministry is considering clearing another such proposal in the public sector banking space in this financial year, with a goal to create four-five global-sized lenders.

- Six-seven banks being considered for the exercise

- Bank of Baroda and Canara Bank are likely top contenders.

- Smaller banks to be merged might include Dena Bank, Vijaya Bank, UCO Bank and United Bank of India.

- Bank of India, which is still making losses, could be considered in future

- Punjab National Bank and Syndicate Bank not in discussion at the moment

- Consolidation could involve merger of one or even two small banks with a big one.

- The main objective is that the entity that will emerge after merger should be strong enough to bear any future shocks.

Benefits of Merger

1. The merger benefits include getting **economies of scale and reduction in the cost** of doing business. Synergy of operations and scale of economy in the new entity will result in savings and higher profits. Post merger, the cost-to-income ratio will come down by 100 basis points a year.

2. **Technical inefficiency** is one of the main factors responsible for banking crisis. The scale of inefficiency is more in case of small banks. Hence, merger would be good.

3. Consolidation also helps in improving the **professional standards**.

4. Mergers help small banks to gear up to **international standards with innovative products** and services with the accepted level of efficiency.

5. Mergers help many PSBs, which are geographically concentrated, to **expand their coverage** beyond their outreach.

6. A better and optimum size of the organization would help PSBs offer more and more products and services and help in integrated growth of the sector.

7. This might also be helpful in funding the huge **infrastructure financing** needs of the country.

8. Larger PSBs can support the corporate sector better in overseas acquisitions.

9. After merger, Indian Banks can **manage their liquidity** – short term as well as long term – position comfortably. Thus, they will not be compelled to resort to overnight borrowings in call money market and from RBI under Liquidity Adjustment Facility (LAF) and Marginal Standing Facility (MSF).

10. This will also **end the unhealthy and intense competition** going on even among public sector banks as of now. In the global market, the Indian banks will gain greater recognition and higher rating.

11. The volume of **inter-bank transactions** will come down, resulting in saving of considerable time in clearing and reconciliation of accounts.

12. The burden on the central government to **recapitalize the public sector banks** again and again will come down substantially.

13. This will also help in **meeting more stringent norms under BASEL III**, especially capital adequacy ratio.

14. A **great number of posts** of CMD, ED, GM and Zonal Managers will be abolished, resulting in savings of crores of Rupee.

15. From regulatory perspective, **monitoring and control** of less number of banks will be easier after mergers. This is at the macro level.

16. Mergers can **diversify risk management**.

Apprehensions About Merger

1. India right now needs **more banking competition rather than more banking consolidation**. In other words, it needs more banks rather than fewer banks. This does not mean that there should be a fetish about small-scale lending operations, but to know that large banks are not necessarily better banks.

2. India is right now seeing the creation of new banks that could add to variety in the domestic financial system. These new banks should make the Indian loan market more competitive. The decision to merge the large public sector banks does exactly the opposite. It will likely reduce competition—and without any major efficiency gains to the economy as a whole.

3. Merger will affect regional flavour and **end regional focus**.

4. The argument that size is going to determine the future of the bank in a globalised scenario is not always true. The **fate of large global banks**, which collapsed during the global financial crisis, is well known to all. On the contrary, small banks have survived the crisis due to their nimbleness and the niche areas they operate in. When a big bank books huge loss or crumbles, there will be a big jolt in the entire banking industry. Its repercussions will be felt everywhere.

5. Immediate negative impact would be from **pension liability provisions** (due to different employee benefit structures) and harmonisation of accounting policies for bad loans recognition.

6. There are many **problems to adjust top leadership** in institutions and the unions.

7. Mergers will result in shifting/closure of many ATMs, Branches and controlling offices, as it is not prudent and economical to keep so many banks concentrated in several pockets, notably in urban and metropolitan centres.

8. Mergers will result in **immediate job losses** on account of large number of people taking VRS on one side and slow down or stoppage of further recruitment on the other. This will worsen the unemployment situation further and may create law and order problems and social disturbances.

9. The **weaknesses of the small banks may get transferred** to the bigger bank also.

10. New power centres will emerge in the changed environment. Mergers will result in **clash of different organizational cultures**. Conflicts will arise in the area of systems and processes too.

11. India right now needs **more banking competition rather than more banking consolidation**. In other words, it needs more banks rather than fewer banks. This does not mean that there should be a fetish about small-scale lending operations, but to know that large banks are not necessarily better banks.

What Should Be Ensured By The Government

1. The central government **shall not rush through the process of bank mergers**. The decision with regard to selection of smaller/weaker banks for merger with larger/stronger banks is to be taken carefully and grouping of various banks for this purpose is the key issue involved. The government shall not yield to pressure from any political or social groups. All stakeholders are taken into confidence, before the merger exercise is started.

2. After mergers, shares of public sector banks shall not be sold to foreign banks, foreign institutions and Indian corporate entities, beyond certain limit.

3. Whenever further divestment (dilution of government holdings) takes place, the government share holdings shall not fall below 51% under any circumstances. This will ensure that the ownership and control of public sector banks remain with the government.

4. The acquiring bank shall not attempt to dominate or subsume the acquired bank. Good aspects of both the banks before merger shall be combined, in order to instil confidence in all stakeholders and to produce better results.

5. Personnel absorbed from the smaller bank shall undergo brief, intermittent training programs to get acquainted with the philosophies, processes and technology in the new environment. The management must be ready with a good roadmap for this and allot considerable budgetary resources for this purpose.

6. There shall be conscious and organized efforts to synthesize the differing organizational cultures, for the mergers to yield the desired results.

Conclusion

Merger is a good idea. However, this should be carried out with right banks for the right reasons. Underperformance shall not be the only reason for merger. Now that the move has been initiated, the bigger challenge is consolidation in the rest of the banking system. This is tricky given the huge challenges banks face, including the bad loan problem that has plunged many public sector banks in an unprecedented crisis. Also, since mergers are also about people, a huge amount of planning would be required to make the consolidation process smoother. Piecemeal consolidation will not provide a lasting solution and what is required is an integrated approach from all stakeholders including the government.

3.15. PAN Based ID For Indirect Tax

- All business entities registering under the GST regime will get a Goods and Services Tax Identification Number, or GSTIN.

- This 15-digit number is similar to the Tax Identification Number (TIN) that is allotted to business entities registered under a state's Value Added Tax law.

- Currently, businesses providing services are also required to obtain a Service Tax Registration Number assigned by the Central Board of Excise and Customs (CBEC).

- Under the GST regime, all these different identification numbers required for indirect tax purposes will be replaced by a single umbrella number, the GSTIN.

- This is expected to make life simpler for business entities, and to improve the government's tax collection through better tracking of transactions.

- The first two digits of the 15-digit GSTIN represent the state code as per the Census of India, 2011. The next 10 digits are the taxpayer's PAN. The thirteenth digit is assigned based on the number of registration within a state. The fourteenth digit is Z by default. The last digit is the check sum digit code.

3.16. Aadhaar-PAN Linking Must From July 1

In News

- Individuals having permanent account number (PAN) will have to link it to their existing 12-digit biometric Aadhaar number from July 1.

- Aadhaar number or Aadhaar enrolment ID will also have to be mandatorily quoted while applying for PAN, which is a must for filing tax returns, opening of bank accounts , and financial transactions beyond a threshold (i.e., Rs 50,000).

- Finance Minister, through an amendment to tax proposals in the Finance Bill for 2017-18, had made Aadhaar mandatory for filing income tax returns (ITR) and provided for linking of PAN with Aadhaar.

- Earlier Apex court had only given a "partial relief" to those who do not have an Aadhaar or an Aadhaar enrolment ID and the tax man.

Implications

- Tax evasion through the use of multiple PAN cards will not be possible since biometrics identification enabled by Aadhaar proves the identity of the PAN holder.

- The move will be implemented to push the government's Digital India drive to further curb fraudulent activities using the PAN cards.

- Since Aadhaar card has been linked with many schemes and subsidies, from mid-day meal to free LPG, everything is in the process of being digitised by the government for better transparency.

- Now Direct and Indirect taxes can be linked together and there is a possibility of availability of authetic information regarding amount of tax paid by a person and population as a whole.

3.17. **Three Greenfield Airports**

- Centre is in talks & has begun work on developing Greenfield airports in Tamil Nadu (Chennai), Maharashtra (Pune), and Andhra Pradesh (Vizianagaram).

- Land pooling will be used for building these greenfield airports. It has found some success in Gujarat, Maharashtra and Andhra Pradesh. In this model, land owned by different people is pooled together and the land owners get back a certain portion of land in a developed area, whose value is significantly higher than the value of the original land holding.

- Recently, two Greenfield projects at Mopa in Goa and Navi Mumbai in Maharashtra were awarded to private airport operators GMR and GVK respectively.

Greenfield Land Projects	Brownfield Land Projects
Facilities which are ***built from scratch*** are called as Greenfield land projects.	Facilities which are ***modified/upgraded*** are called as Brownfield land projects

3.18. **$100 Million Loan To Finance Solar Rooftop Projects**

In News

- The Asian Development Bank (ADB) and the Punjab National Bank (PNB) signed $ 100 million loan to be guaranteed by Government of India that will finance large solar rooftop systems on industrial and commercial buildings throughout India

- The PNB will use the ADB funds to make further loans to various developers and end users to install rooftop solar systems.

> Financing includes $330 million from ***ADB'***s ordinary capital resources + $170 million from the multi donor ***Clean Technology Fund (CTF)*** administered by ADB. The first tranche loan of $100 million would be financed entirely from the CTF.

- This is the ***first tranche loan*** of the $500 million multi tranche finance facility Solar Rooftop Investment Program (SRIP) approved by ADB in 2016.

Highlights

- Program will contribute to government's plans to increase solar power generation capacity, help India meet the carbon emission reduction target in line with its commitment at the recent global climate change agreement

- It will contribute to Government's efforts to promote solar energy solutions as affordable and sustainable energy sources.

> The Government of India has set a target of 175 GW renewable power installed capacity by the end of 2022. This includes
>
> ✓ 60 GW from wind power,
>
> ✓ 100 GW from solar power,
>
> ✓ 10 GW from biomass power and
>
> ✓ 5 GW from small hydro power.

ADB

- Headquarter : Manila (Established in 1966)

- Its objective is to reduce poverty in Asia and the Pacific through inclusive economic growth, environmentally sustainable growth, and through regional integration.

- It offers both hard & soft loans

- ADB focuses on five core areas: Finance sector development; Environment which includes climate change; Regional cooperation and integration; Education; and Infrastructure.

3.19. Miscellaneous

- **Modi, Abe Likely To Flag Off Bullet Train Project In Sept**

  o Government will take the first step to make bullet train a reality in India, with help from Japan, in between Mumbai-Ahmedabad to be covered in two hours.

  o Railway Minister is targeting the commissioning of the project by 2023-24.

  o In February 2016, a special purpose vehicle National High Speed Rail Corporation Ltd — was formed to implement the elevated Mumbai Ahmedabad high-speed rail corridor project.

  o In addition to the Mumbai Ahmadabad high-speed corridor, five more corridors are being explored — Delhi-Mumbai, Mumbai-Chennai, Delhi-Kolkata, Delhi-Nagpur and Mumbai-Nagpur corridors. Trains on these corridors will cross 300 kmph.

- **Centre Considering Furtherig Relaxing FDI Norms In Defence**

  o The Centre is considering to further relax foreign direct investment (FDI) norms in the defence sector with a view to attract more overseas inflows.

  o Currently FDI up to 49 percent is permitted in the sector through automatic route and beyond that up to100 percent via government nod is permitted.

  o India imports 70 per cent of its military hardware from different countries.

- **Govt To Sharpen Plan For Naming & Shaming Tax Defaulters**

  o The tax department is looking at expanding the scope of naming and shaming of defaulters by sharing detailed data with banks, financial institutions and credit rating agencies, among others.

  o The move is being mulled as part of a broader strategy aimed at arrears recovery and litigation management.

- **Restrictions On Masala Bonds**

  o The Reserve Bank of India (RBI) brought some restrictions on issuance of rupee-denominated bonds, or masala bonds, by harmonizing the issuance norms at par with those for external commercial borrowings (ECBs). Now, there will also be a cap on how much interest can be paid on these bonds.

  o This will put some conditions for masala bonds which are gaining popularity as a means of raising cheap money. Since these bonds are issued in rupee, the issuer is not exposed to currency risks.

- **Govt To Roll Out Fellowships To Prevent Brain Drain**

The human resource and development ministry (MHRD) is set to roll out the ambitious *Prime Minister Research Fellowships scheme* from January to stop India's talent from going abroad for higher education, jobs and research.

4. INTERNATIONAL AFFAIRS

4.1. Crisis In Gulf Region

About The Issue

- Saudi Arabia and three of its biggest allies Egypt, the UAE and Bahrain have announced that they were severing diplomatic ties with Qataras well as suspending air, land and sea travel to and from the country.

- Later Libya, Yemen and the Maldives have also joined the diplomatic boycott.

- The countries accused Qatar of backing radical Islamist groups like the Muslim Brotherhood and ISIS.

- Tensions between Qatar and its neighbors increased after Qatar's state-run news agency 'Aljazeera' published an article in which the Qatar's ruling emir, Tamim bin Hamad Al Thani was quoted praising Israel and Iran which are Saudi Arabia's biggest adversaries in the region.

- The situation became worse when a few days later Sheikh Tamim called Iranian President Hassan Rouhani to congratulate him on his reelection, which was a clear act of defiance against Saudi's stance on Iran.

- Saudi Arabia has had tensed relations with Qatar for several years now. For over two years, a Saudi-led coalition that included Qatar has been fighting Iran-backed rebels in Yemen.

- Though both Saudi Arabia and Qatar are Sunni-dominated nations whereas Iran has a predominant Shia population but Qatar also has close economic ties with Iran including sharing a major offshore gas reserve.

- Later Saudi Arab led alliance has declared 13 points demands from Qatar such as curbing of ties with Iran, sever ties with terrorist organizations such as the Muslim Brotherhood and Hezbollah, immediately close Turkey's military base outside the Qatari capital and to shut down media channels such as Aljazeera and its affiliates etc. to be fulfilled within 10 days.

Qatar's Reaction

- In response to the recent boycott, Qatar's Foreign Ministry said it regretted the measures by the Arab nations and called the decisions unjustified.

- Qatar alleged that hackers had taken over the site of its news agency and published what it called fake comments from its ruling emir about Iran and Israel. The boycott is the uninvestigated sudden step by the Saudi Arab led coalition.

Effects on Qatar

- Qatar though rich in gas depends heavily on imports from other nations especially food. The boycott affected supply of food material and other products in the nation.

- The land border that Qatar shares with Saudi Arabia is its only land crossing and the suspension of air, land and sea travel could deeply impact the nation's over 2.5 million people.

- The suspension of air and sea links with Qataris affecting trade, security and travel of the foreign nationals as well as citizens. Its state-owned flag carrier has begun diverting its flights to Europe, North America and North Africa via Iran instead of Saudi Arabia.

Global Impacts

- The consequences have rippled beyond the region's internal politics and seriously imperil US military operations in the region.

- Qatar is home to the forward headquarters of the US Central Command, which manages all military operations in Afghanistan and the Middle East. And the air war command for the US-led fight against ISIS operates out of Qatar's Al Udeid Air Base.

- The UN human rights chief warned that it could lead to widespread suffering among ordinary people.

- The boycott affected the foreign companies and national living and working in Qatar.

Effects on India

- India has termed the development as internal matter of Gulf Cooperation Council (GCC). It is of the view that all parties should resolve their differences through dialogue based on the principles of mutual respect, sovereignty and non-interference.

- The move will have a bearing on India-Qatar relationship. The ***inflow of Qatari FDI*** in India is significant.

- The crisis might affect the ***supply of crude and natural gas***.

- The Gulf-Qatar rift will send a caution message to ***corporate sector*** in India. A number of reputed Indian companies, particularly in construction/infrastructure and IT, have operations in Qatar, including L&T, Punj Lloyd, Shapoorji Pallonji, Voltas, TCS, Wipro, MahindraTech, HCL, SBI and ICICI. The corporates have increased their businesses in Qatar and are looking forward to the vast potential in that country.

- India has time-tested friendly relations with GCC countries. With over eight million ***Indian expatriates*** living and working in these countries, we have vital stakes in the regional peace and stability.

- The Indian population in the country currently stands at around 650,000. Travel for Indians to Qatar is unlikely to be affected as flights from India take the Persian Gulf route to Doha.

America's Support to Saudi Arabia

- The earlier political administration under President Obama held some degree of ambivalence toward the Saudis and did not give them totally free rein to do whatever they wished to. He angered them with his efforts at the Iran nuclear deal, which Saudi saw as giving too much latitude to their foremost regional rival.

- In addition, President Obama canceled the major arms deal of Saudi Arabia with them before he left office, out of disapproval of the way they were handling their war on Yemen.

- But under Donald Trump's presidency the policies so far railing against Iran and threatening to undo the nuclear deal.

- He has also approved a $110 billion arms deal with Saudi and he used his first trip to Saudi Arabia to strengthen ties with Saudi Arabia and promised America's cooperation and support to them.

- President of U.S.A. backed the recent boycott of Qatar by Saudi Arabia and its allies as the US and Qatar too have had strained relations. The reasons for this include the latter's support of several Islamist groups and Palestinian militant group Hamas.

Reasons of Saudi-Iran Rivalry

- Saudi-Iran rivalry is based on the ***Shia-Sunni sectarian conflict*** that has split not just the Middle East/West Asian region but in fact the whole of Muslim world.

- Saudi Arabian-Iranian friendship had come to an end with the Iranian revolution in 1979 as the revolutionary regime of Iran declared the Saudi monarchy as anti-Islamic.

- The 1980s saw tensions between Saudi and Iran escalate when Saudi Arabia backed Saddam Hussein in the clashes at the hajj in 1987 that killed hundreds of Iranian pilgrims, Saudi Arabia suspended diplomatic ties with Iran for three years.

- The relations severed when Iran and Saudi Arabia are locked in an escalating dispute over the Saudi execution of leading Shia cleric Sheikh Nimr al-Nimr.

- Another reason is that Iran is the second largest oil producer in OPEC and deliberately produces more oil than allowed in its OPEC quota, leading to worsening competition with the world's largest oil producer, namely Saudi Arabia.

About Gulf Cooperation Council

- The Cooperation Council for the Arab States of the Gulf known as the Gulf Cooperation Council is a regional ***intergovernmental political and economic union*** consisting of all Arab states of the Persian Gulf, except for Iraq.

- Its member states are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.

- The Charter of the Gulf Cooperation Council was signed on 25 May 1981 formally establishing the institution.

4.2. Britain Election

In News

- Prime Minister of Britain Theresa May has suffered a major setback in the recent election by losing her overall majority in the Parliament.

- The Labour Party has gained seats across the country, with the Jeremy Corbyn's claiming 262 seats, 32 more than they won in 2015.

- The rising terrorist attacks in London and policies of reducing number of police officials by Theresa May when she was Defence Minister along with the poor campaigning strategy has led to this set back to the Conservative party.

About the Elections

- There was an election in May 2015 where the Conservative Party defied expectations to edge a small majority in parliament after having been in a coalition government with another smaller party.

- Part of their election strategy was promising a referendum on Britain's membership of the European Union even though the party officially wanted to stay in.

- The British exit (or Brexit) referendum happened in June 2016 and the result was a surprise to many. Voters chose to leave the EU.

- Since the then Prime Minister David Cameron had campaigned to stay, hence after his defeat he decided to surrender the post.

- Theresa May became the Prime Minister and repeatedly said the government would serve its five-year term.

- Then in April 2017, she suddenly called a new election in just seven weeks time because she needed a bigger majority to guarantee political stability in the Brexit negotiations with the EU.

- She had been hoping to boost her mandate for Brexit negotiations but the Tories actually lost seats and fell below the 326 needed to form a majority government.

4.3. America And Paris Climate Summit

The new political establishment in US under President Donald Trump, because of its conservative and "America first policy", has decided to quit from Paris Climate Summit. A decision to withdraw from the deal would put the US in league with Syria and Nicaragua as the world's only non-participants in the Paris Climate Agreement.

Reasons for Such a Decision

- The U.S. President has called the Paris agreement as fundamentally unfair to the United States.

- He considers Paris agreement as the *regulatory burden* on the American economy and a challenge which the businesses would face in order to create jobs and grow the economy.

- America is worried about the key risk of *financial burden* to fulfilling this objective of the Paris Agreement.

- It is against *the principle of "common but differentiated responsibility"* and said that China and India had no obligations under the agreement until 2030 and America has to bear the cost of fulfilling their commitments.

- The agreement set America's standards higher than for much of the world while giving countries like *China a free pass* for years to come. China's commitment to lower carbon dioxide emissions (compared to its 2005 level) by 60 to 65 % by 2030 and India's commitment to lower emissions by 33 to 35 % by 2030 is ahead of the deadline the U.S. has set for its own reduction is 2025.

Why It Is A Matter Of Concern?

- Pulling out of the agreement suggests that the US does not care about climate change anymore or about its potentially catastrophic consequences for the planet.

- It also sends a broader signal that the US considers its obligations to be optional. That the US leadership can no longer be trusted to adhere to agreements on issues of vital concerns for other countries even when it helps set the terms of the agreements itself.

- Another repercussion of leaving the Paris Agreement is potential retaliation from other countries which could either leave the Paris Agreement as well or punish the US in some way for leaving the agreement.

- The U.S. leadership was essential in Paris. It has a moral and ethical responsibility to do so as it is the country that has contributed more than any other to accumulated greenhouse gas emissions so far. Without the USA, it is hard to achieve the targets to limit the temperature at the critical 2 degrees Celsius threshold before 2060.

- The USA, which is the second highest greenhouse gas emitter, if not fulfill its responsibility towards the Climate change issue it might cost adversely to the whole world.

- The funding and the advance green technology, in which the USA has expertise, is needed for mitigating the climate change impacts. Hence the decision to quit the agreement will impact the resources and technologies needed.

- There will likely be numerous consequences for leaving the Paris Agreement not only for the climate but for the US economy and jobs as well. The decision to leave the Paris Agreement will create an uncertainty in the economy over the future of both fossil fuels and renewable energy

resources. That would be detrimental for businesses hoping to invest in renewable energy and could spread to other countries' economies as well

> Q. What is America First policy and how it can derail the global efforts for sustainable development?

4.4. Ireland's New Prime Minister

In News

- Leo Varadkar, son of an Indian immigrant, has been chosen as the Prime Minister of Ireland.

- International media has praised the societal changes that enabled an openly gay person with an immigrant background to lead a predominately Catholic country that had only stopped homosexuality being a criminal offence in 1993.

Challenges In Front of Newly Elected PM

- In addition to inheriting the fastest growing economy in Europe, Varadkar will be faced with a number of challenges as prime minister.

- Ireland is the only EU country that has a land border with the UK as it prepares for Brexit. The country may experience an impact on prosperity and trade across the open border as it works towards restoring a power-sharing government in Northern Ireland.

4.5. Kabul Terrorist Attack

In News

- The deadliest terrorist attack in Afghanistan occurred near Zambaq Square in Kabul on May 31.

- The Islamic State terror group claimed responsibility for the attack. However Afghanistan's National Directorate of Security later said that the attack had been staged by the Haqqani Network insurgent group in coordination with Pakistan's intelligence service.

- Another terrorist attack on 22nd June was committed outside a bank in southern Afghanistan has claimed 29 lives, about 50 people were injured.

Why Afghanistan Is Not Able To Restrain Terrorism

- Afghanistan has not been served well by its 2004 Constitution, which created a dysfunctional system of government that relies too much on the President alone.

- The fragile Afghan governmental institutions are susceptible to corrosive corruption and a massive illegal drug economy thriving in the vacuum of State authority and abetting the insurgency.

- The complex regional environment and national interests in Afghanistan are sometimes pursued at the expense of an effort to support stability in a coordinated manner.

- The international community had too often been insufficiently united on key policy issues such as terrorism. Lack of better coordination in international efforts is one of the causes of rising instability in the region.

- The blame game between Pakistan and Afghanistan instead of shouldering responsibility to curb terrorism is exaggerating the problem. Both Pakistan and Afghanistan blame each other for providing sanctuaries to terrorists unleashing violence in their territories.

- The returning process of ISAF and NATO proved detrimental for the stability in Afghanistan and the Afghans are not able to effectively combat the terrorist organizations.

- ISIS is also gaining ground in Afghanistan and this has increased the already present threat of rising insurgency and terrorism.

Efforts Needed To Bring Peace And Stability In Afghanistan

- Consensus between U.S.A. and U.N.'s approach to bring stability in Afghanistan is highly required. There have been differences between the USA and the UN over the policy objectives and modus operandi in Afghanistan.

  o The US policy on Afghanistan was framed in terms of counter-terrorism objectives or the 'war on terror'. The objective was to destroy the safe haven from which al-Qaeda had planned and directed the September 2011 attacks.

  o While the UN was trying to disarm militiamen as part of the disarmament, demobilization, and reintegration (DDR) programme.

  o The USA counteracted the DDR programme by recruiting the militiamen as a way of establishing security without needing to use its own military personnel.

- There is a need of renewing the mandate of the United Nations Assistance Mission in Afghanistan (UNAMA). According to the studies, UNAMA did not need additional powers but in the face of the evolving situation, the mandate needs to be enhanced.

- The success against the insurgency requires a comprehensive planning to ensure that rooting out enemy activity is coordinated with efforts to establish good governance and economic development, which is lacking hitherto.

- To achieve the goal of bringing development in Afghanistan, the U.S. should work with the Afghan government and regional allies to urge the Taliban leaders to come to the negotiating table end the insurgency and join the peace process.

- Deliberations with Taliban can prove fruitful to bring peace and stability in the region. Since 2006 various partners of ISAF in Afghanistan as well as Pakistan and Saudi Arabia have pursued a dialogue with Taliban figures. However none of these efforts have borne tangible results. The main problem is finding individuals who can speak with authority for the Taliban leadership.

- Coordination and collaboration in the efforts by the neighbouring nations of Afghanistan such as India, Pakistan and China is needed to bring development in the region.

- Widespread corruption is another significant issue that needs to be tackled.

- The capabilities of Afghan National Defense and Security Forces (ANDSF) should be increased by provided them advanced armaments and technologies to fight with the Taliban.

> Q. Recent Kabul attack has again brought instability in Afghanistan to limelight. What is the current situation in Afghanistan and state the reasons for the current scenario?

4.6. New Chief To United Nation Counter Terrorism Centre Appointed

In News

- The UN Secretary General Antonio Guterres has appointed Russian diplomat Vladimir Voronkov to head the UN Counter-Terrorism Centre (UNCCT) despite growing tensions between the US and Russia.

- The new high-level position has been created by United Nations Secretary General to strengthen counter-terrorism efforts that had been dispersed among several United Nations agencies and departments.

- The Vladimir Voronkov has been given the rank of Under-Secretary-General. The new Under-Secretary-General would Chair the Task Force and Executive Director of the UN Counter-Terrorism Centre.

- Mr. Voronkov brings more than 30 years of foreign services experience to the position, working primarily on the United Nations as well as responsibilities ranging from public diplomacy and social and economic development issues, to intergovernmental affairs.

- Mr. Voronkov serves on the Board of Governors of the International Atomic Energy Agency (IAEA) and has led several delegations to the Commission on Narcotic Drugs and the Commission on Crime Prevention and Criminal Justice.

- The appointment will raise Russia's profile in international counter-terrorism and at the United Nations, where Voronkov will hold the title of under-secretary-general.

About UNCCT

- It was established in 2011 within the United Nations Counter-Terrorism Implementation Task Force (CTITF) in the Department of Political Affairs to assist in meeting capacity-building needs of Member States while strengthening United Nations' counter-terrorism expertise.

- The UNCCT has been mandated to oversee the counterterrorism efforts of 36 UN-funded programmes under the ambit of a variety of UN agencies, 12 inter-agency working groups, Interpol and the World Customs Organisation.

- The CTITF and the UNCCT, currently under the Department of Political Affairs (DPA), will be transferred to the new office together with existing staff and associated budgetary resources.

- India though had welcomed the creation of the new UN office on counter-terrorism, it had been repeatedly stressing on the need to have a separate office for counter-terrorism as the presence of as many as 31 entities within the United Nations dealing with some aspect of countering terrorism lacked coherence and coordination while dealing with terrorism.

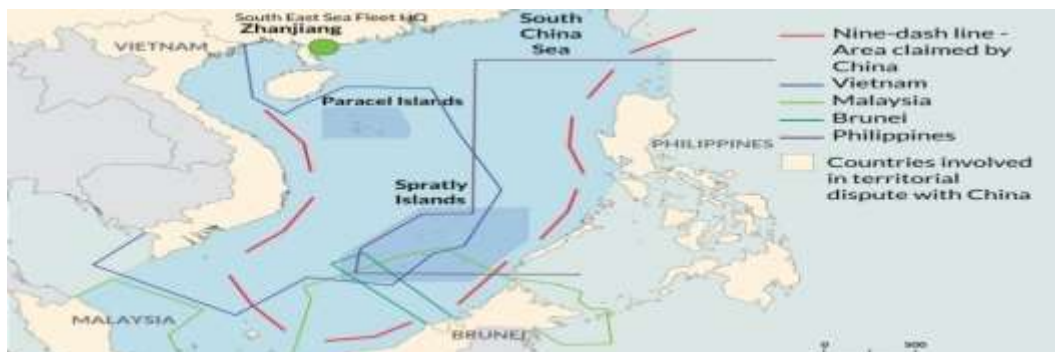### *Objectives/Significance of the Centre*

- The UNCCT aims at strengthening the implementation of the UN Global Counter-Terrorism Strategy in a comprehensive and integrated manner through the development of national and regional Counter-Terrorism Strategy *implementation plans*.

- The UNCCT undertakes initiatives aimed at fostering international counter-terrorism cooperation and promote collaboration between national, regional and international counter-terrorism centres and organizations.

- Through collaboration with CTITF working groups, the UNCCT serves a critical role in *building capacity of Member States* to strengthen their counter-terrorism capability.

- Based on UNCCT assistance, requesting Member States and regions have improved upon counter cyber-terrorism, border security and management including through enhanced inter-agency and international cooperation.

- UNCCT supports the Member States to have access to good practices on ensuring respect for human rights while countering terrorism and are enabled to apply them.

About World Customs Organisation

- The World Customs Organization (WCO) was established in 1952 as the Customs Co-operation Council (CCC).

- It is an independent intergovernmental body whose mission is to enhance the effectiveness and efficiency of Customs administrations.

- Today, the WCO represents 182 Customs administrations across the globe that collectively process approximately 98% of world trade.

- As the global centre of Customs expertise, the WCO is the only international organization with competence in Customs matters and can rightly call itself the voice of the international Customs community.

Q. What is UNCCT (UN Counter-Terrorism Centre)? How is it successful in its objective of

---

making world "Terrorism free"?

4.7. China's Research Project In South China Sea

In News

- China has approved a plan to build an underwater observation network across the disputed East and South China seas.

- China will invest two billion yuan (USD 292 mn) to build the network which will be capable of all-weather and real time HD multi-interface observation from seabed to surface.

- In the project, researchers will collect and compile valuable data and materials obtained during China's major ocean expeditions to the South China Sea and its affiliated islands and reefs.

- A comparative analysis and research into the data will provide insight into the resources, environment and changes related to the South China Sea and its affiliated islands and reefs.

Significance Of Such Projects For China

- The project can help China in promoting frontier research in fields such as earth systems and climate change and meet the country's comprehensive demand to monitor the marine environment, prevent disasters and protect national security and interests.

- The planned physical platform can help in understanding the complicated submarine world and provide a technical basis and the physical conditions for exploration and application of resources under the ocean.

- China is looking to become a major military power using technologies for undersea surveillance supported by highly advanced information technologies giving real time correlation and other forms of surveillance especially space-based military satellites.

Concerns Of Other Nations

- China claims almost all of the resource-rich South China Sea (SCS) including islands more than 800 miles from the Chinese mainland, despite objections from neighbours such as the Philippines, Malaysia, Brunei and Vietnam.

- The emergence of the observation system is the latest concern to be raised surrounding China's dominance in the South China Sea.

- China has ongoing territorial disputes in both the East and South China Sea. These projects will enhance the claims of China in disputed regions along with strengthening the power to maintain this claim.

- There are concerns raised by other island nations regarding the linkages of the underwater system with a military facility and can have strategical and military usage in the disputed areas.

What International Laws Say About Such Project

- According to the 1982 United Nations Convention on the Law of the Sea, coastal states control all marine scientific research in a 200-nautical mile (370 km) exclusive economic zone but must usually grant access to other states for peaceful research purposes.

- If this project is a scientific operation the international laws lends it a significant legitimacy. However, there are apprehensions that China could pass the data observed to its military.

- It's possibility that all strategical processes can inter-operate in the rather gray space between oceanography and military science.

About South China Sea Dispute

- Approx 3.5 million square km area of the South China Sea has been under dispute as China, the Philippines, Vietnam, Malaysia, Taiwan and Brunei have all claimed sovereignty over this territory. This area of the sea is rich in oil and gas fields.

- China's claim to the South China Sea is based in history dating back to records from the Xia and Han dynasties. China delineates its claims via the nine-dash line which Chiang Kai Shek advanced in 1947. During China's republican era, China surveyed, mapped and named 291 islands and reefs in the region.

- The United States contends that the South China Sea is international water and sovereignty in the area should be determined by the United Nations Convention on Laws of the Sea (UNCLOS).

- UNCLOS states that countries cannot claim sovereignty over any land masses that are submerged at high tide or that were previously submerged but have been raised above high tide level by construction.

- Both China and the US have accused each other of militarising the South China Sea.

Q. Recently China has approved a plan to build an underwater observation network across the disputed East and South China seas. Why this is being opposed by the other nations of the region?

---

5. INDIA AND WORLD

5.1. Prime Minister Of Mauritius Visited India

The Prime Minister of Mauritius Mr. Pravind Jugnauth and his delegation visited India. This was the first visit abroad of Mauritian Prime Minister after assuming office.

Key Highlights Of The Visit

- The visit was part of India's continuing engagement with the Mauritius at the highest level and reflects special ties between the two countries.

- Leaders of the both countries agreed to foster close cooperation in the fields of security, infrastructure and energy.

- During the visit India announced 500 million USD line of credit and offered unconditional cooperation to Mauritius in the key area of maritime security in the Indian Ocean region.

- Prime Minister Narendra Modi assured Mauritius of continued Indian support in other important sectors including skill development and human resource development.

Significance Of Indian Ocean In The Context Of India-Mauritius Relations

- The Indian Ocean is a major conduit for international trade especially energy. Its littoral is vast, densely populated, and comprised of some of the world's fastest growing regions. The Ocean is also a valuable source of fishing and mineral resources.

- Recognising the strategic importance of this region Indian government in 2005 had embarked upon a policy to influence Indian Ocean Region by engaging four western Indian Ocean islands – Mauritius, Maldives, Seychelles and Madagascar economically, militarily and through diplomatic cooperation.

- India launched the *Indian Ocean Naval Symposium* that convenes all the naval chiefs in the littoral for professional exchanges and engagement to promote maritime security.

- With its strategic location, Mauritius forms the lynchpin of India's vision of the Indian Ocean as a zone of peace, security, and development.

India and Mauritius Bilateral Relations

- Entwined by history, culture, democratic values and intimate ancestral ties, the spirit and sounds of India are omnipresent and resonant in Mauritius.

- *From the Aparvasi Ghat, where the first batch of Indian indentured labourers came more than 180 years ago to work on sugar plantations to the shining Cyber Tower in Port Louis, the journey and transformation of Mauritius into a modern, confident and resurgent nation is linked with Indians and the India Story.*

- 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 100 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.

Strategic Relations

- India has strong extensive defence relations with Mauritius to safeguard sea lanes of communication which trawls over 70 % of India's energy imports from depredations of terrorists and pirates.

- The Indian Navy has been proactively cooperating with the National Coast Guard of Mauritius to protect common national interests.

- India has gifted *Advanced Light Helicopter Dhruv, a Coastal Radar Surveillance System (CSRS) and an Offshore Patrol Vessel (OPV)* to the government of Mauritius to bolster its counter-piracy capabilities.

- Personnel from the Mauritian Police Force are trained annually in Indian Defence Training institutes. India has also been sending Diving and a Marine Commando (MARCOS) training team to Mauritius for training.

Economic Relations

- India is Mauritius largest trading partner and has been the largest exporter of goods and services to Mauritius since the last eight years. Petroleum forms single largest export item by India to the island nation.

- Mauritius has been the single largest source of FDI into India.

- Indian investments in Mauritius span diverse sectors such as health, hospitality, pharmaceuticals, education, financial services, IT and BPO. Mauritian companies have also invested in India in sectors such as textile, logistics and banking.

- 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) is a key plank for accelerating India's economic and strategic engagement with Africa.

Cultural Relations

- The Mahatma Gandhi Institute and the Rabindranath Tagore institute in Mauritius are beacons of Indian culture and deep spiritual connections between the two countries.

- India is the preferred destination for thousands of Mauritian students dreaming of better prospects in life.

- From Indian languages like Hindi and Bhojpuri to Hindustani music, kathak, tabla and yoga, Indians and Mauritians know how to speak, sing and dance together.

Indian Diaspora

- The PM Modi's maiden visit to the island nation underscores India's multi-hued ties with Mauritius where 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 to work on sugar plantations.

- Mauritius now celebrates November 2 every year as the 'Apravasi Divas.'

- Aparvasi Ghat, a World Heritage Site today stands as an enduring monument to the inextinguishable human spirit to triumph over all existential hardships and the unique human gift of remaking one's destiny.

Conclusion

With such organic cultural links and a coalescence of strategic and business interests, the relations between India and Mauritius can only become stronger and acquire the depth and richness the Indian Ocean symbolizes.

Mauritius: A Tax Haven

- Mauritius is the biggest exporter of capital to India. Mauritius is the single biggest source of foreign direct investment (FDI) in India The use of Mauritius as a gateway to funnel foreign investments into India has always been controversial.

- The island nation's financial regime endowed with the key characteristics of a quasi tax haven has facilitated tax avoidance during foreign investments.

- The key to the apparent paradox lies in the provisions of a two-decade-old bilateral agreement - the Double Taxation Avoidance Convention (DTAC).

- Using the DTAC the foreign entities have set up paper companies in Mauritius claiming to be Mauritian residents. These companies masquerading as Mauritian companies have invested in India.

- Taking advantage of the DTAC they avoid paying any taxes in India. They pay no taxes in Mauritius too.

- Reports in the financial media indicate that a substantial part of FII investment is believed to be coming from Non-resident Indians (NRIs) bringing back funds to participate in the Indian stock markets, much of which is said to be routed through Mauritius-based paper companies.

- Also, these companies are using the device of Participatory Notes and dealing through the sub-accounts of the FII, which need not be registered with regulatory agencies such as SEBI & RBI, to invest in Indian market.

- The losses to the government are difficult to estimate primarily because it is difficult to ascertain how much comes through the Mauritius route. It is reckoned that the potential losses because of the loophole could run into several thousand crores since 1991, when India opened the floodgates to foreign investment.

- The recently reworked India-Mauritius tax treaty, an amendment to a 32 year old rule, has tried to address these concerns by making it mandatory to pay capital gains tax on sale of shares in India by companies registered in Mauritius.

- To control the misuse of P-Notes, markets regulator SEBI has taken steps to curb the use of P-Notes by levying a fee of USD 1,000 each and barred their issuance for non-hedging or speculative purposes.

About Indian Ocean Naval Symposium (IONS)

- The IONS is a voluntary initiative that seeks to increase maritime co-operation among navies of the littoral states of the Indian Ocean Region by providing an open and inclusive forum for discussion of regionally relevant maritime issues.

- In the process it endeavours to generate a flow of information between naval professionals that would lead to common understanding and possibly cooperative solutions on the way ahead.

- There are 35 members of the IONS which have been geographically grouped into the following four sub-regions:-

o **South Asian Littorals** - Bangladesh, India, Maldives, Pakistan, Seychelles and Sri Lanka.

o **West Asian Littorals** - Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, UAE and Yemen.

o **East African Littorals** - Comoros, Djibouti, Egypt, Eriteria, France, Kenya, Madagascar, Mauritius, Mozambique, Somalia, South Africa, Sudan and Tanzania.

o **South East Asian and Australian Littorals** - Australia, Indonesia, Malaysia, Myanmar, Singapore, Thailand and Timor Leste.

About Indian Ocean Rim Association (IORA)

- IORA is a regional cooperation initiative of the Indian Ocean Rim countries. It was established in Mauritius in March 1997 with the aim of promoting *economic and technical cooperation*. IORA is the only pan-Indian ocean grouping.

- It brings together countries from three continents having different sizes, economic strengths and a wide diversity of languages, cultures.

- Member States - Australia, Bangladesh, Comoros, India, Indonesia, Iran, Kenya, Madagascar, Malaysia, Mauritius, Mozambique, Oman, Seychelles, Singapore, Somalai, South Africa, Sri Lanka, Tanzania, Thailand, UAE and Yemen.

- It aims to create a platform for trade, socio-economic and cultural cooperation in the Indian Ocean rim area, which constitutes a population of about 2 billion people.

- The Indian Ocean Rim is rich in strategic and precious minerals, metals and other natural resources, marine resources and energy, all of which can be sourced from Exclusive Economic Zones (EEZ), continental shelves and the deep seabed.

Q. India's continuing engagement with the Mauritius at the highest level reflects special ties between the two countries. Critically analyse.

5.2. PM Modi's Visit To Russia

The Prime Minister of India Mr. Narendra Modi had visited Russia on the occasion of 70th

anniversary of the establishment of diplomatic relations between India and Russia.

St. Petersburg Declaration

- India and Russia designed the St Petersburg Declaration marking 70 years of diplomatic ties. It is an action plan for deepening not only political and economic development of the two countries but also to ensure a benchmark of stability in times of global instability.

- The Declaration was signed following the 18th annual bilateral summit between Prime Minister Narendra Modi and Russian President Vladimir Putin.

- The economies of India and Russia complement each other in the energy sector. The declaration said that they would strive to build an *'Energy Bridge'* between both the nations and expand bilateral relations in all areas of energy cooperation including nuclear, hydrocarbon and renewable energy sources.

- There has been a series of steady and demonstrable achievements in the civil nuclear partnership including advancing nuclear power projects at the Kudankulam site and transforming it into one of India's largest energy hubs. The declaration has provisions regarding the conclusion of General Framework Agreement and Credit Protocol for Units 5 and 6 of the Kudankulam Nuclear Power Plant.

- According to the Declaration, the growing nuclear power partnership between India and Russia has opened opportunities for developing advanced nuclear manufacturing capabilities in India and is in line with its 'Make in India' initiative.

- It also stated that both countries were interested in launching joint projects on exploration and exploitation of hydrocarbons in the Arctic shelf of Russia.

- The Declaration sets major economic objectives including expanding *trade and investment* and diversification of trade in goods and services in particular increasing the share of high-technology products, fostering industrial cooperation, improving environment for entrepreneurship and investments and developing cooperation in banking and financial matters. A MoU was signed between National Investment Promotion Agency 'Invest India' and the Business Council for Cooperation with India concerning the promotion of investment in India and Russia

- It said given Russia's strength in shipbuilding, river navigation and desalination technologies both countries would work together to develop joint projects through transfer of technology and

experience sharing for ***developing inland waterways, river embankments, ports and cargo containers*** towards effective utilisation of India's extensive river systems.

- On ***defence cooperation***, it said that both countries should upgrade and intensify this cooperation through joint manufacture, co-production and co-development of military hardware and military spares with increasing reliance on the adoption and sharing of future technologies in compliance with the obligations of the sides under the existing agreements on military-technical cooperation.

- Russia reaffirmed its support for India's bid for ***permanent membership*** in the UN Security Council and the Nuclear Suppliers Group.

- Both countries strongly ***condemned terrorism*** in all its forms and manifestations and stressed that there can be no justification for any acts of terrorism whether based upon ideological, religious, political, racial, ethnic or any other reasons. Both nations called for early conclusion of negotiations on the Comprehensive Convention on International Terrorism to strengthen the global counter-terrorism normative and legal framework to combat this menace.

India-Russia Bilateral Relations

Time-tested, friends forever, all-weather, special and privileged - these words sum up the kind of relationship India and Russia share. The two countries have consistently stood as a robust pillar of support to each other in good times and not-so-good times. From frontier areas of science and technology, space, defence and nuclear power to hydrocarbons, trade and investment and cultural synergy the relations between the two countries are truly all-encompassing and comprehensive.

Since the signing of Declaration on the India-Russia Strategic Partnership in October 2000 during the visit of Russian President Putin to India, the relations have been qualitatively transformed in virtually all areas. In December 2010, the Strategic Partnership between the nations was elevated to the level of a Special and Privileged Strategic Partnership.

Defence Ties

- The cooperation in strategic sectors like defence and nuclear energy is already comprehensive and efforts are being taken to give a renewed momentum for enhanced cooperation in these areas.

- Russia accounts for over 60 per cent of India's imports of military hardware and looks set to retain this unassailable position in years to come despite New Delhi diversifying its arms supply.

- The defence-relation is the bedrock of the India-Russia relationship and has acquired a new dynamic with the shift from the buyer-seller framework to the ongoing programmes for joint research, development and production of cutting-edge defence technologies and weaponry systems.

- Joint development is the new dimension in the defence relations which is symbolized in Brahmos missiles, the Fifth Generation Fighter Aircraft, the Multi Transport Aircraft and the licensed production in India of SU-30 aircraft and T-90 tanks.

Energy Diplomacy

- The strategic comfort in bilateral ties is reflected in ongoing civil nuclear energy cooperation where Russia is India's preferred partner. The Unit I of the Kudankulam Nuclear Power Plant (KKNPP) which became operational in July 2013 and attained full generation capacity in June 2014 marks a watershed moment in successful nuclear collaboration.

- Russia is looking to set up at least a dozen atomic reactors in the coming years. This was recently reflected at the 70th anniversary meeting.

Focus On Revitalizing Economic Ties

- With the strategic relationship going strong, the key focus is on the scaling up of economic ties which is an underperforming area and has not kept pace with the level of robust strategic partnership the two countries.

- The India-Russia bilateral trade is estimated to be just round $10 billion.

- The two countries are therefore looking to raise the bar and are expected to unveil pacts which will complement other initiatives that will make Russia an important partner in India's 'Make in India' campaign.

Space Cooperation

In the area of space, the sky is virtually the limit. From launching the first Indian into space to the manned moon missions and the ongoing cooperation on *GLONASS* and other critical space applications it's clear that outer space will remain a shining frontier of India-Russia space cooperation.

Cultural Relations

- Smart diplomacy is about not just big-ticket strategic doctrines but about bringing people together and harnessing cultural energies.

- The deep and strong ties between India and Russia are reflected in the cultural relations too. Talking of culture Raj Kapoor, the eternal romantic actor still looms large over the mental landscape of India-Russia relations.

- Many Russian institutions including leading universities and schools teach Hindi and languages such as Tamil, Marathi, Gujarati, Bengali, Urdu, Sanskrit and Pali. The popularity of Indian dance, music, yoga and ayurveda is soaring in Russia.

- In no area is this deep civilizational relations better reflected than in books and literature. The intellectual exchanges between Mahatma Gandhi and author-sage Leo Tolstoy are legendary. Rabindranath Tagore has admirers cutting across generations in Russia and Russian literary giants like Tolstoy, Dostoevsky and Pushkin continue to be read with fervour in India.

Changing Dynamics Of India Russia Relations

- The major reason for the changing dynamics of the India – Russia relations is the Russia's relation with China and Pakistan. They have become strategic partners and have significant convergence of interests.

- The tilting of relations towards China and Pakistan is because of Russia's dependence on arms and energy exports. Russia is constantly looking for new markets for the arms and energy trade.

- India and Russia have cooperated with each other and their national interests converge. India has supported Russia on issues like Syria, Ukraine and Chechnya.

- Russia has also backed India on Kashmir and terrorism. India and Russia continue with their deep collaborations, wherein Russia is providing sensitive technologies, military equipment, nuclear power-propelled submarines etc. to India.

- But India's tilt towards the US has changed many things. India as an emerging power has developed a strategic partnership with the US. There has come a viable shift in India's arms equipments procurement policy. It is the area where Russia dominated for years in the Indian market.

- But for some time, India has opened up to the US, France, Israel and other Western powers to procure arms and armaments. They are edging out the Russians in some sectors. As a result of this Russia-India trade has not grown to great heights.

- Though we see China-Russia relations getting a new fillip, China has its own designs and objectives. Russia, China and US relationships have become highly complex. China aggressively wants to enlarge its national interests, whether through collaboration or confrontation.

Way Forward

- India has to revive its common concerns with Russia. The two countries should try to revitalise their earlier agreements on sharing intelligence for a joint strategy on terrorism. India is concerned with the state-sponsored terrorism from Pakistan and Russia is concerned with growing terrorism in West Asia and Central Asia.

- India and Russia are in need of continuous engagement and follow-up plans. Joint manufacturing needs to be planned. Joint investment in oil and gas sector should be renewed. Export to third countries needs to be energised. The two time-tested allies need to further deepen their scientific, technological, military and economic relations. A base for this already exists.

Conclusion

- Despite some recent developments like Russia's contentious decision to sign a defence pact with Pakistan and the increasing cooperation with China, the overall relations remains overwhelmingly positive.

- The India-Russia relations has its relevance and strength in the sheer range of collaboration in strategic sectors and an identity of perspectives on leading regional and global issues, underpinned by a common belief in multi-polarity and an inclusive world order.

- With such a large arc of convergence of interests in diverse areas and deep connections of mind and heart, the India-Russia relations look set to shine forth with a new vision and fresh ideas to fructify the full potential of this very special partnership.

> Q. What is St. Petersburg declaration? How it realign India's foreign policy with its three large neighbours China, Pakistan and Russia?

5.3. SCO Membership To India

During the visit of the Prime Minister of India to Kazakhstan, India got the permanent membership of Shanghai Corporation Organisation along with Pakistan in the Shanghai corporation summit which took place on June 8, 2017 in Astana, Kazakhstan.

India- SCO

- India became an **observer** to the organization at 5th SCO summit in **Astana, Kazakhstan in 2005.**

- Since then India has subtly indicated its interest in playing a more substantive role in the development of the SCO.

- It was felt by most members particularly Russia and Kazakhstan that the grouping would benefit hugely from India's active association.

- The SCO decided in 2009 to **initially focus on its vertical consolidation before embarking on a horizontal expansion.** After the moratorium on expansion of SCO was lifted n 2012, India formally applied to join the organization.

- India, along with Pakistan was formally accepted as a new member at the **Ufa Summit** of the SCO in **July 2016** when Russia was chairing the SCO. However, a few procedures were needed to be undertaken before the formal induction of these two south Asian countries.

- Pakistan was also admitted as a full member of the SCO along with India during the Astana summit. According to some analyst, the membership of Pakistan with the backing of China is a step to counter India.

Importance of India In SCO

- India's membership in the SCO adds further strength and muscle to the organization, particularly against the backdrop of continuing weakness in the international economy and anemic global demand.

- India today is the fastest expanding global economy. It represents the third largest economy ($8 trillion) in PPP (Purchasing Power Parity) terms and seventh largest ($2.3 trillion) in nominal dollar terms. It also inspires confidence on other indicators such as FDI, inward remittances, savings rate, and pace of economic reforms.

- SCO members also are well aware that India is an energy deficient country. Central Asia and Russia are extremely well endowed with fossil fuels including oil, gas and coal as well as uranium and hydropower potential. India's rapidly expanding energy needs will provide a stable and assured market for these countries.

- India's vast experience in dealing with the terrorism can help Central Asian countries to counter the menace of global terrorism.

Significance For India

- India's security, geopolitical, strategic and economic interests are closely intertwined with developments in the region.

- The ever present and expanding challenges of **terrorism, radicalism and instability** pose a grave threat to the sovereignty and integrity of India. India feels as an SCO member it will be able to play a major role in addressing these threats.

- New Delhi is also keen on deepening its security-related cooperation with the SCO and its Regional Anti-Terrorism Structure (RATS) which specifically deals with issues relating to security and defence.

- In addition, the Central Asian region is richly endowed with **natural resources and vital minerals**. With the Central Asian states landlocked and Uzbekistan even doubly landlocked, accessing these resources becomes arduous and prohibitive.

- To get around the lack of direct land connectivity with Central Asia and Pakistan's refusal to provide access through its territory, India is actively collaborating to develop the Iranian seaport of _Chabahar_ with possible financial and technical support from Japan. India has also prioritized the construction of the _International North-South Transport Corridor (INSTC)_. Joining the SCO will be a welcome diplomatic boost to India's efforts to **connect with Central Asia**.

- India's membership in the SCO will provide a welcome opportunity for India's leadership to meet with their counterparts from Central Asia, Russia, China, Afghanistan and others regularly and frequently. India's potential participation in the Eurasian Economic Union (EEU) will be an added advantage to make this partnership more fruitful.

INSTC

- International North-South Transport Corridor (INSTC) is a multi modal transportation established on 12 Sep' 2000 in St. Petersburg by Iran, Russia and India for the purpose of promoting transportation cooperation among the Member States.

- This corridor connects India Ocean and Persian Gulf to the Caspian Sea via Islamic republic of Iran and is connected to St. Petersburg and North European via Russia.

- The INSTC was expanded to include eleven new members, namely: Republic of Azerbaijan, Republic of Armenia, Republic of Kazakhstan, Kyrgyz Republic, Republic of Tajikistan, Republic of Turkey, Republic of Ukraine, Republic of Belarus, Oman, Syria, Bulgaria (Observer).

EEU

- The Eurasian Economic Union is an international organization for regional economic integration. It has international legal personality and is established by the Treaty on the Eurasian Economic Union in 2014.

- The EAEU provides for free movement of goods, services, capital and labor, pursues coordinated, harmonized and single policy in the sectors determined by the Treaty and international agreements within the Union.

- The Member-States of the Eurasian Economic Union are the Republic of Armenia, the Republic of Belarus, the Republic of Kazakhstan, the Kyrgyz Republic and the Russian Federation.

Challenges

- SCO is focusing on strengthening regional connectivity and it is evident that all **other member countries have endorsed China's One Belt, One Road; a key policy to connect trading partners along the ancient Silk Road.**

- However, India has not yet given its consent to be a part of OBOR. One of India's major concerns has been the **China-Pakistan Economic Corridor** which passes through the disputed territories between India and Pakistan.

- Being in the SCO*, India would not be able to stay out of China's proposed connectivity and infrastructural projects.* India needs to devise a plan which neither hampers the functioning of the grouping nor compromises its apprehensions vis-a-vis OBOR and the CPEC.

- **Differences between India and Pakistan** on the issue of connecting south Asia with central Asia might hamper the functioning of the SCO just like it has halted the growth of south Asia's own regional organisation -- the SAARC**.**

- Under such circumstances it would be difficult for India to overcome the **burden of geography** and make tangible gains in terms of trans-regional connectivity.

- The traditional focus of SCO has been on Central Asia's regional security, economic cooperation and humanitarian interaction. **New members that do not have direct common borders with the region** may **divert SCO's attention away from Central Asia** and increase the number of new influencing factors.

- There are concerns that the induction **of India and Pakistan could shift the focus of SCO from Central Asia to South Asia** and could **disrupt the SCO's smooth and consensual functioning** through an emphasis on **India-Pakistan bilateral disputes.**

About SCO

- The Shanghai Cooperation Organisation (SCO) is a permanent intergovernmental international organisation, the creation of which was announced on 15 June 2001 in Shanghai (China) by the Republic of Kazakhstan, the People's Republic of China, the Kyrgyz Republic, the Russian Federation, the Republic of Tajikistan, and the Republic of Uzbekistan.

- The Shanghai Cooperation Organisation Charter was signed during the St.Petersburg SCO Heads of State meeting in June 2002 and entered into force on 19 September 2003. This is the fundamental statutory document which outlines the organisation's goals and principles, as well as its structure and core activities.

- Today, SCO comprises eight member states, namely the Republic of India, the Republic of Kazakhstan, the People's Republic of China, the Kyrgyz Republic, the Islamic Republic of Pakistan, the Russian Federation, the Republic of Tajikistan, and the Republic of Uzbekistan;

- SCO counts four observer states, namely the Islamic Republic of Afghanistan, the Republic of Belarus, the Islamic Republic of Iran and the Republic of Mongolia;

- It has six dialogue partners, namely the Republic of Azerbaijan, the Republic of Armenia, the Kingdom of Cambodia, the Federal Democratic Republic of Nepal, the Republic of Turkey, and the Democratic Socialist Republic of Sri Lanka.

5.4. PM Modi's Visit To Spain

The Prime Minister of India Mr. Narendra Modi paid an official visit to Spain on 30th- 31st May. This was the first visit by an Indian Prime Minister to Spain in almost three decades.

Key Highlights of The Visit

- President of Spain and Prime Minister of India acknowledged the progress made in the negotiations held in New Delhi on a bilateral Agreement on Cooperation in the Peaceful Uses of Nuclear Energy.

- They also expressed satisfaction on the conclusion of the second round of the bilateral Security Policy Dialogue held on 23 May 2017 in New Delhi.

- Both the leaders recognized that terrorism poses the gravest threat to international peace and stability and expressed their strong commitment to combat terrorism in all its forms and manifestations. Both leaders condemned the recent terrorist attack in Manchester.

- They decided to continue the dialogue and cooperation on terrorism between the concerned Ministries and the security agencies in order to share best practices, experiences and reinforce and speed up cooperation on the ground.

- Concerning about the challenges present in cyberspace, both the nations committed to further their dialogue both bilaterally and through a closer coordination in the international fora. They welcomed the signing of a bilateral MOU on Cyber Security.

- They stressed the importance of enhancing the common understanding on security and strategic issues of mutual interest relating to the Asia Pacific, Europe, the Mediterranean and Latin America and urged greater bilateral contacts including through Indian and Spanish Think Tanks.

- During the meeting with Prime Minister of India, CEOs of Spanish Business and Industry expressed strong support for the economic reforms in India and highlighted their keen interest to participate actively in various flagship programmes including Make in India, Smart Cities, Digital India, Swachh Bharat, Start Up India, Skill India and other Initiatives. Both leaders welcomed the holding of an India-Spain Business Summit in India in the latter half of 2017 to promote trade and investment cooperation between the two countries.

- Both heads of Government reflected on the central role of energy and energy management in providing a stable environment for development and growth. Prime Minister Modi appreciated the global reputation of Spanish renewable energy companies and their ongoing projects in India.

- The two leaders welcomed the ongoing innovation driven joint R&D projects in sectors such as biosensors, bio pesticides, bio economy, waste to energy, e-health and flexible electronics.

- They welcomed the coordination between India and Spain at multilateral initiatives and platforms such as Infect-ERA for infectious diseases, Inno-INDIGO for bioeconomy and EMBO for molecular biology.

Agreements Signed

- MOU on Technical Cooperation in Civil Aviation.

- MOU on Cooperation in organ transplantation between India's Directorate General of Health Services and the National Transplant Organization of Spain.

- MOU on Cooperation in Cyber Security.

- MOU on Cooperation in Renewable Energy.

- Agreement for Transfer of Sentenced Persons.

- MOU between Foreign Service Institute and Diplomatic Academy of Spain.

- Agreement on visa waiver for holders of diplomatic passports.

India-Spain Relations

Relations between India and Spain have been cordial since the establishment of diplomatic relations in 1956.

Economic Relations

- Spain is India´s 7th largest trading partner in the European Union. Given the infrastructure push that is planned in India in the areas of power, roads, ports, airports, telecom and urban infrastructure especially as part of the Delhi-Mumbai Industrial Corridor and the Make in India campaign, the possibilities for cooperation are immense.

- India on the other hand could offer Spain quality options in the fields of IT and services, pharmaceuticals and the chemicals sector.

- Spain is the 12th largest investor in India with $1.8 billion in FDI mostly in infrastructure, renewable energy (Gamesa), auto components (Gestamp), water desalination (Abengoa) and single brand retail (Inditex – Zara/Mango).

- A total of around 200 Spanish companies have subsidiaries, joint ventures, projects or liaison offices and purchase offices in India. There are over 30 Indian companies in Spain, the most significant ones being in the areas of IT (TCS, Tech Mahindra), energy (Avantha) and automobiles (Mahindra).

- In order to give an impetus to trade and investment relations, the India-Spain Joint Economic Commission (JEC) was set up under the 1972 Trade and Economic Cooperation Agreement, and has since met ten times.

Cultural And Academic Relations

- Cultural exchange is an important component of India-Spain bilateral relations. ICCR (Indian Council for cultural Research) sponsors visits of cultural troupes for performances in various parts of Spain and offers five scholarships to Spanish students every year to study in India.

- Mission brings out a quarterly publication titled 'Hola Namaste' carrying articles on contemporary events in India.

- Casa de la India was founded in 2003 as a platform for the promotion of India and Spain and Indo-Spanish relationships in the field of culture, education, cooperation and enterprise. It has the Indian Council for Cultural Relations, City Council of Valladolid and the Valladolid University as its main patrons.

- A statue of Mahatma Gandhi was unveiled in Madrid by Her Majesty the Queen of Spain on 2nd October 2013. This is the third statue of Mahatma Gandhi to be installed in Spain, the earlier two being in Valladolid and Gran Canarias.

- The Indian performing arts scene has become increasingly vibrant in Spain. During the first half of 2015, Indian artists like Dr Jayanta Kumar Das (Rudra Veena), Pt Sandip Chatterjee (Santoor), Gundecha Brothers (Dhrupad vocal) and Ms Aranyani Bhargav (Bharatanatyam) have performed in various parts of Spain.

- Three editions of the biennial Indian music festival in Spain titled 'India enConcierto' have successfully been organized till date, the most recent one being in June, 2014.

Indian Community

- The Indian community forms a very small percentage of the immigrant population of Spain. Among the Asian communities, the Indian Diaspora is the third largest group, after Chinese and Pakistanis.

- The earliest Indian settlers were Sindhis who came from the subcontinent at the end of the 19th century and settled in the Canary Islands. Many others travelled to Spain from Africa in the 1950´s and 1960´s while others came directly from India.

Significance Of Spain In India-EU Relations

- To deepen the existing EU – India relations, the relations between Spain and India needs to be bolstered. During the recent visit India and Spain acknowledged the positive results of 2016 EU – India Summit in March 2016 which marked a new momentum in the EU – India relations.

- They reconfirmed their commitment to the EU-India Agenda for Action 2020 and to the development of cooperation in the areas of foreign and security policy, trade and investment, global issues, natural movement of persons and people to people contacts.

- Spain's position in the EU as a country fully committed with the European Project and with the main policies and instruments of the European Union can prove to be fruitful for India-EU relations.

Conclusion

- From the Indian point of view, Spain continues to be a relatively unknown country in the south of Europe playing a very minor role in its foreign affairs.

- India is highly attractive to Spain and the vast majority of European countries which fundamentally, for economic reasons, are extremely interested in improving relations with New Delhi over the short and medium terms.

- India and Spain are the most economically and politically vibrant countries in the world. Hence, we should prioritize innovative and high-impact proposals to reap the benefits out of the India-Spain relations. For this, we need to come together for strengthening the relations in the diverse fields.

PIIGS Countries Crisis

- PIIGS states include Portugal, Italy, Ireland, Greece and Spain.

- Due to the economic recession which started in 2008 several members of the European Union faced the situation of severe economic crisis. The reason why these five countries gained popularity became a serious concern within the EU with regard to their national debts especially for Greece. The latter country was involved in a controversial affair after allegedly falsifying its public financial data.

- In the year 2010 it was evident that the five countries were in need of corrective action in order to regain their former financial stability.

- Spain is the fifth largest economy in the European Union with the lowest debt-to-GDP ratio of all PIIGS countries. However, its GDP is at the low 66.3 %, while unemployment stands at 20 %. At present the authorities in the country are about to implement some tough fiscal restraints.

5.5. PM Modi's Visit To Germany

The Prime Minister of India Mr. Narendra Modi visited Germany to participate in the fourth Inter-Governmental Consultations [IGC] between India and Germany.

Key Highlights

- During the visit, Mr Modi and the German Federal Chancellor Dr. Angela Merkel agreed to further strengthen the Strategic Partnership between India and Germany by deepening cooperation on foreign policy and security issues as well as on sustainable development and enhanced trade and investment ties.

- Both the leaders welcomed the successful implementation of the ambitious bilateral agenda that was agreed during the last round of Inter-governmental Consultations held in New Delhi in 2015.

- India and Germany emphasized their commitment to a stable, united, prosperous, pluralistic and peaceful Afghanistan. They supported a comprehensive and inclusive Afghan-led and Afghan-owned peace and reconciliation process that leads to the renunciation of violence and breaking of

---

all ties to international terrorism and the respect for the Afghan Constitution including its human rights provisions.

- They underlined that the Heart of Asia-Istanbul process remains an important format for regional confidence building and regional political cooperation.

- Both underlined their common concern about the threat and global reach of terrorism and extremism. They agreed on the need to take strong measures against all those who encourage, support and finance terrorism, provide sanctuary and safe havens that sustain and support terrorist groups and organizations. They welcomed closer collaboration between India and Germany to counter these challenges through regular meetings of the Joint Working Group on Counter Terrorism.

- They also reaffirmed their strong commitment to the EU-India Broad Based Trade and Investment Agreement and their commitment to bring about a resumption of the negotiations at the earliest possible date.

- Recognizing Germany's key competencies in high technology and India's growing needs, both the Leaders welcomed the efforts of the High Technology Partnership Group (HTPG) to identify specific opportunities for high technology collaboration, including in priority areas of skills development in manufacturing under the "Make in India" program and to enhance cooperation in defence manufacturing and machine tools as well as enhancing cooperation in maritime technology and the development of blue economy.

- The Leaders also welcomed the Alliance on Dual VET (Vocational Education and Training) founded by Indian industrialists and leaders of major Indian companies, aspiring to ensure India's industries' proactive participation in strengthening skills and employability of young people.

- Prime Minister Modi and Chancellor Merkel reaffirmed the importance of the Indo-German Environment Forum (IGEnvF) in contributing to further cooperation on environmental issues including biodiversity and climate change. They agreed to hold the next meeting of the Indo-German Environmental Forum in 2017 in New Delhi.

- The Joint Working Group on Sustainable Urban Development identified Kochi, Coimbatore and Bhubaneshwar for bilateral collaboration. Underpinning this cooperation both sides encouraged to cooperate in the field of spatial and urban monitoring and evaluation systems.

- The two Leaders welcomed the meetings of the Working Groups for collaboration in Water Management, Waste Management and Climate Change held in 2016 and took note of the scheduled meetings for 2017 including the meeting of the proposed Working Group on Biodiversity.

- They welcomed the ongoing Indo-German cooperation on resource efficiency and called for continuation of joint initiatives in this field. Both Leaders noted the proposed establishment of the G20 Resource Efficiency Partnership. They highlighted the successfully operating Indian Resource Panel (InRP), making India one of the first emerging economies having in place a national advisory body on resource efficiency.

Changing Political Dynamics In America And Its Effects On Europe

- The President of U.S.A. Donald Trump's policy has generated a backlash among some of Europe's leaders. The traditional Western alliance is threatened by the new US Presidency and its policies.

- America's decision to quit Paris Climate Summit has worried the European leaders. ―President Trump has refused to go along with his six counterparts in G-7 meeting in reaffirming their support for the 2015 Paris Agreement.

- U.S.A. is worried about the trade deficit it is facing in the trade with European Union and the collective defence policy (an attack on member of NATO is considered as an attack on all the members) of NATO.

- America is also against the immigration policy of Germany. The central European country has a progressive attitude toward immigration that the United States does not like. Rather than viewing immigrants a threat Germany has opened its doors to them

- The German Chancellor said that the changing political dynamics in Britain by Brexit, Britain cannot help and play its traditional role as a Bridge Builder between Europe and America which it has traditionally sought to do at times of tension and potential divergence between Washington DC and Brussels.

- It has not only been President Trump's lukewarm attitude to NATO but more significantly his hostility towards the de-facto leader of the European Union Chancellor Merkel and the US-German alliance, which is indicative of greater movement in the power structures of the West.

- German Chancellor Angela Merkel has clarified in the meeting that Europeans cannot rely for their own leadership and collective defense, security and prosperity upon the traditional twin pillars of Western stability that of the United States and United Kingdom.

India and China in Germany

- The visit of the Prime Minister of India was coincided with the visit of the Chinese Premier's visit this signifies the importance of Germany forboth India and China.

- Although Germany shares India's concerns on China's 'One Belt, One Road' initiative and said OBOR is very different from the ancient Silk Road. Regarding OBOR Germany is quite conscious as it said that the OBOR is not about free trade;it is a trade-enhancing measure by China.

- Germany stands by India in its fight against the menace of terrorism and had been sharing intelligence with the Indian government.

- Though India-Germany relations are deep and strong but China is also a very important economic and trade partner. China is Germany's largest trading partner outside of Europe.

5.6.   India-France

The Prime Minister of India in his four nation official visit of Europe visited France on 2nd and 3rd June.

Key Highlights of Visit

- As strategic partners, India and France consult and support each other on international matters in a spirit of mutual understanding and commitment to the benefit of the international community at large.

- The leaders reiterated their support to CoP 21 to UNFCCC at Paris **and** expressed confidence that the Paris Conference is significant to fight against climate change issue for the post 2020 period. In the context of America's decision against Paris summit, both nation reaffirmed their commitments regarding Paris Summit and criticized the decision of America.

- The Leaders reiterated their strong support for ongoing efforts aimed at defeating terrorism. They called for dismantling of the terrorist infrastructure, denying safe havens to terrorists, bringing perpetrators and conspirators of terrorist attacks to justice, and to strengthen international frameworks to forge closer cooperation in this area including through supporting initiatives in the framework of the UN such as the draft Comprehensive Convention on International Terrorism.

India-France Relations

- Relations between India and France are multi-faceted, close and special. In 1998 a 'Strategic Partnership' was announced and since then relations have developed in a manner fully justifying the term 'Strategic Partnership'. The relationship is based on shared values and real convergence on a whole range of regional and global issues.

- France was the first country with which India entered into an agreement on Civil Nuclear Cooperation. France has been a steadfast proponent and supporter of India's candidature for permanent membership of a reformed UN Security Council.

Economic Relations

- France has emerged as a major source of FDI for India with about 750 big French companies already present in India. France is the 9th largest foreign investor in India with a cumulative investment of USD 4.65 billion from April 2000 to June 2015 which represent 1.80% of the total FDI inflows into India for the period.

- French companies continue to look at India as an attractive investment destination in order to expand their profits and diversify risks. Indian companies have also invested in France.

Space Cooperation

- France and India view each other as important partners in space technology and applications. The ISRO and its French counterpart, the Centre National de Etudes Spatiales (CNES) have a rich history of cooperation and collaboration spanning five decades.

- During the visit of the Indian Prime Minister to France in April 2015, joint stamps were released to commemorate the completion of 50 years of Cooperation in Space.

- A program agreement for a reinforced cooperation in space activities was signed between the two countries during the visit. The program envisages joint development of an earth observation satellite, cooperation in inter-planetary missions, and hosting of a French payload on an Indian satellite.

- Other MoUs on Space, signed during the PMs Visit, include the extension of the ISRO-CNES MoU on Megha Tropiques satellite for two years.

- ISRO and CNES had jointly developed the Satellite for ARGOS and ALTIKA (SARAL) carrying a radar altimeter and a data collection platform. The SARAL satellite was launched on-board ISRO's Polar Satellite Launch Vehicle (PSLV) in February 2013.

- Under a commercial Launch Service Agreement between Antrix Corporation Limited and ASTRIUM SAS, an advanced Remote Sensing satellite - SPOT-7 built by ASTRIUM SAS was successfully launched on-board PSLV from India in June 2014.

- Arianespace, France has been the major provider of launch services to Indian Geo Stationary satellites. As many as 18 Indian satellites have been launched by Arianespace on a commercial basis.

Defence Cooperation

- The defence relations between the two countries are strong and have been growing within the framework of structured talks under the Indo-French Defence Cooperation Agreement.

- India and France are developing six Scorpene class submarine under Project 75 from which one has been commissioned in the Indian navy.

- Joint service level exercises are held regularly in India and France. Joint Army exercise, 'EX-SHAKTI was conducted in the French Alps in September 2013 while the fifth edition of the air exercise EX- GARUDA was held in Jodhpur in June 2014. The latest edition of the Indo - French naval exercise EX - VARUNA was held off the coast of Goa in May 2015.

Cultural Cooperation

- Indian culture enjoys a wide and discerning audience among the French population, as is evident in the numerous and frequent cultural events organized all over France, spanning the entire spectrum of Indian art, music, dance, cinema and literature.

- The Cultural Exchange Programme for 2013-15 was signed during the visit of President Hollande to India in February 2013.

- The Indian Council of Cultural Relations (ICCR) regularly sponsors visits of Indian artists to France and also assists in exchange of students in the field of culture and arts.

International Solar Alliance

- The International Solar Alliance was launched on the first day of the Paris summit by Indian PM Modi and French President Francois Hollande as a *union of countries with abundant sunlight.*

- Under this alliance, *121 countries that fall within the tropics* {i.e. between Tropic of Cancer and Tropic of Capricorn} have been invited to *make collaborative efforts to harness solar energy* to generate the electricity. Most of these countries fall within Asia, Africa and South America.

- There are three objectives behind the International Solar Alliance:
  o to force down prices by driving demand.
  o to bring standardization in solar technologies.
  o to foster research and development.

5.7. India And Afghanistan Establish Direct Air Freight Corridor

The first flight from Kabul to Delhi, establishing air freight corridor, was received on 19 June 2017 by the External Affairs Minister Smt. Sushma Swaraj.

About The Recent Connectivity Initiative

- The cargo flight from Kabul to Delhi marked the inauguration of the dedicated Air Freight Corridor.

- The decision to establish an Air Freight Corridor between Afghanistan and India was taken in the meeting between PM Modi and President Ghani in Sept' 2016 during the President's visit to India.

- It is aimed at providing the private sector in Afghanistan with a platform to increase their exports to India. The project was also envisaged to enable traders to export Afghan products to the vast Indian market by air with minimum costs while circumventing the obstacles faced in the land route, which was denied by Pakistan. This would enable the Afghani products to gain access of regional markets of South Asia and beyond.

- India has been closely working with Afghanistan to create alternate and reliable access routes for the landlocked country. In this context, in January 2015 India had announced its decision to allow Afghan Trucks to enter the Indian territory through Attari land Check post for offloading and loading goods from and to Afghanistan.

- India is also cooperating with Afghanistan and Iran for development of the Chahbahar Port. In this context, a trilateral transport and transit agreement based on sea access through Chabahar was signed in the presence of the leaders of the three countries in Tehran in May 2016.

India- Afghanistan Developmental Cooperation

- The Indian government in its efforts to help stabilizing Afghanistan has undertaken varied medium and large scale infrastructure projects in the country. These include some significant infrastructure projects such as:
  o construction of the Afghan Parliament in Kabul,
  o Indian-built and financed 218 km Zaranj-Delaram road (establishes link between Afghanistan and Iran),
  o a 220kV DC transmission line from Pul-e-Khumri to Kabul,

- o power generating Afghan-India Friendship Dam (also known as Salma Dam) in Herat province.
- A crucial feature of India's development cooperation with Afghanistan has been its Small Development Projects (SDPs) scheme. Through this scheme Indian government has undertaken (or committed to) more than 200 projects with short gestation periods in diverse fields including public health, education, community infrastructure development, agriculture, vocational training etc.

Technical Cooperation and Capacity Building

- Indian government has also been offering training to Afghan nationals in order to foster skill development and capacity building.
- Importantly New Delhi's cooperation in these avenues comprise primarily of extensive vocational training programs, scholarships and other training programs and schemes.
- These training program and schemes comprise primarily of India's flagship Indian Technical and Economic Cooperation (ITEC) program, Indian Council of Agricultural Research (ICAR) scholarships under India-Afghanistan Fellowship Program, Indian Council for Cultural Relations (ICCR) scholarships etc.
- During 2015, the Indian government also committed to extending its ICCR scholarship scheme until 2020 and offered another 500 scholarships for the children of the martyrs of Afghan Security Forces In School And Colleges Both In Afghanistan And In India.

5.8. India Ratifies UNTIR Convention

India had ratified United Nations Transports Internationaux Routiers Convention, a universal transit system for goods to improve its trade prospects in the region. India has thus become the 71st country to ratify the United Nations TIR Convention.

About UNTIR

- The Customs Convention on International Transport of Goods under cover of TIR Carnets, 1975 (TIR Convention) is an international transit system under United Nations Economic Commission for Europe (UNECE).
- The convention facilitates seamless movement of goods within and amongst the parties to the Convention. It is managed and developed by the International Road Transport Union.
- By joining the convention, the need for inspection of goods at intermediate borders as well as physical escorts en route shall be obviated due to reciprocal recognition of Customs controls.
- As per the Convention, Customs clearance can take place at internal Customs locations thereby avoiding clearances at Border Crossing Points and ports that may often be congested.
- Compliance with the Convention ensures enhanced security in the supply chain as only approved transporters and vehicles are allowed to operate in terms of the Convention.
- The TIR Carnet (A custom document that allows temporary duty free importation of the particular good) represents a guarantee for Customs duties and taxes and traffic in transit. Hence there is no need for payment of such taxes and duties en route.
- The TIR carnet also serves as a Customs declaration and hence it precludes the need to file multiple declarations satisfying national laws of the different transiting countries.

Benefits for India

- The ratification of the international treaty is expected to boost India's status as a trade transit hub in Asia and also help counter the impact of China's OBOR (One Belt, One Road) project on India's prospects as an emerging power.

- By ratifying the convention India will be able to better integrate its economy with global and regional production networks.

- The Convention will help Indian traders to have access to fast, easy, reliable and hassle free international system for movement of goods by road or multi-modal means across the territories of other contracting parties.

- TIR will also help India implement the World Trade Organisation's Trade Facilitation Agreement which it signed in 2016. Since the convention allows only approved transporters and vehicles to operate, it will help Indian traders use a fast, easy and reliable international system to move their goods.

- TIR will allow India to integrate its trade with Myanmar, Thailand, Bangladesh, Bhutan and Nepal as well as to move goods along the International North-South Transport Corridor via the Chabahar port in Iran and to access Afghanistan.

About International Road Transport Union (IRU)

- IRU is a non-governmental business organization which was founded in 1948 in Geneva to help war-torn Europe rebuild devastated trade and commercial links.

- Beginning as an alliance of national road transport associations from eight European countries, IRU already began to develop TIR in 1949.

- IRU membership and activities have now expanded to all continents, encompassing passenger and goods mobility by road, as well as intermodal journeys and innovative mobility services.

- The IRU works for implementing the UN Customs Convention on the International Transport of Goods under Cover of TIR Carnets (TIR Convention).

- The IRU provides leadership on sustainable development, for example by obtaining the road transport sector's commitment to achieving the economic, social and environmental goals set out in the UN's Agenda 21 sustainable development plan.

- In addition there are several objectives related to the environment among the IRU's core activities:
  - ensuring that vehicles are safe, clean, efficient and fuel-efficient;
  - encouraging sound fleet management, strict vehicle maintenance and good working conditions for drivers;
  - helping to make roads safer and less congested;
  - seeking improvements in the environmental performance of vehicles.

5.9. India China Border Issue: Sikkim

Background

- India shares a 220-kilometre-long border with China in Sikkim. It is the only portion of the 4,057-kilometre Himalayan frontier of China with India that ***Beijing accepts as settled***.

- Unlike Jammu and Kashmir and Arunachal Pradesh, where the Line of Actual Control and McMahon Line act as the dividing lines respectively, India has an international border with China in Sikkim.

- The boundary in Sikkim was defined by the Anglo-Chinese Convention signed by the Great Britain and China in 1890 in Calcutta and jointly demarcated on the ground in the year 1895.

- In 1953 Beijing noted that the boundary between China and Sikkim has long been formally delimited and there is neither any discrepancy between the maps nor any disputes in practice.

- In 1975, the Sikkim monarchy held a referendum in which the people of Sikkim voted overwhelmingly in favour of joining India. At the time China protested and rejected it as illegal.

- In June 2003, when PM Atal Bihari Vajpayee visited Beijing he shifted India's long-standing position on Tibet from it being an autonomous region within China to it being part of the territory of China.

- He linked his Tibet concession with supposed Chinese flexibility on Sikkim. Having turned Sikkim from a non-issue into a bilateral issue he claimed credit for beginning the process by which Sikkim will cease to be an issue in India-China relation.

- However the Sikkim-China border's northernmost point continues to be the subject of dispute and military activity. Chinese transgressions and incursions into Indian Territory are not uncommon.

Recent Incidents: Face off at Sikkim Border

- In November 2016 Chinese forces destroyed few of the makeshift Indian army bunkers near Doka Lam, at the Sikkim-Bhutan-Tibet tri junction.

- China now has laid claim to the Finger Area, a 2.1-square-kilometre tract that protrudes like a finger over the Sora Funnel valley at Sikkim's northernmost tip.

- It has objected to India's move to beef up defences in the vulnerable Siliguri Corridor — the chicken neck that connects mainland India with the northeast.

- Bhutan has lodged a strong protest against China as the construction of the road inside Bhutanese territory is a direct violation of the 1988 agreements between Bhutan and China and affects the process of demarcating the boundary between these two countries. They have urged a return to the status quo as before 16 June 2017.

- In keeping with their tradition of maintaining close consultation on matters of mutual interest RGOB and the Government of India have been in continuous contact through the unfolding of these developments.

- India has told China that construction of a road in the Doklam area of Bhutan would harm Indian security interests as well as violate a written understanding between Indian and Chinese Special Representatives on the border issue that the status of the boundary at any tri-junction would be resolved only with participation of the concerned third country.

- The two sides had discussed the issue in a flag meeting on 20 June. Indian Army Chief General Bipin Rawat also visited Sikkim signalling India's intent to not back down and the importance it attaches to this incident.

Earlier Transgression And Incursion Incidences

- In February 1997 the Chinese PLA intruded 6 kms across India's Himachal Pradesh. The incident happened despite the 1993 India-China agreement for maintenance of peace and

tranquility along the LAC and the November 1996 agreement on Confidence Building Measures in the Military Field along the LAC in the India-China Border areas**.**

- In June 2003 the PLA intruded in the Asaphila region of the upper Subansiri District of Arunachal Pradesh which is one of the eight known pockets of dispute. During this intrusion 10 Indian soldiers were abducted by Chinese military, according to reports. In May 2005 the chinese troops intruded into Asaphila again.

- In April 2013 and early May 2013 the Chinese intruded in Daulat Beg Oldi (DBO), Ladakh region, and Depsang plains of Aksai Chin. They set up camps in tents in Depsang valley. Indian officials say Chinese Depsang intrusion was 19 km deep inside Indian Territory, ahead of even the Chinese perception of the LAC.

- In September 2014 the Chinese troops intruded in Chumar area of Ladakh. Intrusion by Chinese civilians at Demchok along the LAC also took place. 1000 Chinese troops intruded into 3 kms inside India's Chumar territory. Chumar incident lasted for a week. It reflected a Chinese claim on a new area. China however withdrew its troops from Chumar finally. China's objection was reportedly to India's construction of a road in the area.

China's Claim

- China has accused Indian troops of crossing the boundary in the Sikkim sector and demanded their immediate withdrawal.

- China's assertion that Donglang – which is called Doklam - was part of Chinese territory since ancient times and it doesn't belong to Bhutan.

- China is reiterating on its sovereignty claims, citing the 1890 Sino-British Treaty to argue that its road construction project is undoubtedly located on the Chinese side of the border.

- China stopped the Nathu La route for Indian pilgrims travelling to Kailash Mansarovar because of the border standoff. The Kailash MansarovarYatra through the new route via Nathu La Pass in Sikkim was launched by the two countries in 2015. This was the second route agreed by the two counties for the Kailash Yatra. Till 2015, the Yatra was being organised by External Affairs Ministry only through Lipu Pass in Himalys connecting the Kumaon region of Uttarakhand in India with the old trading town of Taklakot in Tibet.

- The Nathu La route enabled pilgrims to travel 1500 km long route from Nathu La to Kailash by buses reducing the hardship and journey time involved and enabling many more pilgrims in particular aged pilgrims to undertake the Yatra.

- China's road-building here could be part of a long-term strategic contingency plan that would help Beijing cut off India's northeast regions in a combat scenario. Understandably, India is sensitive about that prospect and reacting assertively to prevent it.

Bhutan's Response

- The boundary between China and Bhutan is yet to be demarcated; the two sides have been working on that through peaceful negotiation.

- Bhutan does not have diplomatic relations with China but maintains contacts with periodic visits by the Chinese ambassador based in Delhi.

- Bhutan has asked China to stop and refrain from changing the status quo.

India's Side

- Since the 1962 war with China, Indian strategists have envisioned a scenario where the Chinese may bring in forces to choke the vulnerable Siliguri Corridor and cut off the northeast region. The narrow Siliguri Corridor is the only bridge between northeastern part of India and rest of the country.

- Between Sikkim and Bhutan lies the Chumbi Valley, a dagger-like slice of Tibetan territory. A Chinese military advance of less than 80 miles (130 km) would cut off Bhutan, part of West Bengal and all of North-East India, an area containing almost 50 million people. This situation arose during the war between India and China in 1962.

- Any construction of road is undesirable for India in this region as this will give China unhindered access to India's strategically important Siliguri Corridor, the chicken neck that links the northeastern region to the rest of the country.

Requirements Of Effective Border Management

- The biggest challenge in front of effective border management comes from the poor state of border infrastructure. For instance it reportedly takes 20 hours to drive a distance of 500 km from Guwahati to Tawang – a reflection of the severe condition of the road network in the region.

- The Chinese roads nearly reach the line of actual control (LAC) or in some cases go beyond while on the other hand most Indian roads stop well before the Indian side of the LAC.

- The Cabinet Committee on Security though approved the new corps but the Army also wanted the long-pending infrastructure and capability development plan along the northern borders with China to be speeded up.

- The first and foremost requirement for ably guarding Indian territorial integrity is the necessity of building a road and rail infrastructure linking the border areas on LAC with the hinterland for logistics to move forward.

- Inter-state connectivity for force deployment and redeployment is required to reduce the sectoral isolation.

- The lay of Tibetan plateau is such that Chinese can build road or rail link almost parallel to the LAC. Whereas, the Indian side is interspersed with valleys running north-south - laying of a road parallel to LAC may not be possible

- Hence to secure borders not only dedicated forces but their capacity building with robust border infrastructure and ammunitions is urgently required.

About Mountain Strike Corps

- On July 17, 2013 the Cabinet Committee on Security (CCS) approved the Army's proposal for raising a Strike Corps for the mountains to secure the borders with Chinese territory in Ladakh and Arunachal Pradesh.

- It helps India to upgrade its military strategy against China from dissuasion to meaningful deterrence as the Strike Corps, in conjunction with the Indian Air Force (IAF) and provides the capability to launch offensive operations across the Himalayas so as to take the next war into Chinese territory while simultaneously defending Indian Territory against Chinese aggression.

- India's CCS agreed to proceed with the creation of a new XVII Mountain Strike Corps of nearly 40,000 troops to be deployed along the disputed China border region.

- The XVII Corps is not only for war-waging, it's for war-prevention as well and to raise and convert our combat power into certain amount of QRF (Quick Reaction Force) capabilities.

Need:

- India has an almost 4057 kms long border called Line of Actual Control with China that runs into three sectors.

- In the western sector in Ladakh, China's People Liberation Army (PLA) controls most of the area that Beijing claims as its own. The central sector, at the UP-Tibet border, already China controls Tibet. The eastern sector is the most contentious one as here China claims Arunachal Pradesh as its own and India is in control of the area. Sikkim also falls in this sector.

- China claims 90,000 sq. kms of territory here in this sector, which belongs to India. It is here for this area, India is planning a mountainous strike corps.

- The China-Pakistan nexus is the strongest that any country can possibly have with China. Probably, Pakistan's strategic location has a lot to do with this. Chinese design to use Pakistan as a front for waging asymmetric war on India dates back to the 1960s when Zhou-en-Lai suggested to Ayub Khan that Pakistan should prepare for a prolonged conflict with India instead of short-term wars.

- This emphasized the need of securing the Chinese border with the establishment of the dedicated strike force.

6. SUMMITS AND ORGANISATION

6.1. Shangri La Dialogue 2017

The 16th Asian Security Summit, commonly known as Shangri La Dialogue, was organized in Singapore.

Key Highlights Of The Summit

- At the Shangri-La Hotel, the delegates of various nations gathered to examine the region's most enduring security challenges such as North Korea's nuclear and missile programme, religious extremism, and the South China Sea (SCS) disputes.

- During the summit, China has remained at the focal point of discussion because of its recent assertive stance in regional issues. The smaller nations have voiced frustrations and concern about its policies such as on artificial island building in the SCS and territorial claims elsewhere.

- In the discussions, there were also concerns regarding the US' isolationist policy demonstrated by changes in immigration laws, decision to exit the Paris Climate Agreement, the decision to end the Trans Pacific Partnership (TPP) and calls to renegotiate NAFTA (North American Free Trade Agreement) could spill over into the security areas. These led to doubts about Washington's global leadership role.

- However, representative from US reassured the Asia-Pacific countries that America remained committed to strengthening regional alliances and reinforcing its military capabilities.

- USA urged China to recognise that North Korea had become a strategic liability.

- India went unrepresented at the ministerial level with the Defence Minister unable to accommodate participation amidst his tight schedule due to GST.

About Shangri La Dialogue

- The summit is a multilateral annual meeting of Defence Ministers, military experts and other delegates mainly from Asia-Pacific, North American and European countries discussing security issues in Asia.

- It is organised by the International Institute for Strategic Studies (IISS).

- The Shangri-La Dialogue was started in 2002 and over the years it has acquired an important stature in the defence community to conduct defence diplomacy.

- It acts as a vehicle for public policy development and discussions on defence and security in the Asia-Pacific.

About IISS

- The IISS was founded in the UK in 1958 with a focus on nuclear deterrence and arms control.

- The International Institute for Strategic Studies (IISS) is a non-partisan organisation, independent of government and other bodies.

- Its mission is to promote the adoption of sound policies to further global peace and security and maintain civilised international relations.

- Its objective is to provide the best possible information on military and political developments relevant to the prospects, course and consequences of conflict to IISS members and the wider public through publications and other activities.

- It is also renowned for its annual Military Balance assessment of armed forces of countries and for its high-powered security summits including the Shangri-La Dialogue.

6.2. United Nations Ocean Conference

In News

- The first high-level United Nations Ocean Conference was convened at United Nations Headquarters in New York in June 2017 coinciding with World Oceans Day.

- The conference was co-hosted by the Governments of Fiji and Sweden.

- The overarching theme of the conference is "**Our oceans, Our future: Partnering for the Implementation of Sustainable Development Goal 14**".

- The Sustainable Development Goal 14 is to conserve and sustainably use the oceans, seas and marine resources for sustainable development.

Purpose Of The Conference

- The purpose of the conference is to find solutions to some of the toughest problems facing the oceans that include coral bleaching, plastic pollution, overfishing and rising sea levels.

- It also includes measures to protect coastal and blue carbon (the carbon captured by the world's oceans and coastal ecosystems) ecosystems such as mangroves, tidal marshes, sea-grass and coral reefs as well as enhancing sustainable fisheries management.

- To identify ways and means to support and stimulate innovative and concrete new partnerships to advance the implementation of Goal 14.

Key Outcomes

- The conference highlighted that Oceans are under threat like never before with pollution, overfishing and the effects of climate change severely damaging the health of marine ecosystem.

- The conference sought to find ways and urge the global communities to support the sustainable development of the marine resources.

- Over 1,300 voluntary commitments have been made during the UN ocean conference.

- Delegates from China, Thailand, Indonesia and the Philippines pledged to work to keep plastics out of the seas. The Maldives announced a phase out of its non-biodegradable plastic and Austria pledged to reduce the number of plastic bags used per person to 25 a year by 2019.

- Several nations announced plans for new marine protected areas. China plans to establish 10 to 20 demonstration zones by 2020 and introduced a regulation which requires that 35 percent of the country's shoreline should be natural by 2020.

- The US-based international wildlife organisation Wildlife Conservation Society announced to create new marine protected areas of 3.7 million square kilometers.

- The conference ended with the adoption by consensus of a **14-point Call for Action** by the 193 UN member states in which they affirmed their strong commitment to conserve and sustainably use our oceans, seas and marine resources tor sustainable development.

- The Ocean Conference also decided to create a mechanism for raising global awareness regarding ocean problems in its future framework.

Threats Faced By Oceans

Unsustainable Fishing

- Unsustainable fishing is the largest threat to ocean life and habitats. It also affects the livelihoods and food security of over a billion people.

- According to the studies, 90% of the world's fisheries are already fully exploited or overfished while billions of unwanted fish and other animals die needlessly each year.

Inadequate Protection

Oceans might cover over 70% of our planet's surface but only a 3.4% of the oceans has been protected. Even worse, the vast majority of the world's few marine parks and reserves are protected in name only. Without more and better managed Marine Protected Areas the future of the ocean's rich biodiversity and the local economies it supports remains uncertain.

Tourism & Development

Around the world, coastlines have been steadily turned into new housing and tourist developments and many beaches disappear under flocks of holiday-makers each year. This intense human presence and unsustainable practices is taking its toll on marine life.

Shipping

The oceans are huge highways, across which we ship all kinds of goods. Like other human activities this heavy traffic is creating problems to the oceans such as oil spills, ship groundings, anchor damage and the dumping of polluted, ballast water and oily waste are endangering marine habitats around the world.

Oil & Gas

Important reserves of oil, gas and minerals lie deep beneath the seafloor. However, prospecting and drilling for these poses a major threat to sensitive marine habitats and species.

Pollution

Untreated sewage, garbage, fertilizers, pesticides, industrial chemicals, plastics most of the pollutants on land eventually make their way into the ocean either deliberately dumped there or entering from water run-off and the atmosphere. This pollution is harming the entire marine food chain all the way up to humans.

Aquaculture

Fish farming is often taken as the answer to declining wild fish stocks. Butthe farming of fish and shellfish is actually harming wild fish through the pollution the farms discharge, escaped farmed fish, increased parasite loads and the need to catch wild fish as feed.

Climate Change

- Coral bleaching, rising sea levels, changing species distributions are the impacts of the global warming and climate change on the oceans.

- Comprehensive strategies are needed to deal with these phenomena and to reduce other pressures on marine habitats already stressed by rising water temperatures and levels.

Q. What is Sustainable Development Goal 14? In the light of SDG 14 critically analyse the importance of United Nations Ocean Conference organized on World Ocean Day.

6.3. Global Multidimensional Poverty Index

- The 2017 global Multidimensional Poverty Index (MPI) has been published. It provides a headline estimation of poverty and its composition for 103 countries across the world.

- The report has been published by the Oxford Poverty & Human Development Initiative.

Key Findings Of The Index

- The index highlighted that a total of 1.45 billion people from 103 countries are multi-dimensionally poor. 48 % of the poor people live in South Asia and 36% in Sub-Saharan Africa. Most MPI poor people are living in middle income countries.

- According to the data revealed in the index, half of the multi-dimensionally poor (48%) are children aged 0–17. Nearly half of all MPI poor people are destitute and experience extreme deprivations like severe malnutrition in at least one-third of the dimensions (criteria used in MPI).

- The MPI revealed that the poorest regions in the world are in Chad, Burkina Faso, Niger, Ethiopia, South Sudan, Nigeria, Uganda and Afghanistan.

- The poverty data varies according to the areas in a country. For example inside Afghanistan poverty rates vary from 25% in Kabul to 95% in Urozgan.

- India has been ranked 37th out of 103 nations in the 2017 global MPI. In terms of absolute number, India accounts for both the highest and a staggering number of multi-dimensionally poor people.

- More than 528 million Indians are poor, which are more people than all the poor people living in sub-Saharan Africa combined.

- India's multi-dimensionally poor face on average 47% of the 10 deprivations and more than 40% of the poor (or 217 million)are children aged 0-17.

What is Multidimensional Poverty?

- Multidimensional poverty is made up of several factors that constitute poor people's experience of deprivation such as poor health, lack of education, inadequate living standard, lack of income (as one of several factors considered), disempowerment, poor quality of work and threat from violence.

- Many countries define poverty as a lack of income. However this alone doesn't reveal the broader picture of what life is really like for the poor.

About Multidimensional Poverty Index

- The Global MPI is an international measure of acute poverty (A serious shortage of income or of access to the range of resources that usually provide the basic necessities for life for humans such as food, shelter, sanitation, clean water, medical care, and education) covering more than 100 developing countries.

- The MPI complements income-based poverty measures by reflecting the multiple deprivations that people face at the same time.

- The MPI identifies deprivations across health, education and living standards and shows the number of people who are multi-dimensionally poor and the deprivations that they face at the household level.

- It uses ten indicators across three dimensions:

    a. Education: Year of schooling and School attendance.

    b. Health: Child Mortality and nutrition.

    c. Living Standard: Electricity, Sanitation, Drinking water, Cooking fuel, floor and assets.

- Each dimension is equally weighted and each indicator within each dimension is equally weighted.

- A person is identified as multi-dimensionally poor if he or she is deprived in at least one third of the weighted indicators; one deprivation alone may not represent poverty.

About OPHI

- The Oxford Poverty and Human Development Initiative (OPHI) is an economic research centre within the Oxford Department of International Development at the University of Oxford. It was established in 2007.

- OPHI aims to build and advance a more systematic methodological and economic framework for reducing multidimensional poverty, grounded in people's experiences and values.

- OPHI's work is grounded in Amartya Sen's capability approach. OPHI works to implement this approach by creating real tools that inform policies to reduce poverty.

- OPHI's team members are involved in a wide range of activities and collaborations around the world including survey design and testing, quantitative and qualitative data collection, training and mentoring and advising policy makers.

Amartya Sen's Capability Approach

- The capability approach is an economic theory conceived in the 1980s as an alternative approach to welfare economics.

- In this approach, Amartya Sen brings together a range of ideas that were previously excluded from (or inadequately formulated in) traditional approaches to the economics of welfare.

- The core focus of the capability approach is on what individuals are able to do.

- The Capability Approach is defined by its choice of focus upon the moral significance of individuals' capability of achieving the kind of lives they have reason to value.

UN Human Poverty Index

- The Human Poverty Index (HPI) was introduced in 1997. It is a composite index which assesses three elements of deprivation in a country - longevity, knowledge and a decent standard of living.

- There are two indices; the HPI – 1which measures poverty in developing countries and the HPI-2 which measures poverty in developed economies.

- It is developed by the United Nations Development Programme to complement Human Development Index.

6.4.   AIIB ANNUAL MEETING

The Korean government and the AIIB (Asian Infrastructure Investment Bank) jointly hosted the second AIIB Annual Meeting of the Board of Governors in Jeju, Republic of Korea.

Key Highlights

- The meeting was held under the theme of "**Sustainable Infrastructure**" seeking strategic directions of the international infrastructure bank and making major decisions on the bank's management.

- During the meeting, the China-led Asian Infrastructure Investment Bank has approved USD 150 million equity investment loan to the India Infrastructure Fund. It is the bank's first such loan to fund private projects.

- India and South Korea have signed agreements to establish USD 9 billion in concessional credit and 1 billion dollars in Official Development Assistant (ODA) funding for infrastructure development projects in India.

- With this Republic of Korea became one of the first non-G-7 countries to become an ODA contributor in India.

- **India-Korea Financial Dialogue in Seoul**--Both sides agreed that in the face of uncertainty and the risk of rising protectionism there is a need for the two countries to increase efforts to stimulate investment flows, support for infrastructure development, and bilateral trade among others.

- During this second annual meeting of governors, AIIB approved the membership of *Argentina, Madagascar and Tonga*.

- The Board of Governors of the AIIB announced that the Bank's third Annual Meeting of the Board of Governors will be held in Mumbai, India in June 2018.

About AIIB

- The Asian Infrastructure Investment Bank (AIIB) is a new multilateral financial institution founded to bring countries together to address the daunting infrastructure needs across Asia.

- By furthering interconnectivity and economic development in the region through advancements in infrastructure and other productive sectors, the bank can help stimulate growth and improve access to basic services.

- The bank currently has 56 member states while another 24 are prospective members for a total of 80 approved members.

- The bank was proposed by China in 2013 and the initiative was launched at a ceremony in Beijing in October 2014.

- Unlike the IMF and World Bank, no country has a veto in this new bank. Voting rights are expected to be based on a combination of GDP and PPP and India is the second largest shareholder.

- As an infrastructure investment bank it offers sovereign and non-sovereign finance for sound and sustainable projects in energy and power, transportation and telecommunications, rural infrastructure and agriculture development, water supply and sanitation, environmental protection, urban development and logistics.

Significance for India

- India is a founding member of the AIIB and is the second-largest shareholder after China. The AIIB will help India and other signatory countries to raise and avail resources for their infrastructure and sustainable development projects.

- It is expected that with membership in AIIB, India would be able to raise and obtain more resources for much needed infrastructure development.

- AIIB may have a significant impact on the energy choices available, by lifting Western-imposed constraints on how the World Bank lends. India needs huge funds for energy funding thus India can leverage its membership in AIIB to avail cheap loan.

- India is expected to gain directly if its investment proposals get approved. Focus on enhancing connectivity and infrastructure within the country and with countries in the neighbourhood is critical.

- Sub-regional projects such as Bangladesh-Bhutan-India-Nepal (BBIN) corridor and inter-regional projects such as India-ASEAN rail and road connectivity projects need huge funding. AIIB can help drive this growth by funding such projects with regional focus.

- India is striving to develop its north-eastern region, a goal which can be swiftly achieved through greater regional cooperation and the support of multilateral funding agencies.

7. DEFENCE AND SECURITY

7.1. Issue Of Terror Funding Through Hawala In Kashmir

In News

- The National Investigation Agency (NIA) has raided various sites in Kashmir and Old Delhi based on the preliminary report regarding terror funding through hawala.

- The agency questioned various separatist leaders in the alleged hawala and terror funding from Pakistan-based terrorist groups.

About The Issue

- A national news channel aired a sting operation in which the Hurriyat leaders allegedly confessed to its reporter that they received money from Pakistan-based organisations routed through hawala. After this expose, NIA raided several places.

- The agency's action comes after registering a preliminary enquiry against Hurriyat's hardcore wing chief Syed Ali Geelani and his close aide and Hurriyat provincial president Nayeem Khan, Jammu and Kashmir Liberation Front (JKLF) leader Dar alias Bitta Karate and Tehreek-e-Hurriyat leader Baba.

- Probing the separatist leaders for allegedly receiving money from Lashkar-e-Taiba and other sources in Pakistan to fund stone-pelting and violent protests in Jammu and Kashmir, NIA officials have also asked the separatist leaders to produce certain documents for examination.

- According to the investigating agency officials, the probe agency has collected the copies of at least 150 cases regarding damage caused to the schools and public property as part of the larger conspiracy to perpetuate violence and chaos in Kashmir.

Hawala Funding Through Pakistan

- Though Pakistan always denied its acts of supporting terror attacks and insurgencies in India but the NIA probe into the funding as well as the Enforcement Directorate (which probes economic offences) had provided evidences of linkages of hawala brokers with Pakistan.

- ED along with NIA are probing into the matter of funding through hawala channels (an illegal cash transfer system across borders run by money brokers) and have enough prima facie evidences to prove that Pakistan is fueling the Kashmir instability crisis by providing money to the terrorist organizations.

- The money pumped through these illegal routes is then used to hire the stone pelters by the separatist organizations to attack on the security forces, which arefurther deteriorating the crisis situation in Kashmir.

About National Investigation Agency

- NIA is functioning as the Central Counter Terrorism Law Enforcement Agency in India.

- The need for an independent agency to tackle terrorism was felt after the 2008 Mumbai attacks and the National Investigation Agency Act was enacted in the Parliament.

- While intelligence agencies are tasked with snooping and providing information to other law enforcement agencies there was no central agency investigating terrorist activities specifically.

- Usually the state police department would be called in to probe after say a suspected terrorist had been caught. Now the NIA can be called in because of its wider jurisdiction.

- The agency is headed by a Director General and the officers for the agency are recruited from other agencies like the Indian Revenue Services, State Police departments, Income

---

Tax department, Central Armed Police Forces.

- NIA's emphasis is on using latest scientific methods of investigation and a speedy trial resulting in quick justice. The agency which began with its headquarters in Delhi now has branches all over the country.

- It also builds a database on all terror-related information and shares it with the states and other law enforcement agencies.

- The NIA has the power to investigate any terrorist attack in the country covering offences including bomb blasts, hijacking of planes and ships and attacks on nuclear installations.

- The agency also has the authority to look into incidents related to smuggling of arms, circulation of fake currency and cross border infiltration.

About Enforcement Directorate

Directorate of Enforcement is a specialized financial investigation agency under the Department of Revenue, Ministry of Finance, Government of India which enforces the following laws: -

- Foreign Exchange Management Act,1999 (FEMA) - A Civil Law, with officers empowered to conduct investigations into suspected contraventions of the Foreign Exchange Laws and Regulations, adjudicate, contraventions and impose penalties on those adjudged to have contravened the law.

- Prevention of Money Laundering Act, 2002 (PMLA) - A Criminal Law, with the officers empowered to conduct investigations to trace assets derived out of the proceeds of crime, to provisionally attach/ confiscate the same and to arrest and prosecute the offenders found to be involved in Money Laundering.

Hurriyat Conference

All Parties Hurriyat Conference is an alliance of 26 political, social and religious organizations formed on March 9, 1993 as a united political front to raise the cause of Kashmiri separatism.

7.2. Lapses In Pathankot Terror Incident

A Court of Inquiry conducted by the Indian Air Force into the terror attack at Pathankot Air Force Station in January 2016 found serious lapses at the security base as well as in the handling of the incident.

About The Issue

- The court of inquiry (COI) into the January 2 terror attack in Pathankot, during which the security forces had taken almost three days to kill the four heavily-armed terrorists while losing seven of their own personnel, revealed lapses by different officers in the forward airbase near the border with Pakistan.

- The lapses ranged from failure to follow basic standard operating procedures and plug vulnerable perimeter gaps to inadequate flood-lighting and the inability of the IAF Guard commandos to initially pin down and isolate the attackers who had gained entry into the airbase by using branches of trees adjacent to the outer main wall.

- Although the terrorists did not manage to penetrate the critical technical area of the airbase where the fighters, missile units and radars were located and were eventually neutralized in the domestic area by National Security Guard commandos but the report revealed that due to the security lapses the terrorist could enter the technical area.

Recommendation By Committee Regarding Existing Lacunae In Existing Security Set-Up

- A top tri-Service committee constituted after the Pathankot attack under former Army vice chief Lt-General Philip Campose (retd) had revealed several lacunae in the existing security set-up of most military bases around the country.

- The committee had recommended several measures ranging from installation of modern access control, perimeter security-cum-intrusion detection systems to providing new weapons, bulletproof jackets and night-vision jackets to personnel guarding the bases.

- The IAF on its part has finalised an over Rs. 8,000-crore comprehensive security plan for 54 of its major airbases around the country but the government hasn't paid attention to the recommendation of the committee.

Inadequacy of Indian Counter-terror Measures

- The increasing terror attacks have highlighted that Indian security establishments are not organised and well-equipped to counter the tactics that terrorists have adopted with startling success.

- In the aftermath of the Mumbai attack 2008, several reforms have been initiated such as the National Investigation Agency was set up and a decision has been taken to deploy the National Security Guard (NSG) in the four metros and later in all state capitals in the country. Parliament also passed in record time the Unlawful Activities (Prevention) Amendment Act 2008, which would inter alia allow the detention of terror suspects for up to 180 days.

- The steps taken are no doubt important in themselves. However, they alone would not substantially enhance our capability to counter terror.

- India is a soft target and has porous borders with many of its neighbouring countries. We have the longest border with Bangladesh. An estimated 16 million refugees have traversed this border. The border with Pakistan is however less porous on account of fencing in J&K and strong security measures. Nevertheless extremists continue their effort to infiltrate into India.

- The Mumbai terror attack has proved that the threat from the sea could prove more difficult to counter. India's 7500 kilometres of sea coast is poorly guarded. Fishing hamlets dotting the coasts also provide ideal drop zones for terror groups.

- But the dilemma that India faces is that it would be an almost impossible task to make our land and sea borders watertight in the foreseeable future.

Steps To Restructure India's Security Apparatus

- A commission to study the nation's counter terror apparatus and an ***integrated and overarching body*** like the US has should be appointed. This body should coordinate, collate and analyse intelligence information besides being entrusted with all tasks including the overall control of the counterterrorist forces such as the NSG. Part of the Coast Guard should also be brought within its ambit. The administrative head of such a body should be senior to all the heads of the intelligence agencies.

- Any individual with Asian features infiltrating India is virtually indistinguishable from its citizens and defy easy identification, as the nation does not have any system of identity cards. As a consequence a potential terrorist who sneaks in from abroad can melt into the Indian milieu, plan, network, stockpile weapons and explosives and wreak havoc after spending considerable time on target reconnaissance, conducting dry runs, etc. Therefore, within a definite timeframe we should provide some form of ID cards like ***smart cards*** linked to a national database to all Indians. Though it would be a daunting task, there is no escape from it.

- No property should be leased or hotel accommodation given to Indian or foreign nationals without first ascertaining their identity from the national database with links to an MEA resource that should contain up-to-date information on all visas issued by Indian missions abroad. Legal provisions should also be put in place to ensure that the penalty for breach of such provision is severe enough to deter any potential violators.

- Every police station should be linked to the national database and the Station House Officer be made responsible for the proper verification of the lessees/occupants of hotels and property.

- A separate ***data-mining organization*** should be established. It is an important tool in establishing correlations between various sets of information from immigration authorities, transport bodies, police stations, intelligence data bases, mobile telephone operators, etc.

- This computer software would analyse apparently separate and disconnected information and identify links that would otherwise be hidden. In a computerised world where human dealings/activities are increasingly digitised, important information in many standalone systems are lost when they are not correlated. Linking of separate systems and use of this specialised software would provide critical information to track suspicious activities.

- We could take lessons from the successful intelligence agencies of other nations.

- There is an urgent need to ***augment, arm and train our counter terrorist forces***. The counter-terror forces in India today are evidently poorly organised and ill-equipped to face terror threats. This is evident from the response to the Mumbai attacks. There is no doubt that our security forces fought valiantly during the crisis. But it also brought to the fore the lack of specialised training and the absence of sophisticated electronic gadgetry in neutralising the terrorists.

- Besides strengthening the internal security structure it is equally important to strengthen the external arm of the strategy i.e. collaboration with other nations. As long as terrorist leaders roam freely in other nations immune from punishment, they would continue to plot against India. We should avail our strategic relations with U.S., Russia, France and other nations to counter terrorism.

Q. After the Pathankot incident there is a need to review the apparatus of critical defence/security bases. Critically analyse.

7.3. Cartosat Significant For Strenthening Millitary Aaparatus

In News

- The Indian Space Research Organisation (ISRO) has launched earth observation satellite Cartosat-2 series and 30 co-passenger satellites from Sriharikota in Andhra Pradesh.

- The Cartosat-2 series is a dedicated satellite for the defence forces to strengthen the defence military apparatus of the country.

About Cartosat

- Cartosat-2 is a remote sensing satellite with the resolution of 0.6 metres which can spot even smaller objects within a square of 0.6 m by 0.6 m.

- The previous satellite in the series had a resolution of 0.8 metres. It took images that helped India carry out its precise strikes on seven terror camps across the Line of Control in 2016.

- The first dedicated military satellite, CartoSat-2A was launched in April 2008, followed by CartoSat-2B in July 2010.

- The series' latest three satellites have been deployed over the space of a year and a day: Cartosat-2C was launched on 22 June 2016, Cartosat-2D on Feb. 15 February this year. Cartosat -2E was launched recently. All of them rode on PSLV rockets.

- Cartosat-2E will likely be the last Cartosat-2 series spacecraft. A follow-on series, Cartosat-3 is due to begin launching next year.

Significance of Cartosat

- Cartosat-2 is a remote-sensing satellite. Its objective is to provide high-resolution scene-specific spot imagery. The images sent by the satellite would be useful for cartographic applications, urban,

rural and coastal land use and regulation, utility management like road network monitoring, water distribution, creation of land use maps, and various other land information systems (LIS) as well as geographical information systems (GIS).

- The satellite can provide India's defence forces scene-specific imagery in the military's area of interest. Thus, India can track developments along the borders with China and Pakistan. It can be used to identify terrorist camps and bunkers and some enemy formations.

- However, the Indian military wants more dedicated satellites for exclusive military use. So far only the Indian Navy has a dedicated satellite. India has moved towards network-centric warfare in which land, air and sea defence forces are networked through space technology and surveillance aircraft.

- This satellite series is designed and developed for the defence forces to create a robust mechanism with their own infrastructure, which includes ground stations and trained manpower to access data.

- Defence surveillance will get enhanced because it can be used in identifying terrorist camps and bunkers.

7.4. <u>**First Indigenously Built Floating Dock**</u>

- Indian Navy's first indigenously built floating dock FDN 2 was launched at the Larsen & Toubro Ltd. (L&T) shipyard in June 2017. This is a milestone in India's quest for self-reliance in shipbuilding.

- The floating shipyard would be handed over to the Indian Navy after conducting three to four months of trial.

- The floating dock will enable the docking of all kinds of vessels including submarines and Indian naval ships of up to 8,000 tonnes displacement with draughts of up to seven metres.

- The dock will be positioned at Port Blair on completion and is expected to reduce the load on existing dry docks and contribute to the maintenance of front line assets.

- There it would be used for repairing assets of the Indian Navy and also of other services.

- These floating docks are capable of being installed either along a jetty, moored in calm waters and also moved to high seas enabling round-the-year operation.

- In addition, off-center docking options were also feasible. It has hauling-in system to handle a ship's docking and undocking operations.

- It can also cater to the ships berthed along its side. At any point of time, FDN-2 can cater to six ships for repairs or refit.

8. SCIENCE AND TECHNOLOGY

8.1. Scorpene Submarine Kalvari

- The first of the six Scorpene submarines under project 75 of Navy- Kalvari, being built in India under technology transfer, is likely to join by end of July.
- Submarine can undertake various types of missions that are undertaken by any modern submarine including anti-surface warfare, anti-submarine warfare, mine laying, intelligence gathering, surveillance, etc.
- The attack can be launched with torpedoes, as well as tube launched anti-ship missiles, whilst underwater or on surface.

Significance of Cartosat

- The Kalvari Class of Submarines are stealthier than nuclear submarines as they can work without needing to surface or send up a snorkel for oxygen thanks to the use of Air-independent propulsion system found on the Scorpene submarines that can help it stay underwater for up to 21 days at a stretch.
- With its superior stealth capability, it can launch a crippling attack on the enemy using precision guided weapons.
- This submarine works in all war theatres including the tropics wherein various means and communications are in place to ensure interoperability with various components of the naval task force.
- Numerous defence activities can be carried out through this stealth submarine including mine laying, area surveillance, anti-submarine warfare, intelligence gathering and multifarious warfare activities.

Project 75

- Under Project 75, the six Scorpene submarines are being built by Mazagaon Dockyard Limited with transfer of technology from the collaborator DCNS (French industrial group specialised in naval defence and energy) of France.
- From the six submarines two (INS Kalvari and INS Khanderi) are ready and rest four are under construction.
- The second submarine Khanderi was launched on January 2017 and will undergo rigorous tests and trials in the harbour and at sea, on surface and underwater. It will be commissioned in the Navy after all the tests.

8.2. Pressurized Water Reactors (PWRs)

India and Russia have signed the much-awaited agreement on setting up two more units of Kudankulam Nuclear Power Plant (KKNPP) in Tamil Nadu. The reactors are pressurized water reactor of Russian design.

About PWRs

- Pressurized Water Reactor (PWR) is a type of a nuclear power reactor that uses enriched Uranium as a fuel, which in turn heats the light water used for producing steam.
- The main feature which differentiates it from a Boiling water Reactor (BWR) is that a PWR has a separate arrangement to make steam in the form of a heat exchanger.
- In PWR, two basic circuits having light water as the working fluid is used.
- In one of the circuits, water is heated to a high temperature and kept at high pressure as well, so that it does not get converted into a gaseous state.

- This superheated water acts as a coolant as well as moderator hence the reactor goes by the name pressurized water reactor.
- The secondary circuit consists of water at high pressure in the gaseous state i.e. steam which is used to run the turbine-alternator arrangement.

Advantages of PWR

- Much fewer control rods are required in a PWR.
- Since the two circuits are independent of each other, it makes it very easy for the maintenance staff to inspect the components of the secondary circuit without having to shut down the power plant entirely.
- The water used in the primary circuit is different from that used in the secondary circuit and there is no intermixing between the two, except for heat transfer, which takes place in the boiler or heat exchanger. This means that the water used in the turbine side is free from radioactive steam hence the piping on that side is not required to be clad with special shielding materials.

Drawbacks of PWR

- The primary circuit consists of high temperature, high pressure water which accelerates corrosion. This means that the vessel should be constructed of very strong material such as stainless steel, which adds to construction costs of PWR.
- PWR fuel charging requires the plant to be shut down and this certainly requires a long time period of the order of at least a couple of months.
- The pressure in the secondary circuit is relatively quite low as compared to the primary circuit hence the thermodynamic efficiency of PWR reactors is quite low of the order of 20.

8.3.   Third Gravitational Wave Merger Detected

In News

- The Laser Interferometer Gravitational-Wave Observatory (LIGO) detectors in the U.S. have detected yet another merger of two black holes named GW170104.
- This signal marks the third confirmed detection of gravitational waves coming from a binary black hole merger.
- It is of great interest to the scientific community that the black holes, having masses nearly 31 times and 19 times than that of the sun. Until the first detection of gravitational waves by LIGO in 2015 (GW150914) it was not known that such massive black holes could exist.
- This detection has revealed not merely a black-hole merger but also the alignment of the spins of the black holes.
- This can shed light on the way the black holes might have formed. In this event, the spins of the individual black holes making up the merger are probably not aligned along the same direction. This supports the theory, which says that black holes form independently in a star cluster, then sink to the centre of the cluster and eventually merge.

What Are Gravitational Waves

- They are fabric of space-time caused by some of the most violent and energetic processes in the Universe.
- The strongest gravitational waves are produced by catastrophic events such as colliding black holes, the collapse of stellar cores (supernovae), coalescing neutron stars or white dwarf stars, the slightly wobbly rotation of neutron stars that are not perfect spheres, and the remnants of gravitational radiation created by the birth of the Universe itself.

- Albert Einstein predicted the existence of gravitational waves in 1916 in his general theory of relativity.

8.4. DHANUSH

- Dhanush is an upgraded version based on the Swedish 155-mm Bofors howitzers, which India procured in the mid-1980s.

- It is a 155-mm, 45-calibre gun with a maximum range of 40 km in salvo mode, compared to the 39-calibre, 27-km range of the original guns.

- Dhanush, which has a better range and modern functioning as compared to the original Bofors gun, has been developed by Gun Carriage Factory (GCF), Jabalpur.

8.5. Neutrino

- Neutrinos are tiny particles, almost massless, that travel at near light speeds.

- They are born from violent astrophysical events such as exploding stars and gamma ray bursts

- They are abundant in the universe, and can move as easily through matter.

- They are the byproducts of nuclear fusion in the sun.

- 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.

India and Neutrino Research

- 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.

- However, setting of INO projects gets delayed as the National Green Tribunal (NGT) suspended the environmental clearance (EC) granted to the India-based Neutrino Observatory (INO), and ordered it to file a fresh application for clearance.

Why Opposition

- Explosives used in construction are a threat to the highly sensitive ecology of the Western Ghats.

- The relevant radiation safety studies for carrying out the long baseline neutrino experiment in the second phase of INO have not been done.

Counter Points

- The proposed excavation is planned to be carried out by a controlled blast, limiting the impact of vibrations with the help of computer simulations.

- Building the INO involves constructing an underground lab accessed by a 2 km-long horizontal access tunnel, resembling a road tunnel. Such tunnels have been built extensively in India and the relevant studies show that the environmental impact (mainly dust and noise in the initial phase) have been managed.

- In the second phase, the INO project initially had planned to be set up as a far detector for the Neutrino Factory, which is a proposed particle accelerator. This may not be necessary because of

the discoveries already being made in the field. Even if it is built, the radiation from the neutrino beam alone on an average would be one in 100 millionth of the natural radiation, which is negligible.

Conclusion

Public apprehensions in such projects are understandable;they also demonstrate that communication between the scientific community and the public needs to be more basic and democratic. For a country of young minds, we should generate sufficient public support for such high technology and science projects.

8.6. Geosynchronous Satellite Launch Vehicle-Mark II

The Geosynchronous Satellite Launch Vehicle-Mark III (GSLV-Mk III), the heaviest rocket ever made by India and capable of carrying large payloads, was launched from the Satish Dhawan Space Centre in Sriharikota on June 5, 2017.

About GSLV-Mk III

- GSLV Mk III is a three-stage heavy lift launch vehicle developed by ISRO.
- The vehicle has two solid strap-ons, a core liquid booster and a cryogenic upper stage.
- GSLV Mk III is designed to carry 4-ton class of satellites into Geosynchronous Transfer Orbit (GTO) or about 10 tons to Low Earth Orbit (LEO), which is about twice the capability of GSLV Mk II.
- This is India's first fully functional rocket to be tested with a cryogenic engine that uses liquid propellants — liquid oxygen and liquid hydrogen.
- C-25, the large cryogenic upper stage of the GSLV, is the most difficult component of the launch vehicle to be developed. ISRO successfully ground-tested the indigenously developed C-25 in February 2017.
- The first developmental flight of GSLV Mk III, the GSLV-Mk III-D1 successfully placed GSAT-19 satellite to a Geosynchronous Transfer Orbit (GTO) from SDSC SHAR, Sriharikota.

8.7. KELT-9 :'Hottest' Planet In Universe
- Scientists have discovered the hottest known planet located 650 light years from Earth, which is warmer than most stars in the universe and sports a giant, glowing gas tail like a comet.
- Newly discovered exoplanet, designated KELT-9b, is hotter than most stars and only 926 degree Celsius cooler than our Sun.
- The ultraviolet radiation from the star it orbits is so brutal that the planet may be evaporating away under the intense glare, producing a glowing gas tail.
- The gas giant 2.8 times more massive than Jupiter but only half as dense, because the extreme radiation from its host star has caused its atmosphere to puff up like a balloon.

8.8. Revision of Antibiotic Protocol by WHO
- In an effort to curb antibiotic resistance, the World Health Organization (WHO) has divided the drugs into three categories— specifying which are to be used for common ailments and which are to be kept for complicated diseases.
  - Access: Commonly used antibiotics
  - Watch: Slightly more potent,
  - Reserve: potent drugs to be used only as a "last resort"
- Purpose:

- o The new WHO list should help health system planners and prescribers ensure that people who need antibiotics have access to them, and ensure they get the right one, so that the problem of resistance doesn't get worse.
- o The new categorization will further guide countries in ensuring access to appropriate antibacterial agents and support antimicrobial stewardship effort.
- o This list serves as a guide for the medicine supply system and is responsible for promoting health equity

8.9. <u>Nanoparticles To Treat Eye Infection</u>

Scientists at the Hyderabad-based CSIR-Centre for Cellular and Molecular Biology (CSIR-CCMB) have developed a novel way to treat fungal keratitis.

What is Keratitis

- Keratitis is the inflammation of the eye, which starts with redness and itching and might eventually lead to blindness.

- Keratitis can be caused by both bacteria and fungi. Fungi attach themselves to the cornea and release enzymes that break down the corneal proteins for their nutritional requirements.

- In the process the cornea also gets inflamed. Corneal damage causes wound and scar formation leading to severe visual impairment.

- It is estimated that about 30% of keratitis cases in India lead to blindness.

Current challenge

Treating keratitis infection is currently a challenge because it is difficult to maintain a therapeutic dose at the corneal surface for long periods as blinking and tear formation washes off the drug.

How Scientist Overcame This

- To address this challenge Scientist has developed protein-based nanoparticles that encapsulate the drug.

- Certain antibodies get attached to the outer surface of the nanoparticles, thus anchoring the nanoparticles to the corneal surface.

- The infected cornea expresses a set of receptors (TLR4) when infection sets in. The team has used antibodies to these receptors to anchor the nanoparticles to the cornea.

- If the infection is severe, more receptors are expressed on the cornea and more nanoparticles get bound to the receptors. Since they are bound, the residence time in the eye is long; neither blinking nor tear formation washes off the nanoparticles

- The enzymes secreted by fungi breaks down the gelatine protein of nanoparticles that encapsulates the drug, thus releasing the drug. Like in the case of the receptors, more enzyme is secreted when infection is severe leading to more drug being released from the nanoparticles

- The gelatine protein acts as an alternative nutrient for the fungi. The fungi also degrade the gelatine-based nanoparticle to derive nutrients thus minimising the damage to the corneal tissue. In the process, it releases the drug. In a sense, the fungi are committing suicide by consuming the gelatine protein

8.10. <u>Oxytocin</u>

After being banned in retail markets, the Drug Controller will soon restrict manufacturing of controversial hormone drug Oxytocin to public sector undertakings (PSUs).

Why This Step

- The drug is used by diary owners and farmers to boost milk production and make vegetables look bigger and fresher. But, it was found that indiscriminate use of Oxytocin in milch animals and by farmers was causing irreversible hormone damage.

- Misuse of Oxytocin is leading to early sterility in milch animals at an unprecedented rate. Despite it being a Schedule H drug, it is impossible to prevent its manufacturing at registered private factories.

- Implications to human health are humongous, from reproductive complications to hormonal imbalances. One major reason for such blatant misuse of this drug is the absence of robust veterinary services in India.

8.11. Biomedical Innovation Need A Policy Boost In India

- India is not just a hub for pharmaceutical production but is also increasingly becoming a hub for product development aimed at innovation in meeting the public health needs of developing countries.

- Meningococcal conjugate vaccine, MenAfriVac from the Serum Institute of India, now meeting the needs of the African meningitis belt. Several product development partnerships (PDPs) such as the Drugs for Neglected Diseases Initiative (DNDi) have been quietly working for over a decade with researchers and the Indian industry to develop treatments which are affordable and accessible.

- However, investments from PDPs and generic companies are not enough. Financing and support from the highest level of the Indian government is urgently required.

- For this to happen, a policy on neglected disease innovation should be jointly developed by the Indian Ministries of Health, and Science & Technology. Both are key stakeholders.

8.12. Minimoon

- A minimoon is the smallest full moon in any given year.

- It's the opposite of a full moon, or when the full moon coincides with perigee — that point in the moon's orbit when it is closest to earth. On such occasions, the moon appears somewhat larger than normal because of its closeness to earth.

8.13. Second Highest Obese Children In India

India has the second highest number of obese children in the world after China, according to a study which found that 14.4 million kids in the country have excess weight

Key Takeaway From Report:

- Globally, over two billion children and adults suffer from health problems related to being obese, and an increasing number die from these conditions. However, of the four million deaths attributed to excess body weight in 2015, nearly 40% occurred among people whose body mass index (BMI) fell below the threshold considered "obese".

- Among the 20 most populous countries, the highest level of obesity among kids and young adults was in the US at nearly 13%.

- China with 15.3 million and India with 14.4 million had the highest numbers of obese children; the US with 79.4 million and China with 57.3 million had the highest numbers of obese adults in 2015.

- The prevalence of obesity has doubled since 1980 in more than 70 countries and has increased in most other nations.

8.14. Anti-Tank Guided Missile Nag

The Defence Research and Development Organisation (DRDO) has successfully test fired anti-tank 'Nag' missile in Rajasthan.

About Nag Missile

- The anti-tank Nag missile is one of the five missile systems developed by the DRDO under the integrated guided missile development programme (IGMDP).

- The four other missiles developed under this programme include Agni, Akash, Trishul and Prithvi.

- Nag is a third-generation, fire-and-forget, anti-tank guided missile developed to support both mechanised infantry and airborne forces of the Indian Army.

- The missile incorporates an advanced guidance system and possesses high single-shot kill probability. It is designed to destroy modern main battle tanks and other heavily armoured targets.

- Nag can be launched from land and air-based platforms. The land version is currently available for integration on the Nag missile carrier (NAMICA) infantry combat vehicle.

- The helicopter-launched configuration designated as helicopter-launched NAG (HELINA) can be fired from Dhruv advanced light helicopter (ALH) and HAL Rudra attack helicopter.

- The anti-tank Nag missile has been equipped with the highly advanced Imaging Infrared Radar (IRR) seeker along with integrated avionics.

- The Nag anti-armour guided weapon's airframe is built with lightweight and high-strength composite materials. The missile features top-attack capability and has high immunity to countermeasures.

- A real-time image processor with fast and efficient algorithms is installed to provide automatic target detection and tracking capabilities. The digital autopilot offers guidance, stability and control for the missile during the flight.

Significance of Nag Mssile

- Nag Missile strengthened the military capabilities of the country. It is high precision advanced anti tankmissile which will help in creating robust defence system.

- It has also been equipped with highly advanced Imaging Infrared Radar (IRR) seeker and has integrated avionics technology in its arsenal. This technology is possessed by very few nations.

- The missile has been designed mainly to destroy modern main battle tanks and other heavily armored targets which enhances the capabilities for Indian forces.

About IGMDP

- The Integrated Guided Missile Development Programme (IGMDP) was conceived by renowned scientist Dr. A P J Abdul Kalam to enable India attain self-sufficiency in the field of missile technology.

- The IGMDP got the approval from the Government of India on July 26, 1983. The ambitious, time-bound project brought together the country's scientific community, academic institutions, R&D laboratories, industries and the three Services in giving shape to the strategic, indigenous missile systems.

- The missiles developed under the programme were:--

➢ Short-range surface-to-surface ballistic missile Prithvi

➢ Intermediate-range surface-to-surface ballistic missile Agni

➢ Short-range low-level surface-to-air missile Trishul

➢ Medium-range surface-to-air missile Akash

> ➢ Third generation anti-tank missile Nag

8.15. Zika Advisory For India

The WHO placed India as a 'Category-2' country for Zika risk. A Category-2, the second highest on a four-point scale and that also includes 2015 Zika-hotspot Brazil, indicates that the virus is being actively transmitted within the country. Until April, 2017 India was a Category-4 country.

About Zika Virus

- The Zika virus is transmitted through the bite of an infected Aedesaegypti mosquito, which also transmits dengue and chikungunya.Sexual transmission of Zika virus is also possible. Other modes of transmission such as blood transfusion are being investigated.

- People with Zika virus disease can have symptoms including mild fever, skin rash, conjunctivitis, muscle and joint pain, malaise or headache. These symptoms normally last for 2-7 days.

- Severe forms of disease requiring hospitalization is uncommon and fatalities are rare. **There is no vaccine or drug available to prevent/ treat Zika virus disease at present.**

8.16. Semi Cryogenic Engine: SCE 200

- ISRO may use 2000 kN (kilo Newton) semi-cryogenicengine for heavy lift rockets.

- Semi-cryogenic engine uses a combination of liquid oxygen (LOX) and refined kerosene (ISROSENE) as propellants.

- The liquid stages of PSLV and GSLV engines use toxic propellants that are harmful to the environment. The trend worldwide is to change over to eco-friendly propellants.

- LOX and Kerosene are environmentally friendly and low cost propellants

- In addition, the propellants for semi-cryogenic engine are safer to handle and store. It will also reduce the cost of launch operations.

- This engine is being developedunder a project named SCE 200.

- This advanced propulsion technology is now available only with Russia and USA. The world's most powerful liquid engine, the Russian RD 170, is powered by a LOX - kerosene combination.

- Proposed Uses:
  - o Use in GSLV Mk-3 Upgrade - The 2000 kN SCE is envisaged to initially replace the core stage of the GSLV Mk-3 allowing an upgraded version of the launcher to lift a 6 ton payload into a GTO, instead of the current 4 ton.
  - o Use in Two-Stage-to-Orbit Reusable Launcher - Besides serving as the main building block for expendable launchers, the SCE will also be used to power a Two Stage to Orbit (TSTO) launcher being actively researched by ISRO.

8.17. Hyderabad Team Grows Miniature Eyes Using Stem Cells

Researchers at the Hyderabad-based LV Prasad Eye Institute (LVPEI) have successfully grown miniature eye-like organs that closely resemble the developing eyes of an early-stage embryo.

Technology

- The miniature eyes were produced using induced pluripotent stem (iPS) cells.

- The iPS cells are produced by genetically manipulating human skin cells to produce embryonic-like stem cells that are capable of forming any cell types of the body.

- Small portions of the corneal tissue were separated from the miniature eyes and used for growing corneal epithelial cell sheets in the lab. Such tissue-engineered cell sheets can potentially be used for restoring vision in patients whose limbus region of the cornea is damaged in both the eyes.

- The limbus region of the cornea contains stem cells, and chemical or thermal damage to this region affects corneal regeneration and results in vision loss.

- Stem cells present in the limbus region of a healthy eye have been used for restoring vision when only one eye is damaged. But when the damage is present in both eyes, the only way to restore vision is by using the healthy limbus taken from a related or unrelated donor.

- Patients have to be on immunosuppressant lifelong when limbus is transplanted from donors. However, immunosuppressant is not required when corneal cells grown using the patient's own skin cells are used for restoring vision.

What Are Induced Pluripotent Stem (iPS) Cells

- iPS cells are derived from somatic cells via transduction and expression of selective transcription factors.

- They can be generated directly from adult cells

- They hold great promise in the field of regenerative medicine. Because they can propagate indefinitely, as well as give rise to every other cell type in the body (such as neurons, heart, pancreatic, and liver cells).

- They represent a single source of cells that could be used to replace those lost to damage or disease

8.18. Progress MS-06

- It's a Russian spacecraft carrying cargo to the International Space Station (ISS).

- It liftedoff from the Baikonur Cosmodrome in Kazakhstan aboard aSoyuz 2-1A launcher, reaching orbit less than nine minutes afterblast-of.

- It docked withthe ISS.

- The spaceship has around 2.7 metric tonsof cargo and supplies to the ISS, according to NASA.

- Theseinclude fuel, water, food, compressed gases, medical andsanitary equipment, as well as nanosatellites to Russia's Zvezdaservice module

8.19. Ludwigiaperuviana Weed

- Ludwigiaperuviana is spreading rapidly in Assam, posing a threat to the state's biodiversity.

- The weed, called **primrose willow**, is native to Central and South America, and flourishes in sandy and mineral rich soil of wetlands

- Weed has damaged marshland plants, particularly along the Dhansiri and Kopili rivers.

- The invasive weed can clog natural waterways, increase sedimentation, result in accumulation of organic matter causing deoxygenation of water columns, which in turn, can lead to disruption of fresh aquatic organisms

8.20. Performance Based Navigation (PBN)

- Performance-based Navigation (PBN), in simple terms, redefines the aircraft's required navigation capability from sensor (equipment) based to performance based.

- Performance-Based Navigation, or PBN, is navigation that uses global navigation satellite systems (GNSS) and computerised on-board systems. This is in contrast with traditional sensor-specific navigation based largely on fixed ground-based beacons guiding aircraft along published routes via waypoints defined by these beacons.

- PBN defines aircraft navigation requirements in terms of the accuracy, integrity, continuity and functionality required for the proposed operations.

- It is a term used to describe the broad range of technologies that are moving aviation away from a ground-based navigation system towards a system that relies more on the performance and capabilities of equipment on board the aircraft.

- Next-generation aircrafts have very advanced avionics that permit aircraft to fly precise and repeatable 3D flight-path with the aid of ground-based / space-based / on-board avionics or combination of these.

Benefits

- PBN leverages this advancednavigation technology to provide sustainable,repeatable and measurable benefits to capable aircrafts through efficient 3D trajectories.

- Large amount of fuel saving

- Reduced carbon emissions, PBN helps in significant reduction of pollutants like mononitrogen oxides and carbon monoxide

- Enhanced safety

- It will not only reduce cockpitworkload but also reduces the workload of air traffic controllers significantly

- Besides offering environmental benefits by saving fuel, reducing C02 emissions, the PBN also eliminates high-thrust go-arounds. PBN enables continuous climb operations (CCO), continuous descent operations (CDO) and reduced flight variance for more predictable operations.

8.21. Bioremediation

- The technique works by making use of the natural ability of certain microorganisms to break down toxic compounds using enzymes.

- Enzymes are molecules present in these microorganisms that do the job of breaking down pollutants into non-toxic compounds, essentially getting rid of them by eating them.

- It is one of the most inert and harmless of environmental cleanup techniques due to its use of near-natural processes.

- It can be done both Ex situ & In situ.

- Bioremediation is not limited to bacteria. Scientists have achieved considerable success in using fungi species such as Aspergillus niger, A terreus, Cladosporiumoxysporum and Mucorthermohyalospora to break down endosulphan, a highly toxic insecticide, into a non-toxic isomer.

Various Techniques of Bioremediation

- IN-SITU (ON SITE) METHOD: Uses microorganisms to treat contaminated material at the site, as was done in the Exxon-Valdez oil spill in 1989.

- **EX-SITU (OFF SITE) METHOD:** Transporting the contaminatedmaterial from the site of contamination and using microbes for treatment.

Used by the Indian Oil Corporation Limited to clean up the Chennai oil spill this year.

- **BIOAUGMENTATION:** Non-indigenous microbial species added to a contaminated site to enhance the breakdown process. Villalba de los Barros, a municipality in Spain, has been using this technique since 2012 to treat wastewater.

- **ELECTRO-REMEDIATION:** Using microbes to remove nitratesfrom soil. Trials conducted in SouthKorea in 2009 to treat nitrate-rich soil.

- **ELECTROKINETICBIOREMEDIATION**: In-situ treatment of soil pollutants known as Hydrophobic OrganicCompounds. Denmark used thistechnique in 2012 to degrade PCE, orPerchloroethylene, a soil contaminant.

8.22. Air Independent Propulsion

- It is any marine propulsion technology that allows a non-nuclear submarine to operate without access to atmospheric oxygen.

- AIP can augment or replace the diesel-electric propulsion system of non-nuclear vessels.

Why AIP

- While underwater, the batteries on board power the propeller and other electrical systems on board the submarine.

- These batteries run out of charge within 4-5 days and the sub needs recharge them. This is done by *snorkeling*, which means travelling just below the surface of the water with the periscope and the diesel generator exhaust pipe above the water surface.

- It exposes them to detection by enemy radars and makes them an easy target for hostile anti-submarine assets.

- The use of AIP on a diesel-electric submarine, greatly increases their underwater endurance, allowing them to continuously stay submerged for weeks without surfacing.

8.23. The Roll Out Solar Array (ROSA)

- Solar panels are an efficient way to power satellites, but they are delicate and large, and must be unfolded when a satellite arrives in orbit.

- The Roll-Out Solar Array (ROSA) is a new type of solar panel that rolls open in space like a party favor and is more compact than current rigid panel designs.

- ROSA technology allows the conversion of sunlight into electrical power that drives the ion thrusters of a solar electric propulsion spacecraft.

- ROSA is expected to enable a number of space initiatives and is a cost-saving plus to transport cargo over long distances beyond the Earth.

Applications

Space Applications

- ROSA has the potential to replace solar arrays on future satellites, making them more compact and lighter weight. Satellite radio and television, weather forecasting, GPS and other services used on Earth would all benefit from high-performance solar arrays.

Earth Applications

- The International Space Station, telecommunications and research satellites, and satellites for military use are all powered by solar arrays, which convert sunlight into energy.

- ROSA is a new design that uses a one-piece, flexible composite material that snaps open in space. It has higher power density than existing technology and can be easily adapted to different sizes, making it a promising material for use on all future NASA, military and commercial solar-powered spacecraft.

8.24. Replacement of Gelatin Capsules with Hydroxy Propyl Methyl Cellulose (HPMC)

- In March 2016, the proposal to replace animal based gelatin capsules with Hydroxypropylmethyl cellulose (HPMC), a type of plant based cellulose capsule, was mooted.
- **Health concern:** Gelatin may be derived from cows with Bovine spongiform encephalopathy (BSE). This may lead to Creutzfeldtjakob disease (a fatal disease) in human population consuming it.
- **Cross linkages:**There are reports of drug incompatibility and cross linkages due to gelatin capsules.
- India will be the first country to incorporate vegetable capsules in the Indian Pharmacopeia if the proposal is implemented.

8.25. NASA-ISRO Synthetic Aperture Radar satellite (NISAR)

- A joint mission by ISRO and NASA to co-develop and launch a dual frequency synthetic aperture radar satellite.
- **Aim of mission:**
  - To study global environmental change and natural disasters.
  - Explore newer application areas in natural resources mapping & monitoring.
  - Estimating agricultural biomass over full duration of crop cycle.
  - Assessing soil moisture.
  - Monitoring of floods and oil slicks.
  - Monitoring of coastal erosion, and change in coastline.
  - To study variation of winds in coastal waters.
  - Assessment of mangroves.
  - To study surface deformation due to seismic activities.

8.26. GeneXpert machines

- It is a multi-disease testing device for Tuberculosis (TB), HIV and Hepatitis.
- Using the device for multi-disease diagnosis can increase system efficiencies and improve access to testing for patients in need.
- Such devices can also help overcome specific challenges in diagnosis and treatment, such as HIV early infant diagnosis and viral load monitoring for both HIV and hepatitis.

8.27. GSAT 17

- Country's newly launched communication satellite
- This was built mainly for broadcasting, telecommunication and VSAT services, carries over 40 transponders.
- It also has equipment to aid meteorology forecasts and search and rescue operations across the sub-continent.

- Its in-orbit operational life is about 15 years.

- It is designed to provide continuity of services of operational satellites in C, extended C and S bands.

- It was launched from the South American space port of Kourou, French Guiana.

9. ECOLOGY AND ENVIRONMENT

9.1. Disaster Mitigation: India Working To Build Up A Global Coalition

India has taken an initiative to build a global coalition of countries on disaster mitigation at the Global Platform for DRR (disaster risk reduction) organized by the UN's Office for Disaster risk Reduction (UNISDR).

Objective

- The agenda of the meet was finding coherence among the Sendai framework for DRR, the Paris Climate agreement and the Sustainable development goals.

- The platform will share the expertise and technology with each other on safeguarding critical infrastructure that includes schools, hospitals, road, power and telecommunication.

Significance

- This is second significant diplomatic initiative by India after forming a global alliance of 121 countries post-Paris Climate Conference of 2015.

- The proposed coalition would be key to integrate all the three major frameworks of Sendai, Paris and the Sustainable goals by focusing on safeguarding the critical infrastructure and achieving these goals by 2030.

- Damage to social and physical infrastructure disrupts social and economic activity and brings hardships to poor and the handicap and affects their livelihood.

- Safeguarding the critical infrastructure is as important as it is to achieve the goals of the sustainable development and the climate change.

Background

- India had issued a 10-point agenda on safeguarding critical infrastructure apart from a global coalition in November 2016 at the Asian ministerial conference on DRR in New Delhi.

- 10 point agenda was issued to fulfil the Sendai framework, which calls for targeted reduction of losses of both lives and properties by 2030.

- The proposed coalition is expected to collaborate in four areas –
  - Areas of scientific research
  - An institutional set up for standards and design for construction of physical infrastructure and its operation and maintenance by member countries.
  - Linking financing to resilience
  - Supporting recovery of infrastructure when disasters strike them.

India's Initiative

- India is projecting itself as a champion of climate change and sustainable development.

- Towards meeting its DRR goals, it had had set aside more than $8 billion for disaster mitigation and relief work over a five year period.

- India is the only country in the world to have come up with a national plan and a local strategy for DRR.

- By forming a coalition on DRR India has shown a desire to engage nations across continents.

9.2. Dual Onslaught On Earth: Global Warming And Local Urban Heating

According to recent studies, apart from of global warming, localised urban heating may warm the world's cities by as much as eight degrees Celsius by 2100.

Findings Of The Study

- The top quarter of most populated cities, in this scenario, could see the mercury rise 7 degrees Celsius or more by the end of the century a study in the journal *Nature Climate Change*.

- In some cities, nearly 5 degrees Celsius of the total would be attributed to average global warming.

- The rest would be due to the so-called urban heat island (UHI) effect. Such an effect occurs when cooling parks, dams and lakes are replaced by heat-conducting concrete and asphalt making cities warmer than their surrounds.

- The top 5% (of cities per population) could see increases in temperatures of about 8 degree Celsius and larger.

Impact

- Such a temperature rise can adversely affect the health of city-dwellers. It may rob the companies and industries of able workers.

- It can also put a pressure on already strained natural resources such as water.

- UHI "significantly" increases city temperatures and economic losses from global warming.

- The median city, right in the middle of the range, may lose between 1.4% and 1.7% of GDP per year by 2050 and between 2.3% and 5.6% by 2100.

- For the worst-off city, losses could reach up to 10.9% of GDP by 2100.

Measures

Local actions to reduce UHI like planting more trees or cooling roofs and pavements, can make a big difference in limiting warming and minimising costs.

Roots of Urban Heat Island

- Cities cover only about 1% of the earth's surface but produce about 80% of gross world product and account for around 78% of energy consumed worldwide, said the researchers.

- They produce more than 60% of global carbon dioxide emissions from burning coal, oil and gas for fuel.

About Urban Heat island

- An **urban heat island** (**UHI**) is an urban or metropolitan area that is significantly warmer than its surrounding rural areas due to human activities.

- The temperature difference is usually larger at night than during the day and is most apparent when winds are weak**.**

- The main cause of the urban heat island effect is from the modification of land surfaces.

9.3.   India's Low Carbon Transition

Why In News

- India along with China has taken positive steps to curb national carbon emissions, and is progressing ahead of the goals set under the Paris Agreement.

- India in particular has made a push towards a low carbon economic transition by expanding its renewable energy capacity by 350% over the past 13 years and plans to double its existing renewable energy capacity by 2022.

What India Has Done

- In addition to investing in solar and wind projects, India is investing in clean coal plants, developing alternative energy sources.

- Government is also focusing on managing its upcoming urban transition in order to curtail carbon emissions while achieving its economic goals.

Concerns

- Despite the progress on renewable energy front, India is (current share of coal @77%) and will (future outlook @ 60% in 2040) continue to be powered by coal.
- Domestic Indian coal happens to be of a poorer quality in comparison to international varieties.
- Additionally, coal plants in India are extremely inefficient—India is currently ranked third worst in the world in coal-plant efficiency.
- This leads to excessive carbon emissions. Natural gas and nuclear energy make up only 8%, of India's power sector.
- For the natural gas industry, the main issue is lack of domestic infrastructure. India currently has a natural gas pipeline network of 15,000km, compared to 500,000km in US.
- The nuclear energy sector also has some barriers for entry in India. They include uncertain climate for international nuclear energy corporations, disincentives provided by Indian liability laws and the difficulties in conducting business faced by foreign firms.

What India Should Do

- For a low carbon economic transition, it needs to move towards clean coal technology, develop alternative fuel sources and manage its urban transition, while continuing to invest in renewable energy.

- Investments in its natural gas infrastructure and its domestic nuclear energy manufacturing capacity could hold the key for a carbon-free future.

9.4. Ameenpur Lake Becomes The First Biodiversity Heritage Site In The Country

Ameenpur Lake has become the first water body in the country to be declared a Biodiversity Heritage Site.

Significance

- Telangana State Biodiversity Board has been able to stop encroachments, garbage dumping and the disturbance to birds.
- The biodiversity tag will help to protect Ameenpur Lake which is rapidly shrinking due to the ravages of urbanisation.

Concern

- Despite the biodiversity heritage tag, the lake is shrinking rapidly. Spread across 93 acres, the lake is still less than a third of its original size of 300 acres.
- Rampant encroachment, a new cinderblock brick kiln and a sewer from a chemical industry complex on its western shore discharging effluents into the lake are the key threats to its existence.

About Ameenpur Lake

- The lake dates back to the time of Ibrahim Qutub Shah, who ruled the kingdom of Golconda between 1550 and 1580.

- According to one account, the tank was excavated to irrigate a large public garden. The lake is now divided into two parts called Pedda Ameenpur and Chinna Cheruvu.

- The teeming birdlife is one of the key features of the lake.

Benefits Of A Heritage Tag

- The heritage tag helps to preserve local habitats rich in plants and animal life. It also helps in the conservation of biological resources, their sustainable use and equitable sharing of benefits of the rich biodiversity.

- Once an area is declared as a heritage site, the local bodies i.e. panchayats will get a revenue share from those using biodiversity resources for commercial purposes.

- Moreover, collection of plants, animals and microbes gets strictly regulated and the local people will be involved in the conservation of the sites.

Procedure

- The Biological Diversity Act, 2002, empowers the state government to notify areas of biodiversity importance as the Biodiversity Heritage Site (BHS).

- Under this Act terrestrial, aquatic, coastal, inland and marine ecosystems having rich biodiversity are chosen for a heritage tag.

9.5. Tiny Orang Roars On Tiger Density

Why In News

- Orang tiger reserve in Assam which has the smallest core among 50 nationally protected areas has shown a high density of 28 big cats.

- The count is a result of phase IV of the all-India tiger estimation programme of the National Tiger Conservation Authority (NTCA).

Density Maths

- Density is calculated based on the number of tigers per 100 sq. km. Thus, Orang has the highest density nationally with 35.44 tigers per 100 sq. km.

- A Wildlife Institute of India and NTCA report last year titled *The Status of Tigers, Co-predators and Prey in India*, showed the density in Kaziranga National Park was 12.72 per 100 sq. km.

- They were followed by Jim Corbett National Park (11) in Uttarakhand and Bandipur National Park (10.28) in Karnataka.

- *Why Good density* - The tiger reserves from Uttarakhand to Nepal, parts of Bihar and north Bengal and in Assam in the '**Terai arc landscape"** sustains grassland and a good prey base.

- The presence of 30 to 35 cats in Orang should lead to a deeper study of tiger ecology in the landscape.

About Orang Tiger Reserve

- Orang Tiger Reserve is the 49th tiger reserve in the country. It was notified in February 2016 It has the smallest core of 78.28 sq. km. Kamlang Tiger Reserve in Arunachal is the 50th and latest to be notified.

- Located on the north bank of Brahmaputra, Orang is famous for its **rich one-horned rhino habitat** after the Kaziranga national park which is on the southern bank of Brahmaputra.

- However, Orang also has viable population tiger population as the park forms contiguous landscape with Kaziranga, connected through numerous sand islands on Brahmaputra.

- Kaziranga's tiger population is connected to Orang's through sand islands system known as Orang-Kaziranga tiger corridor.

- It forms a single largest landscape of big cat population in the state.

- This landscape also includes Loakhowa and Burachapori wildlife sanctuaries which are also tiger habitats.

- Orang boasts of a unique **core –buffer division.**

- Orang's buffer area is 413.18 sq. km. However the boundary between the core and buffer is sharp and not contiguous forest as in other reserves of Assam.

About NTCA

- The National Tiger Conservation Authority is **a statutory body under the Ministry of Environment, Forests and Climate Change.**

- **It has been constituted under the provisions of the Wildlife (Protection) Act, 1972**, amended in 2006.

- It focuses on strengthening tiger conservation, as per powers and functions assigned to it under the WPA Act.

9.6. Govt Plans Temporary Tourism Facilities In Eco-Sensitive Coastal Zones

- The government has decided to bring the major changes via draft Marine and Coastal Regulation Zone notification 2017.

- CRZ 1 comprises mainly areas that are eco-sensitive, have geo-morphological features such as mangroves, coral reefs, sand dunes, turtle nesting grounds, horse shoe crab habitats and others.

Proposed Changes

- It has decided to allow "temporary tourism facilities" in the ecologically sensitive areas which are defined under coastal regulation zone 1.

- According to draft notification development in urban areas (CRZ II or areas near the shoreline) is to be regulated as per local laws.

- It empowers the state governments to prepare marine coastal zone management plans based on land use or regional plans by providing environmental safeguards.

- It permits the housing and infrastructure for local people within 50 metres from the High Tide Line in rural areas or CRZ III.

Contradictions

- CRZ Notification 2011 allows development in CRZ II areas as per the town and country planning norms of 1991.

- The CRZ Notification, 2011 permits houses for coastal communities only after first 100 metres.

Concerns

- The proposed changes allow opening up of restricted areas on the coast for tourism and other constructions.

- This can increase the ecological vulnerability of coastal areas which have been facing pressures due to **land use change, mangrove destruction associated sea erosion.**

- Mining of the sand, rocks and other substrata material is expected to cause damage to the Coastal environment including the Sea water intrusion.

CRZ 2011

❖ Coastal Regulation Zone (CRZ) and the Island Protection Zone (IPZ), for Lakshadweep, Andaman & Nicobar Islands were introduced in 2011. It replaced CRZ of 1991.

Objective

❖ It focuses on the protection of livelihoods of fishing communities and preservation of coastal ecology

---

apart from promoting economic activity in coastal regions.

Limit of the CRZ Area

❖ CRZ area includes the water area up to 12 nautical miles in the sea and the entire water area of a tidal water body such as creek, river, estuary, etc.

What is allowed and what is prohibited in Coastal Zones?

❖ Coastal Regulation Zone (CRZ) area prohibits the mining of limestone sand-rocks and other substrata material.

❖ It allows mining of rare minerals like, monazite, rutile etc. and exploitation of oil and natural gas.

9.7.   Kerala Govt Implements 'Green Protocol' For Weddings

- The Kerala government has floated a green protocol to make wedding and other the auspicious occasions more nature-friendly.

- The core objective of the initiative is to reduce the use of plastic in daily life. With the effective implementation of green protocol, it aims to reduce the amount of plastic used in the long run.

- The protocol will ban plastic and other non-degradable articles.

- Instead it will promote the use of tumblers, plates and other utensils made of glass and environment-friendly metals.

- The protocol has been released as a part of the government's anti-plastic drive and Green-Kerala Mission.

Suchitwa Mission

- It is the state nodal agency for sanitation. It has launched the green protocol in Kannur, Ernakulum, Kollam and Alappuzha on a pilot basis.

- The Mission has engaged the district administration, panchayat authorities and socio-cultural and religious outfit for the green-protocol initiative.

9.8.   New Species Of Flying Squirrel, A 'Surprising' Discovery

In News

- Scientists have discovered a new species of flying squirrel in North America not seen for hundreds of years.

- Known as Humboldt's flying squirrel, these new flying squirrel species inhabits the Pacific Coast of North America.

- Until now, these coastal populations were considered to be the already-known northern flying squirrel.

Uniqueness About Discovery

- Discovery is a result of through study of nuclear genome in addition to mitochondrial DNA, for the first time.

- The Humboldt's flying squirrel is known as a "cryptic" species - a species that was previously thought to be another, known species because the two look similar.

- This new discovery of the Humboldt's flying squirrel is the 45th known species of flying squirrel in the world.

- The gliding ability of flying squirrels is a special feature.

9.9. 'Jal Sanchay Project' of Bihar To Conserve Water Gets National Award

About the News

- Project Jal Sanchay of Bihar government has been selected for the National Award in Excellence by the Ministry of Rural Development.

- It has been selected as a part of **Mahatma Gandhi National Rural Employment Guarantee Programme (MGNREGP).**

Background

- Agriculture is a primary occupation in Nalanda. However it was affected by the drought-like conditions leading to adverse impact on cultivation and farm production.

- To overcome these obstacles and offer farmers a wide spectrum of solutions to their water crisis Project Jal Sanchay was launched.

- It was launched under MGRNREGA by the authorities in the Nalanda and the water conservation model was successfully adopted.

Jal Sanchay Project

- Though conceived as an administrative initiative, it soon turned into a people's movement.

- Under the project focus was on the creation of check dams were. Also the traditional Aahar-Pyne irrigation system and water bodies were desilted and renovated.

- As a part of the project campaigns were held for creating awareness about water harvesting.

- Project gathered the knowledge about the traditional water conservation system useful in water management and in maintaining water table in the area from the local farmers and incorporated it for implementation.

- As a result of this, a holistic approach to the problem of water conservation was evolved, which was a blend of modern day techniques and technologies with traditional knowledge.