CURRENT AFFAIRS
JANUARY 2016
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1. POLITY AND GOVERNANCE

1.1. LODHA COMMITTEE RECOMMENDATIONS

Background

- A sequence of events starting from the IPL 2013 spot-fixing scandal reached its logical conclusion when the three-member Lodha panel submitted its report on the functioning of the BCCI to the Supreme Court on January 4, 2016.
- The report culminates the panel’s exhaustive investigations into
  - How the game is run in the country
  - What could be done to ensure that transparency and accountability is the rule rather than exception.

The committee’s 'Report on Cricket Reforms' is divided into four parts:

(a) In the first, the objectives of the committee are outlined.
(b) In second report, the problems associated with the BCCI- its conflict of interest, corruption, lack of transparency, etc has been identified and its solution has been recommended.
(c) The third part of the Report on Cricket Reforms is an appendix containing the detailed questionnaire that was provided to the BCCI and stakeholders.
(d) The fourth part is report on former IPL COO Sundar Raman in which committee has cleared former IPL chief of wrongdoing in connection with the 2013 betting and spot-fixing scandal.

Key Recommendations

- **Structure:** To resolve the issue of no proper representation of States the Committee proposed the solution in form of policy of ‘One State – One Member – One Vote’.
- **Governance:** There are various issues like Concentration of power, Lack of competence, Overlap of diverse functions, Zonal considerations, No representation to players and women, No independent voice, unlimited terms and tenures and No disqualifications. To resolve this committee has recommended that governance of the BCCI must be decentralized.
- **Delinking IPL and BCCI:** One of the important recommendation is to separate the IPL from the other activities of the BCCI. The committee also proposed a revamp of the existing BCCI governing council (GC) and its membership.
- The committee also recommended the creation of three new positions— an ombudsman, an ethics officer and an electoral officer.
- **Bring BCCI under Right to Information Act** - People have the right to know the functions, facilities and other activities of BCCI and it will also help in bringing transparency and accountability in BCCI’s functioning.
- **Legalized betting** – The committee also recommended legalizing betting with strong safeguards. And even if legalized for players and team officials, betting is a big no.
- **Player’s Association** - It also recommended the establishment of players’ associations, which would offer membership to all Indian international and most first-class cricketers who had retired not less than five years ago.

**Pros**

- The proposed measures could radically alter the way the BCCI functions and it will also improve its public image and impart much-needed credibility.
Recommendations such as restricted tenures, bar on holding more than one office at a time, limits on terms, cooling-off periods between the holding of one office and another and steps to prevent conflict of interest will be step in right direction if implemented in both spirit and letter.

One significant suggestion is that government servants and ministers be kept out of cricket administration. Even if the political class as a whole is not barred, it will at least prevent influential politicians in government eyeing the spoils of office in cricket administration.

Challenges

- Its recommendation on legalizing the betting is a progressive one. However, its implementation, will hinge on suitable local legislation across the country.
- The BCCI will have to ensure strict adherence to the condition that players, managers, officials or anyone associated with cricket are not allowed to participate in betting.
- Recently, Sourav Ganguly led Cricket Association of Bengal (CAB) has decided to reject 10 out of the 21 Lodha Committee recommendations made by the Supreme Court.
- Among the rejections are age and tenure issue and the recommendation that government officials can’t be the office bearers in BCCI or its affiliated units.

Way Forward:

The recommendations are progressive and are aimed at bringing transparency and effectiveness in the administration of cricket body. However, Supreme Court should also seek the BCCI’s view in this regard and try to build a consensus for the better implementation of these recommendations.

1.2. ENEMY PROPERTY ORDINANCE, 2016 PROMULGATED

Why in news?

Recently, the President of India has promulgated the Enemy Property (Amendment and Validation) Ordinance, 2016 to make amendments to the Enemy Property Act, 1968.

Need

- To ensure that the enemy property continues to vest in the Custodian, appropriate amendments were brought in by way of an Ordinance in the Enemy Property Act, 1968 by the then Government in 2010.
- However, the ordinance lapsed in September 2010 and later introduced bill was also lapsed because of completion of term of Lok Sabha.

Provisions of the Ordinance

- Once an enemy property is vested in the Custodian, it shall continue to be vested in custodian as enemy property irrespective of whether the enemy, enemy subject or enemy firm has ceased to be an enemy due to reasons such as death etc.
- Law of succession does not apply to enemy property.
- There cannot be transfer of any property vested in the Custodian by an enemy or enemy subject or enemy firm and that the Custodian shall preserve the enemy property till it is disposed of in accordance with the provisions of the Act.

Impact of Ordinance

- The above amendments to the Enemy Property Act, 1968 will help in plugging the loopholes in the Act to ensure that the enemy properties that have been vested in the Custodian remain so and they do not revert back to the enemy subject or enemy firm.

- The Enemy Property Act was enacted in the year 1968 by the Government of India, which provided for the continuous vesting of enemy property in the Custodian.
- The act authorized the Central Government of India to appoint a custodian for enemy property for India and one or more deputy/assistant custodians as assistances.
- There is also a provision which validates the appointments made under the Defence of India Rules 1962 and 1971.
- The fees equal two percent on the gross income from the properties vested in the Custodian. The income received by way of rent, interest etc. on securities is invested in the Reserve Bank of India.

1.3. TRANSPORT AND ROAD SAFETY BILL, 2015

Why in news?

Recently government has drafted a new TRANSPORT AND ROAD SAFETY BILL, 2015 to reduce road accidents by at least 50%.

Aim of bill

- To provide a scientifically planned and evolving framework for the safety of all road users in India, including vulnerable road users.
- To enable the seamless development of a secure, efficient, cost-effective, sustainable and inclusive transport system for the movement of passenger and freight in the country.

Salient features

1. Technology: It proposes adoption of new technology and standards with improved vehicle design for safer travel. It also intends to make spare parts cheaper.
2. Funding: It proposes innovative financing mechanism for funding safety programs which would save over 200,000 lives in first 5 years due to reduction in road traffic accident deaths.
3. Motor Vehicle Regulation & Road Safety Authority of India: This Independent Agency will set regulations for motor vehicle and road safety. It will finance road/vehicle safety program and will be Accountable to Parliament.
4. Motor Vehicle Regulation: The bill sets up appropriate regulation regarding vehicles.
5. Unified Driver Licensing System: The bill proposed a simpler transparent, single window driver licensing system that is based on biometric to avoid duplication
6. Unified Vehicle Registration System: It proposes a Unified Vehicle Registration System integrating all stakeholders like manufacturer, owner, transport authority, insurer, and enforcement agency all in one ecosystem with private sector participation in establishing fitness certification centres to create more jobs.
7. Road Safety & Traffic Management:
   - Electronic enforcement in urban clusters using modern safety technologies with special emphasis for safety of vulnerable road users

Road accidents are one of the biggest killers in India. Over 10 lakh people have been killed in road accidents in India in the last 10 years but the country is yet to have a stringent law on the issue.
8. **National Road Transport & Multimodal Coordination Authority:**
- Creation of National Road Transport & Multimodal Coordination Authority for improving quality of road transportation,
- Focus on developing integrated transport systems & multi-modal hubs and feeder system and last mile connectivity for people friendly mobility.

9. **Public passenger Transport:**
- Increasing the share of public passenger transportation,
- Two-tier permit system: national and intrastate permit and
- Developing & regulating public passenger transport schemes and developing & regulating public passenger transport schemes.

10. **Goods Transport & National Freight Policy:**
- Simplified permits and single portal clearances,
- Identification and development of freight networks,
- Address bottlenecks concerning trucking industry and increase in logistics efficiency will reduce inflation and enable Indian manufacturing to become globally competitive.

11. **Infrastructure & Multimodal Facilitation:**
- Infrastructure for efficient passenger and goods movement,
- Specific provision of infrastructural needs for vulnerable road users,
- Integration across various modes of transport.

12. **Offences and Penalties:**
- Graded penalty point system with enhanced fines will act as a deterrent and improve traffic condition by reducing road rage.
- It also seeks to come down heavily on traffic offenders and proposes steep penalties of up to Rs. 3 lakh along with a minimum 7-year imprisonment for death of a child in certain circumstances, besides huge fines for driving violations.

13. **Highway Traffic Regulation and Protection Force:** for the purpose of effective policing and enforcement of traffic regulations on highways, an armed force of the State to be called the Highway Traffic Regulation and Protection Force.

---

**Q. What ails India’s road transport economy? Suggest measures of remedy. (CSE MAINS 2004)**

**Q. Technological changes have brought in a major shift in the use of roads as transport corridors in India. How far do you agree with this view? (CSE MAINS 2007)**

**Q. National urban transport policy emphasizes on moving people instead of moving vehicles. Discuss critically the success of various strategies of the government in this regard. (CSE MAINS 2014)**

---

**1.4. BLACK SPOTS IN ROAD SAFETY**

**Why in news?**

There has been increasing concern over about five lakh road accidents in the country every year in which about 1.4 lakh people lose their lives. Majority of these have been linked to Black spots.

**What are Black spots?**

- They are road locations that have a record of large numbers of crashes. There are often common problems at these sites which can be treated with engineering methods.
- Reason for Black spots is noncompliance with Road Safety Norms during design, construction and operation of roads including National Highways.
- Below are most common Black spots:
  - Sharp drop or corner in a straight road so oncoming traffic is concealed
  - Hidden junction on a fast road
- Poor or concealed warning signs at cross-roads.
- 325 most dangerous black spots have been identified in 13 States. These spots account for about 90% road accidents.

**Steps taken by Government in this issue:**
- A website has been launched to help in identifying black spots where accidents take place frequently. The people can send information about such spots to the Ministry of Road Transport & Highways which will further take up the issue with the concerned authorities.
- Work on ten black spots in Delhi has being taken up.
- Rs. 11,000 crore has been earmarked in the next five years to fix black spots across the country

### 1.5. PORTALS FOR BRINGING TRANSPARENCY IN ROAD PROJECTS

**What is the news?**
- NHIDL will come up with two more portals ‘Infracon’ and ‘ePace’ that will provide all necessary details regarding highway projects.
- Centre also launched **INAM-PRO platform** for infrastructure and material providers.

<table>
<thead>
<tr>
<th><strong>INFRACON</strong></th>
<th><strong>INAM-PRO</strong></th>
<th><strong>e-PACE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>It will have all the information about individual consultants and consultation firms</td>
<td>Portal will enable central or state government agencies register and procure cement directly from suppliers on cheaper rates on &quot;cash and carry basis&quot;</td>
<td>It will help people know about highway projects status, funding and other details</td>
</tr>
<tr>
<td>It would serve as a platform for infrastructure consultants where individual consultants as well as consulting firms could register themselves.</td>
<td>Already 33 cement firms and 107 plants are registered with committing cement at cheaper rates for projects.</td>
<td></td>
</tr>
<tr>
<td>There credentials would be made available there and can be accessed by people</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It will make available the largest pool of consultants in the field.</td>
<td></td>
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</tr>
</tbody>
</table>

**Application:**
- All necessary details including project report and current status and all important data will be available on the platform.
- Big Boost to Make in India (Ease of doing business) using Digital India applications
- Will promote transparency and efficiency in highway projects which are one of the major reasons for stalled projects and rising bank’s NPA

### 1.6. CENTRE TO SET UP ROAD SAFETY REGULATOR

The Centre is planning to expedite a proposal to set up a road safety regulator in India.

**Need**
- In India, around 1.5 lakh people are killed in road accidents every year.
- In most of the urban areas, there are many potholes on the roads which lead to many accidents in cities.
Last year Center has awarded contracts to build approximately ten thousands kilometers of roads in India so effective monitoring is needed to ensure the quality construction.

**Benefits**

- It will push automobile companies to introduce airbags in economy cars.
- It will also push states to conduct safety audits of state highways and district roads.
- It will be helpful in ensuring road safety norms in India.
- It will also ensure the effective maintenance of the roads.

### 1.7. ELECTORAL TRUST

**What is Electoral Trust?**

- Electoral Trust is a company or a non-profit company created in India under Section 8 of the Companies Act for orderly receipt of the voluntary contributions from any person and for distributing the same to the respective political parties, registered under Section 29A of the Representation of People Act, 1951.

**Examples of Corporate Trusts:** Bharatiya Socialist Republican Electoral Trust, Bajaj Electoral Trust and Jankalyan Electoral Trust, Progressive Electoral Trust (Tata), People’s Electoral Trust (Reliance Industries), Janhit Electoral Trust, Satya Electoral Trust

- Corporates are entitled for tax benefits with regard to electoral trusts subject to certain conditions.
- The benefits can be availed only if the trusts distribute 95% of the total contributions received in a particular fiscal to registered political parties in that same year itself.
- These entities are barred from receiving donations in cash. Foreign citizens are not allowed to contribute money to the trusts.

**Objective**

- The objective of the Electoral Trust is not to earn any profit or pass any direct or indirect benefit to its members or contributors.
- The sole objective is to distribute the contributions received by it to the political party concerned.
- This is a mechanism for bringing transparency and sanity in the political party funding.

**Why do corporates and politicians prefer electoral trusts?**

- It spares them the embarrassment of baring their political leanings (maintaining anonymity).
- It also spares them the resultant pain of retribution by the political party not benefiting from the company’s munificence.
- Even Political parties lack anonymity.

### 1.8. ELECTION COMMISSION SEEKS FULL INDEPENDENCE

**Why in news?**

- The Election Commission of India (ECI) has sought complete independence from government control in a recent meeting with government.
- At present only Chief Election Commissioner has security of tenure
- Also its budget is not a charged expenditure, but is voted by the Parliament.
WHAT IS A SPV?
An SPV is a legal entity created for a specific purpose, which can theoretically be shut down after the specified purpose has been achieved.

The major advantage of an SPV is that it allows investors to limit their risks and maximize profits, and bypass cumbersome legal and regulatory issues.

Demands made by ECI

- It has demanded for constitutional protection for all three of its members as opposed to just one at present. Its two Election Commissioners can be removed by the government on the recommendation of the Chief Election Commissioner.
- It also demanded a provision either in law or by some government resolution that the senior most EC should be automatically elevated as CEC in order to instill a feeling of security in the minds of the ECs and that they are insulated from executive interference in the same manner as CEC.
- It has also sought absolute financial freedom from the Law Ministry. Like the CAG and UPSC, the ECI wants its budget to be ‘charged’ to the Consolidated Fund as opposed to the current practice of being voted and approved by Parliament.
- It has also proposed an independent secretariat for itself with which it will not have to depend on DoPT to appoint its officers. If it is approved by the Law Ministry, the poll panel will be free to frame its own recruitment rules and shortlist and appoint officers on its own. It can then also draw competent professionals and experts from the job market.
- It has also pushed for the introduction of totaliser machines for counting of votes and multiple cut-off dates for voter registration. The totaliser machine increases the secrecy of voting by counting votes polled at 14 polling booths together, as against the current practice of announcing booth-wise result.

1.9. CHALLENGES WITH SPV IN SMART CITIES

Apart from criticism on the quality of proposals and public participation, there were indications of a few cities hesitant to submit their proposals.

- Reasons for setting up SPVs
  - To ensure objective and efficient decision making, independent of municipal councils, which are subject to local politics. The Smart Cities Mission (SCM) guidelines mandate an equal share of equity contribution by the state government and urban local body, thereby making them the majority shareholders.

- Concerns regarding Special Purpose Vehicle (SPV), which is to be mandatorily constituted for the implementation of their respective Smart City Plans.
  - For Local Bodies
    - Private sector led – seen as defeating essence of local self-governance and bypassing the elected municipal council.
    - SPV may be headed by a bureaucrat, which is a concern for local representation.

- For private sector
  - The absence of clarity on specific projects and assured revenue streams,
  - Combined with a lack of management control, may reduce the attractiveness of SPVs for private investors.

- Regulatory
  - Criteria: The SCM guidelines stipulate that government funding can only be used for projects that have public benefit outcomes. Criteria to decide the degree of public benefit of projects is unclear.
Convergence: The manner in which a smart city SPV interacts with the implementing agency for HRIDAY, and how two projects under the two separate programmes complement each other, is yet to be seen. For example, Varanasi is included under both SCM and the Heritage City Development and Augmentation Yojana (HRIDAY).

**Solutions:**
- An important first step would be to build safeguards to protect the democratic nature of governance structures. A robust governance structure, which allows for sharing of power and financial resources between urban local bodies and the private sector stakeholders, would go a long way towards assuaging fears.
- Government should clarify the financial nature of SPVs and how the private sector can contribute effectively.
- Critical issues of capacity and skill building for local bodies need to be addressed in parallel.
- Matters related to intellectual property rights, open standards and technology transfer should be enshrined at the highest level of government since it is difficult for individual urban local bodies to negotiate with private parties.

### 1.10. NAYI MANZIL SCHEME

**Why in News?**
- Recently, the Union government and the World Bank signed a $50-million credit agreement for Nai Manzil project.
- The Scheme is aimed at helping young people from minority communities complete their education and improve their employment opportunities.
- Recently, this scheme has been launched for the first time in Jammu and Kashmir by the Minister of Minority Affairs.

**Importance**
- According to the World Bank, around 20 per cent of those between 17 and 35 years of age from minority groups such as Muslims, Parsees, Jains, Buddhists, Christians, and Sikhs are out of the labour force.
- So to harness India’s demographic dividend completely it is important that all young people from all sections of society are equipped with the education and skills needed to make them productive members of the economy.

**Features of the scheme**
- This scheme is launched by the Ministry of Minority Affairs in August 2015.
- The aim of the scheme is employment generation of the youths and also extending loans for opening enterprises.
- The scheme will address educational and livelihood needs of minority communities in general and Muslims in particular as it lags behind other minority communities in terms of educational attainments.
- The scheme is intended to cover people in between 17 to 35 age group from all minority communities as well as Madrasa students.
- The scheme would provide ‘bridge courses’ to the trainees and get them Certificates for Class XII and X through ‘distance medium educational system’ and at the same time also provides them trade basis skill training in 4 courses – Manufacturing, Engineering, Services, Soft skills.
- Minimum 30% seats are earmarked for minority girls.
- It includes a Non-residential programme of 9-12 months duration involving a Basic Bridge Programme (For Class VIII or Class X) for their education, along with training in trade based skills for sustained livelihood/gainful employment.
- The scheme covers the entire country.
1.11. OPEN BOOK EXAMINATION

Why in news:
Centre urged state level and central board schools to consider Open Text Based Assessment (OTBA) at board level after the recommendation of eight member committee.

WHAT IS OPEN BOOK EXAMINATION:

- Open book examination is a system of assessment in which students can refer to their notes or textbook while answering the question.
- Examinees are expected not to merely reproduce textbook material, but to interpret it in the context of specific question which require conceptual understanding.

PROS

- More clarity of concepts for students, this would develop their cognitive skills.
- More focus on application aspect than mugging the curriculum.
- Less anxiety and fear during examination.
- Understanding of application would make students aware socially and environmentally.

BOTTLENECKS

- Capacity building of teachers is required in framing relevant questions to judge the understanding of students, and shift away from current mechanical teaching and evaluation process.
- Since education is in state list, hence state board’s reluctance or delay in implementing OTBA could be problematic.
- Culturally in India, since ancient times merit has been judged through rote learning. Hence, acceptance in the society towards OTBA would need behavioral change.

1.12. PANEL TO SUGGEST MEASURES FOR THE REVAMP OF CBFC

- Government has set up a panel headed by Shyam Benegal to suggest measures for the revamp of the Central Board of Film Certification (CBFC).
- The CBFC which was constituted on the basis of the Cinematograph Act, 1952, needs radical revision in a world where the idea of state censorship has few takers.
- The Justice Mukul Mudgal Committee in 2013 had also inquired into similar issues and submitted a report after conducting extensive consultations with stakeholders.
- The panel gave recommendations various issues, including certification and the selection of members to the CBFC, another contentious area since governments tend to use the board to disburse patronage.
- Hence, setting up of a new panel in this regard is a step in right direction and government should also ensure that panel’s recommendations are implemented properly.

Central Board of Film Certification (CBFC)

- It is a statutory body regulating the public exhibition of films under the provisions of the Cinematograph Act 1952.
- Films can be publicly exhibited in India only after they have been certified by the Central Board of Film Certification.
- It assigns certifications to films, television shows, television ads, and publications for exhibition, sale or hire in India
- The Board consists of non-official members and a Chairman (all of whom are appointed by Central Government) and functions with headquarters at Mumbai.
1.13. NHAI TO USE SATELLITE TECHNOLOGY

- To monitor national highways and road assets, Government has decided to use geospatial technology and Unmanned Aerial Vehicles (UAV).
- Govt. signed MOUs with Remote sensing Centre and NECTAR for the purpose.
- A 24/7 technical centre to be setup to provide project specific inputs to engineers using these technologies.
- It will be useful in providing inputs in highway and infrastructure projects for effective and precise preparation of detailed project report, upgrade, road widening and monitoring of under construction sites.
- It will help in quick completion of infrastructure projects.
- It will help in quick identification of problematic area using drones, course correction would then be precise and faster.

What is geospatial technology/remote sensing centre
- Geospatial technology refers to all the technologies like GPS, Remote Sensing etc. which are used to acquire, manipulate and store geographic information.
- Remote Sensing Centre is an organization under ISRO with responsibility of data analysis of several satellite images. It is located in Hyderabad
- North East Centre for Technology Application and Research (NECTAR), headquartered at Shillong is responsible for developing niche technology for development purposes.

1.14. INDIA RANKED 76TH IN CPI 2015

- Berlin based Transparency International’s Corruption Perceptions Index (CPI) 2015 released on Wednesday shows that India has moved up in rank from 85th position to 76th.
- India’s score in the Corruption Perceptions Index (CPI) for 2015 remained unchanged at 38 as it was in the previous year.
- India shares its rank along with six other countries: Brazil, Burkina Faso, Thailand, Tunisia and Zambia.
- The number of countries ranked in 2015 was 168 against 174 nations in 2014.

Global Scenario:

1. Globally, Denmark retained its position as the least corrupt country for the second year running (with its latest score of 91 points).
2. Next in line are Finland and Sweden with scores of 90 and 89 points respectively.
3. The big decliners in the past four years include Libya, Australia, Brazil, Spain and Turkey.
4. The big improvers include Greece, Senegal and UK.
5. Overall, two-thirds of the 168 countries studied scored below 50, and the global average stood at 43.
6. China fared worse than India and Brazil at rank 83 with a score of 37.
7. TI has also noted that Pakistan is the only country among the SAARC countries, to have improved its score this year, though its rank remains poor at 117.

Neighbourhood Scenario:

- Barring Bhutan ranked 27, which with a score of 65 fares much better than India, other neighbouring countries continue to have a poor record.
- While China at rank 83 and Bangladesh at rank 139 have reported no improvement,
- Scores of Pakistan, Sri Lanka and Nepal have increased marginally over the past year.

What is corruption perceptions index?
- CPI, the most widely used indicator of public sector corruption worldwide, is a composite index that combines the results of surveys and assessments of corruption, collected by a variety of reputable institutions including the World Bank and the World Economic Forum.
- It looks at a range of factors like whether governmental leaders are held to account or go unpunished for corruption, the perceived prevalence of bribery, and whether public institutions respond to citizens' needs.
- As per the scoring system adopted, higher the score points on a scale of 0-100, lower is the corruption in that country.
Observations of Transparency International:

- Top country performers share key characteristics such as:
  - high levels of press freedom;
  - access to budget information so the public knows where money comes from and how it is spent;
  - high levels of integrity among people in power;
  - Judiciaries that don't differentiate between rich and poor, and that are truly independent from other parts of government.
- The report also says **68% of countries worldwide** have serious corruption problem and half of the G20 are among them.
- 64 countries had improved their score while only 53 declined. The rest remained unchanged.
- Even globally, there seemed to be an overall improvement in corruption alleviation – with both the United States and United Kingdom making their best rankings ever

1.15. NATIONAL AWARD ON E-GOVERNANCE

- The Employees’ Provident Fund Organisation has won the National Award on e-Governance 2015-16 for launching the **Universal Account Number (UAN)**.
- The EPFO won the gold award in the ‘innovative use of technology in e-governance’ category.

Employees’ Provident Fund Organisation

- The Employees’ Provident Fund Organization is a statutory body, is one of the largest social security organizations in India in terms of volume of financial transactions undertaken and number of covered beneficiaries.
- It works under the overall aegis of the Ministry of Labor and Employment.
- It administers a compulsory contributory Provident Fund Scheme, Pension Scheme and an Insurance Scheme.
- These schemes cover Indian workers as well as International workers (for countries with which bilateral agreements have been signed).

UAN Scheme

- On 1 October 2014, Prime Minister of India launched universal account number for Employees covered by EPFO to enable PF number portability.
- Through UAN, active employees are provided a universal number which can be linked to various provident fund account numbers provided to them while working in different organizations.
- A single account number can be used through all of workers’ employments with various organizations.
- The online portal allows a worker to view his provident fund balance on a real-time basis without going through the employer again and again.

1.16. RIVER INFORMATION SYSTEM

Why in news?

- Union Minister of Shipping, Road Transport and Highways inaugurated the River Information System (RIS) System on 06th January.
- It will facilitate safe and accurate navigation on National Waterway – 1 on the Ganges River.

**RIS are modern traffic management systems enhancing a swift electronic data transfer between water and shore through in advance and real –time exchange of information.**
### Salient features

- It is being implemented under the overall responsibility of Inland Waterway Authority of India, a statutory body administered by the Ministry of Shipping.
- RIS aims to streamline the exchange of information between waterway operators and users.
- This would facilitate:
  - Enhancement of inland navigation safety in ports and rivers.
  - Better use of the inland waterways
  - Environmental protection
- RIS enables achievement of safe and efficient inland water transport by avoiding Ship- to - Ship collisions, Ship - Bridge collisions and Groundings.
- Installation of an efficient and effective River Information Service (RIS) system on the Sagar- Farakka stretch of NW-1 is akin to the systems under operation in countries like the Netherlands, Belgium, Germany, China & USA.

### 1.17. WEB BASED RAIL TRACK MANAGEMENT

**Why in news?**

In a major step towards digitization, the Indian Railways on Monday launched a web-based system to monitor track maintenance on a real-time basis by replacing more than a lakh registers related to it.

**Present System:**

- Management of track maintenance is done largely manually.
- It involves handling of huge volumes of data statistics as well as analysis of various measurement and defects and planning, deployment of large resources.
- The web-based management of track maintenance will be implemented in all the 68 divisions of the Indian Railways.
- Various activities such as track inspection, monitoring and maintenance will now be done on the e-platform.
- The system will be cost and time saving.
- The system will give alerts through SMS and e-mails to the concerned officials in the Railways.
- This system is designed for:
  - Decentralized data capturing.
  - Speedy information dissemination.
  - Centralized data keeping and analysis.

### 1.18. BUREAU OF MINES TIES UP WITH NRSC

- The Indian Bureau of Mines has signed a memorandum of understanding (MOU) with the National Remote Sensing Centre of the Department of Space for monitoring mining activity through satellite technology.
- As part of the MoU, the IBM would set up an exclusive remote sensing cell under the technical guidance of the NRSC at its offices in Nagpur and Hyderabad.
- The cell will utilize Bhuvan-based services for monitoring mining activities as also for development of mobile app for field data collection to verify ground realities with respect of approved proposals.
- The NRSC would carry out a pilot project to demonstrate the feasibility of using high resolution satellite imagery in monitoring the changes over a period of time in select group of mines.
- The MoU paves the way for **sustainable development** and **responsible use** of natural resources.
- The departments concerned could leverage technology for near real time monitoring of the assets and ascertain whether the mining licensee was indulging in any irregularities.

**Bhuvan**

A software application which allows users to explore a 2D/3D representation of the surface of the Earth. The browser is specifically tailored to view India, offering the highest resolution in this region and providing content in four local languages.
• It will also study the feasibility of utilizing technology for restoration of the closed mines and areas where mining activities took place.
• The MoU envisaged training for the IBM staff in using the technology and this would be subsequently extended to the State Governments in the course of time.
• The MoU was significant for the IBM in the context that the officials could now monitor the activity through satellite technology instead of physical inspection every time.
• Technological intervention would keep check on illegal activities.
• It could also be utilised for research and development in mining.

1.19. GOVERNMENT TO RELAX MINING LEASE TRANSFER RULES (MMRDA BILL)

Why in news?
• The government plans to enact a law that will allow companies that received mining licences without having gone through the auction process to transfer these leases.
• This move will make mergers and acquisitions (M&As) easier in the steel cement, and metals sectors.
• Last year, the government brought in the Mines and Minerals (Development and Regulation) Amendment Bill, 2015, replacing a 1957 legislation, and said mining licences could only be auctioned.

Mines and Minerals (Development and Regulation) (Amendment) Bill, 2016
• It would amend the Mines and Minerals (Development and Regulation) Act, 1957 to allow the transfer of mining leases granted otherwise than through auction.
• This would facilitate banks and financial institutions to liquidate stressed assets where a company or its captive mining lease is mortgaged.
• The transfer provisions will also allow mergers and acquisitions of companies and facilitate ease of doing business for companies to improve profitability and decrease costs of the companies dependent on supply of mineral ore from captive leases.
• The transfer of captive leases would be subject to the consideration of enforcing Performance Security, Mine Development and Production Agreement (MDPA), and realization of an appropriate amount, if any, if found feasible at the time of framing terms and conditions.

Benefits
• This will help a lot of mines to come into production, which were earlier held up because the original lease holder had difficulties in developing them and could not transfer to others.
• This would benefit a lot of mines that are at different stages of development.
• The existing restriction on transfer of mines not allotted through an auction had also led to lenders’ funds getting stuck in projects. The move to allow transfer of mines will speed up consolidation in the industry.

1.20. KILKARI PROJECT

Why in news
Kilkari, a mobile voice message service will be launched by Central Government soon.

Salient Features of the Scheme
• This service will deliver weekly messages to families about pregnancy, family planning, nutrition, childbirth and maternal and child care.
• The database for the Kilkari programme will be taken from the successful Mother and Child Tracking System (MCTS) to monitor pregnant women and babies.
• Every woman registered with MCTS will receive weekly messages relevant to the stage of pregnancy and age of the infant.
• In all, 72 free audio messages, each of about two-minute duration, will reach targeted beneficiaries from the fourth month of pregnancy until the child is a year old.
• In the first phase, the Kilkari application is expected to benefit 1.84 crore pregnant women/newborns in Jharkhand, Odisha, UP, Uttarakhand and in some districts of Madhya Pradesh and Rajasthan.
• The messages will be delivered in languages chosen by the user. In phase one, scheme will be launched in Hindi, Odiya and hopefully Santhaali and Chhotanagpuri.
• In phase two, it will be various dialects of Rajasthan, and then we will extend to other languages.
• The Bill and Melinda Gates Foundation has provided the mobile phone application for Kilkari and mobile academy.
• In Bihar, same scheme has been already launched as a paid service.

1.21. ANUBHAV

• The Department of Pension & Pensioner’s welfare has launched online software - ‘Anubhav’.
• It will showcase the outstanding work by retiring employee and sharing experience of working with the Government.
• It will also provide facility to upload recorded voice message by the retiring employee.
• Over a period of time, this will create a wealth of institutional memory with replicable ideas and suggestions.
• It will also act as motivator for serving employees.
• This would provide an excellent opportunity to harness the resource of retiring employees for voluntary contribution to nation building post retirement.

1.22. KERALA LIQUOR PROHIBITION POLICY- SUPREME COURT VERDICT

• The Supreme Court has approved Kerala’s new liquor policy that prohibits drinking in public and restricts serving of alcohol to five-star hotels.
• While delivering the order, Supreme Court has also reminded all state governments that the constitution places a responsibility on them to “at least contain, if not curtail, consumption of alcohol.
• Court’s view was that the prices of alcohol in five-star hotels is usually prohibitively high, which acts as a deterrent to individuals going in for drinking and made an exception in favour of five-star hotels because of the interest of tourism sector in state.
• Kerala, accounts for nearly 14 per cent of the country’s liquor consumption.
• Alcohol prohibition in India is in force in the states of Gujarat, Nagaland and parts of Manipur as well as in the Union Territory of Lakshadweep. Bihar has announced a ban on alcohol sale starting 1 April 2016.
• Article 47 (Part of Directive Provision of State Policy) states that the State shall endeavor to bring about prohibition of the consumption except for medicinal purposes of intoxicating drinks and of drugs which are injurious to health.
• The policy led to the closure of over 700 bars and restricted liquor availability to nearly 20 five-star hotels.
1.23. NATIONAL DEVELOPMENT COUNCIL (NDC) TO BE SCRAPPED

- Union government has decided to scrap National Development Council.
- Government also passed a resolution for transferring its powers to the Governing Council of the NITI Aayog.

Reasons for scrapping NDC

- Prior to NITI Aayog, states' role was limited to the National Development Council and annual interaction during Plan meetings.
- However, after creation of NITI Aayog, state governments are expected to play a more significant role than they did in the Planning Commission. They are directly involved in decision making in NITI Aayog, because of this, role of NDC has become less important and redundant.
- Hence, present government has decided to scrap the NDC which is a step in right direction keeping the consistency in decision making and policy implementation.

1.24. MERGING OF MOIA WITH MEA

- Prime Minister has approved the long-awaited merger of the Ministry of Overseas Indian Affairs (MOIA) with the Ministry of External Affairs (MEA).
- Substantial work of MOIA is done through External Affairs missions abroad so there was point in having two different ministries for the same staff.
- It will help in preventing duplication and delay in various works.
- It will help in efficient functioning of the ministry.
2. INTERNATIONAL RELATIONS

2.1. WORLD DEVELOPMENT REPORT 2016

- World Bank published its annual World Development Report (WDR). It explores the impact of the internet, mobile phones, and related technologies on economic development. It proposes policies to expand connectivity, accelerate complementary reforms in sectors beyond information and communication technology (ICT), and address global coordination problems.
- The 2016 WDR issue titled “Digital Dividends,” noted that almost 1.063 billion Indians were offline even though India ranked among the top five nations in terms of the total number of Internet users, along with China, the U.S., Japan and Brazil.
- Growth, jobs, and services are the most important returns to digital investments. They are referred as digital dividends.
- WDR pointed reasons for digital dividends not spreading rapidly. First, nearly 60 percent of the world’s people are still offline and can’t fully participate in the digital economy. There also are persistent digital divides across gender, geography, age, and income dimensions within each country. Second, some of the perceived benefits of the internet are being neutralized by new risks. Vested business interests, regulatory uncertainty, and limited contestation across digital platforms could lead to harmful concentration in many sectors.
- Report argues that Digital investments need the support of “analog complements”: regulations, so that firms can leverage the internet to compete and innovate; improved skills, so that people can take full advantage of digital opportunities; and accountable institutions, so that governments respond to citizens’ needs and demands. Digital technologies can, in turn, augment and strengthen these complements—accelerating the pace of development.
- The report concludes that Digital development strategies need to be broader than ICT strategies. Connectivity for all remains an important goal and a tremendous challenge. But countries also need to create favorable conditions for technology to be effective.
- When the analog complements are absent, the development impact will be disappointing. But when countries build a strong analog foundation, they will reap ample digital dividends—in faster growth, more jobs, and better services.

2.2. TFA IN SERVICES- INDIA’S PERSPECTIVE

- India is pitching aggressively for TFA in services to the WTO.
- India considers free movement of professionals (Via Mode 1 and Mode 4) is in the interest of India and the world.
- TFA in services will ensure liberalised visa regime such as multiple entry visas, visa-free travel for foreign tourists and long term visas for business community.
- Beside that India is also looking at data privacy hurdles.
- India wanted to be recognised as a data secure country as it is important for meaningful access in cross border supply (Mode 1)
- Data secure status has been a highly contentious issue in bilateral investment and trade negotiations with the European Union.
Why India needs TFA in Service sector

- India is very strong in the **services area as the sector contributes over 50 per cent** in the country’s economic growth.
- A special initiative on services sector is needed. To achieve this, it is imperative to put in place a **simple and transparent regulatory framework** that encourages growth in the services sectors.
- To boost export of services India is working on **reform measures in education and legal services**.
- India is working on garnering support on the issue by holding meetings with like-minded Nations.

What is TFA?

- Trade facilitation agreement, is aimed at streamlining customs rules and procedures across the member nations and reduce transaction cost by expediting trade flows, has been pushed by developed countries.
- However it is yet to be implemented as it will come into effect only when two-thirds of the member nations ratify it. As of now 63 countries of the 162 nations have ratified it while India is yet to ratify it.

‘Non-issues’ at WTO talks

- A global agreement to lower trade barriers under Doha Round negotiations is supposed to take place into the WTO.
- India firming up a strategy to prevent ‘attempts’ by rich nations to introduce ‘new pro-corporate issues’.
- India will make it clear that discussions on any ‘new issue’ can take place only after resolving all the **outstanding matters** related to the Doha Round talks.

What are new pro-Corporate issues?

- Of which the rich nations have **superior standards** or rules than the developing and poor countries.
- These include global value chains, e-commerce, labour, climate-related trade (such as environmental services and goods), competition policies, investment pacts, government procurement and state-owned enterprises.

Why India is opposing such move

- The developing nations including India feel these standards or rules may become **non-tariff barriers**,
- In turn it will **hurt their exports to rich nations**
- The rich nations will be able to **indirectly open up** the developing markets through an agenda that includes ‘new issues’
- India, along with other developing countries, especially most members of the G-33, LDCs, the Africa Group and the ACP, **wanted a reaffirmation of the mandate of the Doha Round**.
- India had opposed the declaration brought out after the WTO’s ministerial conference (its highest decision making body) in Nairobi last month as it did not include measures primarily meant for improving trade prospects of developing and poor nations.
- India also oppose Rich nations attempts to bring in any “non-trade and WTO-plus” issues such as labour and environment into the RCEP.
- India wants that any country pitching for the introduction the ‘new issues’ will first have to ensure that they meet two criteria.
  - To ensure that there is a **consensus among all 162 WTO member countries** in taking up such an agenda.
2.2. BEIJING’S RACE FOR THE EURASIAN HEARTLAND

China’s Eurasian Pivot: What is it?

- It is part of China’s “One Belt, One Road” (OBOR) strategy, to enhance Eurasian economic connectivity through the construction of a Silk Road Economic Belt (SREB) and a Maritime Silk Road (MSR).
- Pivot west to Eurasia seeks to turn its vulnerability – a border with fourteen nations – into a strategic asset.
- Equally significant has been Beijing’s partnership with Moscow: Russia was a major partner in building the Chinese military deterrent (S-400 air defense deal, su-35 fighter planes), China has also signed a $400 billion import deal with Russia for the next 30 years.
- Two are trading in the Chinese yuan and the Russian ruble through currency swap agreements.

Why China is focusing on EURASIA now?

- It is China’s response to the ‘Pivot to Asia’ doctrine or ‘Rebalance to Asia’ policy of USA.
- Western markets still remained trapped by the impact of the 2008 economic crisis, China is taking major steps to restructure its economy through mega-investments in Eurasia under its Belt and Road initiative.
- Instead of pitching financial reserves in U.S. treasury bonds, China has decided to put large amounts of its surplus reserves in building railways, highways, industrial parks, and cyber-cities along the Silk Road Economic Belt, one that stretches from Xian in the East to Europe in the West.
- China wants to shift its focus of development on western part of the country from eastern side especially areas like Xinjing and Tibet.
- Rising tensions between Russia and USA, and china emerging as a natural ally of Russia.
- Belt and Road initiative needs cooperation not only of Russia, which will take care of the western flank, but also of its eastern, South Asian flank, through India and Pakistan also.

Role of India and its Implications:

- India is a major partner in South Asian region and China wants India to be a major stakeholder in one belt one road initiative.
- Though India has not given any official position on this policy.
- China has brought India on board the Eurasian platform by partnering it in major initiatives to transform the international financial architecture e.g. through BRICS’s Bank and The New Development Bank.

What region is EURASIA?

Eurasia is the combined continent of Europe and Asia. All countries in Europe and Asia are part of Eurasia. There are 103 countries with major countries being China, Russia, India and ASEAN.

2.3. WEST ASIAN CRISIS DEEPENS BETWEEN IRAN AND SAUDI ARABIA

Why in news?

- Saudi Arabia executed leading Shia cleric Sheikh Nimr al-Nimr.
- Following the execution protesters in Shia-majority Iran attacked the Saudi Embassy in Tehran.
- The Saudis have cut diplomatic relations with Iran over the attack on its embassy.

What is the root cause?

- Shia dominated countries: Iran, Iraq, Syria, Bahrain (ruled by sunnis), Lebanon.
- Sunni dominated countries: Saudi Arabia, UAE, Qatar, Sudan, India, Pakistan.

Reasons for rift between Shia and Sunni blocks:

- Religious: Shia and Sunnis share a different ideology on religious tenets on a 1000 year old question on who should rightful heir after the death of Prophet Muhammad.
• **Iranian revolution of 1979**: Shia religious authorities took over and started backing Shia militias in other Shia dominated countries.
• Riyadh in turn strengthened links with other Sunni governments, including the formation of the Gulf Co-operation Council.
• Arab Spring saw Iran support its ally, Syrian President Bashar al-Assad, with the Saudis backing the opposition
• Successful P5-Iran nuclear deal and US interest in Iran, has many consequences for Saudis and they are in opposition to this deal.
• Saudi Arabia feels rise of Iran a major threat to its domination in West Asia.
• Bahrain, Saudi troops helped put down anti-government protests by the majority Shia population there.
• Iranian fury over a deadly *stampede during last year's Hajj pilgrimage* and a more assertive Saudi foreign policy since the new king Salman took charge.
• Yemen is the new playground for fight between Shia and Sunnis.

**Implications on India:**

- Iran is important to India for its ports viz: Bandar Abbas ports and Chahabar ports. Both are important to India for its entry to Afghanistan and NSTC corridors.
- India is also a major trade partner and Iran is a major exporter of cheap crude oil to India.
- Several major Indian companies including Larsen & Toubro, Tata Consultancy Services, Tata Motors, Wipro, Infosys, etc. operate in Saudi Arabia.
- Indian exports to the kingdom include mineral fuels and oils, chemicals, iron and steel and electric machines.

### 2.4. CHINA-IRAN RELATIONS

**Why in news**

- President Xi Jinping became the first world leader to visit Iran after sanctions were lifted following the nuclear deal.

**Salient points**

- In Tehran, he talked about a “new season” of Sino-Iranian ties and a 25-year strategic cooperation plan, committing to increase two-way trade to $600 billion over the next decade.
- He also demonstrated the integration of West Asia in its New Silk Road connectivity project by flagging a train from its trading hub of Yiwu to Tehran.
- This container train will cover a journey of 10,399 km in its maiden journey to West Asia in 14 days. It will exit China through Alataw Pass in western China’s Xinjiang province, and then pass through Kazakhstan and Turkmenistan before heading for the Iranian capital.
- Both countries have agreed to enhance security cooperation through intelligence sharing, counter-terror measures, military exchanges and coordination.
- Beijing would also support Iran’s full membership in the Shanghai Cooperation Organisation, a China-led regional security framework.

**Iran’s importance for China:**

1. Iran is vital for China’s continued rise. Its strategic location connecting West Asia and Central Asia is key to President Xi’s One Belt, One Road initiative
2. Iran offers immense investment opportunities for Chinese companies in several areas, particularly in energy and infrastructure.
3. The geopolitical value of Iran is immense for any power that seeks an ambitious role in West Asia.
4. From China’s point of view, Iran is among the most stable countries in the region. And it’s the only major country in West Asia where the U.S. has practically no influence.

**China’s Position towards Iran during Sanctions:**

- During Iran’s isolation era, China adopted a dual approach: it supported UN resolutions against Iran’s nuclear programme while expanding economic and security cooperation with Tehran.
- During this period, China overtook the European Union as Iran’s largest trading partner. Chinese-Iranian trade increased from about $3 billion in 2001 to over $50 billion in 2014.
- Security ties also flourished at a time when international negotiations on Iran’s nuclear programme were going on. In 2010, Chinese fighter jets refuelled in Iran, the first foreign military units permitted on Iranian soil since the Islamic Republic was established. Chinese warships paid a visit to the Iranian port of Bandar Abbas in 2014, another first.
- Even when complying with international sanctions, it expanded ties with Iran so that it would be better placed than any other power in a post-sanctions Iran.

### 2.5. 4TH INDIA-AFRICA HYDROCARBONS CONFERENCE (IAHC)

- The government has organised the 4th India-Africa hydrocarbon conference on January 21-22, 2016 in New Delhi. A total of 21 African countries participated in the event.
- The Conference is aimed at greater cooperation between India and African continent towards ‘Development Transmitting Partnership’ in the field of Hydrocarbons.
- The partnership would enable India to enhance its energy security while nurturing Africa’s Hydrocarbons sector growth on several fronts like capacity building, environmental sustainability, human resource development and employment generation.
- IAHC aims to explore opportunities, bridge boundaries and boost bilateral trade between India and Africa.
- The Conference will bring together leaders in the worlds of energy to network with other influential peers.

**Hydro Carbon Sector Potential for cooperation**

<table>
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<tr>
<th><strong>India hydrocarbon sector</strong></th>
<th><strong>Africa’s Hydro Carbon Sector</strong></th>
</tr>
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<tbody>
<tr>
<td>With per capita energy consumption less than a third of world's average, the energy consumption is poised to rise.</td>
<td>There are more than 500 companies present in Africa in the space of oil and gas exploration today.</td>
</tr>
<tr>
<td>The energy consumption is estimated to double in the next 15 years even under the most pessimistic scenario.</td>
<td>Africa's gas reserves are —3.5 times of Australia's gas reserves &amp; 2.5 times of Europe gas reserves.</td>
</tr>
<tr>
<td>Oil and gas contribute to more than a third of the primary energy demand.</td>
<td>With the continent accounting for 14.5% of current proved accessible oil reserves and 13.2% of the accessible gas reserves, Africa plays a significant role in the global oil and gas pool.</td>
</tr>
<tr>
<td>India imports more than 75% of its crude oil and 35% of its natural gas.</td>
<td>At a global level, the country has emerged as the fourth largest consumer and third largest importer of crude oil.</td>
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2.6. FIRST INDIA ARAB MINISTERIAL CONFERENCE

- The 1st Ministerial Meeting of Arab-India Cooperation Forum was held on 24 January 2016 in the Bahraini capital Manama.
- From Indian side meeting was attended by Minister of External Affairs and Overseas Indian Affairs and foreign ministers of Arab States also participated in this meet.
- In meeting, leaders reviewed the achievements of the Arab-Indian cooperation and adopted the Manama Declaration. The Arab-Indian Co-operation Forum was launched in New Delhi in 2008.

Key Highlights

A. Regional Issues
- **Arab Israel Conflict** - A comprehensive and permanent solution to the Arab-Israeli conflict should be achieved on the basis of UN Security Council resolutions, Madrid Peace conference of 1991 and the 2002 Arab Peace Initiative in Beirut.
- **Syria Issue** – There is need to preserve the unity, sovereignty, territorial integrity and stability of Syria and the importance to reach a political solution to the crisis that preserves the lives of Syrians.
- **Israel – Palestine Conflict**
  - Israel should end its occupation of the Palestinian “Arab” territories it seized in 1967 and dismantle all the settlements.
  - Conference also calls Israel to release all the Palestinian and Arab prisoners and detainees from its jails, halt the aggressions and crimes being committed by the Israeli settlers against the civilian Palestinians.

B. Global Issues
- **UNSC Reforms** – There is a need for urgent reform of the United Nations Security Council through expansion in both permanent and non-permanent membership to reflect contemporary reality.
- **Terrorism** – They emphasized the need for concerted regional and international efforts to combat terrorism and to develop a strategy to eliminate the sources of terrorism and extremism including its funding, and combating organized cross-border crime.

2.7. MAURITIUS TO EXCLUSIVELY OFFER BIO FARMING TECHNOLOGY TO INDIA

- The Mauritius government has exclusively offered to transfer bio-farming technology to India.
- It is also seeking exchange of cooperation in the health sector as part of the first joint committee meeting for cooperation in micro, small and medium enterprises.
- Both governments have also agreed to formulate an action plan in the area of coir, khadi and handicraft sectors in addition to the above areas.
- Additionally, both countries have also agreed to cooperate in the fields of capacity building, surveys on potential areas, managerial and technical skills, marketing, exhibitions and trade fairs, etc.

**India Mauritius Relationship – Brief Summary**
- Connections between India and Mauritius date back to 1730, diplomatic relations were established in 1948, before Mauritius became independent state.
- More than 68% of the Mauritian population is of Indian origin, most commonly known as Indo-Mauritians.
- India and Mauritius co-operate in combating piracy, which has emerged as a major threat in the Indian Ocean region and Mauritius supports India’s stance against terrorism.
2.8. WHY CRUDE OIL PRICES ARE FALLING?

- For the last two years, global oil prices have been in free fall, and no one seems to know when the bungee cord will catch. In June 2014 you had to plunk down $110 to purchase a barrel of Brent crude. By early 2015 that had dropped to $60.
- Today it costs just $32 to buy a barrel of oil — a level not seen since 2004. It’s a breathtaking decline.
- Reasons for steep fall in prices
  - Fracking boom in USA due to Shale Gas and Oil explorations.
  - Continued high production by oil producing countries even after supply surpassing the demand to preserve their market shares.
  - Lifting of sanctions on Iran leading to a production boom and subsequent price fall.
- Prices are expected to either rise or plateau to a new level at the end of this year when the Fracking boom in USA tapers.

2.9. WHAT DOES A BREXIT MEANS?

- In early 2015 the chances of “Brexit”— Britain departing from the European Union—seemed remote.
- In January 2016, largely because of Europe’s migration crisis and the interminable euro mess, the polls have narrowed.
- Some recent surveys even find a majority of Britons wanting to leave. The two campaigns, “Britain Stronger in Europe” and “Vote Leave”, that are likely to form the official lobby groups for each side in the referendum have set out their positions on the main topics that will form the basis for the referendum.

2.10. INDIA APPROVES MOU WITH BANGLADESH TO SET UP MORE BORDER HAATS

- The Union Cabinet, chaired by the Prime Minister Shri Narendra Modi has given its ex-post-facto approval for the Memorandum of Understanding (MoU) between India and Bangladesh for setting up Border Haats on India-Bangladesh Border.
A significant aspect of the growing India-Bangladesh ties has been the setting up of border haats (markets) along the international border in North East.

The haats had been thriving centres of trade and commerce across the borders till the partition of the sub-continent in 1947. Studies indicate that some haats existed even in the time of Mughal rule.

The MoU was agreed in 2010 during the India visit by Bangladeshi Prime Minister.

Already four markets - Kalaichar (Meghalaya-Bangladesh border), Balat (Meghalaya-Bangladesh border), Kamlasagar (Tripura-Bangladesh border) and Srinagar (Tripura-Bangladesh border) - are operational.

In addition, the two governments have also agreed to further establish two markets in Tripura and four in Meghalaya on the Bangladesh border.

2.11. SRI LANKA BEGINS PROCESS TO DRAFT NEW CONSTITUTION

Sri Lanka’s government began the process of drawing up a new constitution for the country aimed at eliminating causes that led to a quarter-century civil war.

A motion was introduced in Parliament to convert it into a Constitutional Assembly to draft a new Constitution.

Features of the Draft introduced in the Parliament
  - The government intends to strengthen democratic rights, promote national reconciliation and establish a political culture that respects the rule of law.
  - Once the Parliament adopts the draft Constitution Bill with two-thirds majority, the Bill will be sent to Provincial Councils for opinion and eventually, tested through referendum for the approval of people.
  - The Cabinet spokesperson claimed that for the first time [in Sri Lanka], a Constitution is going to be framed with the consultation of people.

A survey taken by the Centre for Policy Alternatives during October-December 2015 revealed that 53.4 per cent of Sri Lankans agreed that the Constitution should be changed to produce a political solution to the country’s ethnic problem.

The emergence of a new order since 2015 under new President and Prime Minister provides a setting conducive for positive change. It is a historic opportunity for all stake-holders, including Tamils, Muslims and plantation Tamils, to participate in the process.

2.12. JAPAN-RUSSIA TERRITORIAL DISPUTE

Heads of both Japan and Russia in a New Year’s Press Summit resolved to work for resolution of the long standing territorial dispute between then over the Kuril Islands.

Russia and Japan never signed a peace treaty after World War II because of conflicting claims over islands north of the Japanese island of Hokkaido, which Japan calls its Northern Territories - and Russia refers to as the Southern Kurils.

Thus, technically they are still at war, both countries have tried on numerous occasions to reach an agreement on this issue, always without success.

Japan has on numerous occasions rejected a Russian offer to settle the dispute with the return of two out of the four islands, namely the Habomai islets and Shikotan, since these islands comprise only 7 percent of the total land mass in dispute.

With Abe and Russian President Vladmir Putin in power, now would seem the right time to once again push for a resolution of this long-standing dispute.

Both nationalist leaders, Abe and Putin have a strong hold over their respective nations, share a good rapport, and see space for their countries to work together for mutual benefit.
2.13. INDIA TO BUILD A SATELLITE STATION IN VIETNAM

- India will set up a **satellite tracking and imaging centre in southern Vietnam** that will give Vietnam access to pictures from Indian earth observation satellites that cover the region, including China and the South China Sea.
- The Indian Space Research Organisation (ISRO) will fund and set up the satellite tracking and data reception Centre in Ho Chi Minh City to monitor satellite launches.

**Benefits**

- Earth observation satellites have agricultural, scientific and environmental applications. Information provided by this satellite, will be helpful for Vietnam.
- This will help in deepening ties between India and Vietnam.
- As per the views of some analyst, this step might impact the India-China relations.
- However, Chinese Foreign Ministry spokesperson, has hoped that this satellite will be able to make a positive contribution to pushing forward relevant cooperation in the region.

2.14. AMENDMENT IN NEPAL CONSTITUTION

**Background**

- Nepal's Constitution which was promulgated in September 2015, created seven states in a secular, federal system.
- It divided the country **into seven provinces**.
- However, after the promulgation, there were violent protests in the Terai against “injustice” meted out to the Madhesis.
- The protestors were upset that the federal restructuring of Nepal into seven provinces left the Madhesis divided among five provinces, with only one of them having a majority of plains-origin people.
- Delineation of electoral constituencies in the Terai (where more than 50 per cent of Nepal’s people live) which has not been done on the basis of the population in the plains. This creates a grievance about gerrymandering.
- Other complaints relate to citizenship norms that disallow children of Nepali mothers married to foreigners from inheriting Nepali citizenship.

**Present Situation**

- **Amendments**-
  - The Constituency Delimitation Commission (Article 286) shall consider population the first priority and geography the second while fixing 165 electoral constituencies (Article 84) as per the federal laws.
  - It also covers Article 42 to ensure more inclusive social justice.
- However, the amendment process did not include the main demand of the Madhesis for the creation of two separate Madhesi provinces on the plains of Nepal.
- **India’s response**– India has described the first amendment of the Nepali Constitution as welcome development and hoped that other outstanding issues will be similarly addressed in a constructive spirit.
- **Madhesi’s View** – The United Democratic Madhesi Front rejected a constitutional amendment passed by the Parliament to resolve the ongoing political crisis.

**Impact on India – Nepal Relations –**

- This move will be helpful in improving the ties between India and Nepal.
- It will also pave the way for the first foreign visit of present Nepal Prime Minister to India.
- Nepal also hopes that it will be helpful in resuming the supply of fuel and other essential commodities to Nepal.

[Note- For more details please refer September 2015, current affairs.]
2.15. NASEEM AL BAHR

- India and Oman have conducted the 10th edition of bilateral maritime exercise ‘Naseem Al Bahr’ in the Arabian Sea in last week of January. This exercise was first initiated in 1993.
- In this exercise, Oman Navy ships RNOV Al-Shamikh and RNOV Al-Seeb have participated. The Indian Navy was represented by INS Trikand and INS Trishul.
- The exercise was conducted in two phases i.e. a) Harbour Phase at Goa b) Sea Phase off the Goa coast.
- The exercise has matured over the years with increasing scope, complexity of operations and level of participation.
- The primary aim of this exercise is to increase interoperability amongst the two navies and develop common understanding and procedures for maritime security operations.

Significance
- This exercise has added another milestone in strengthening maritime security cooperation between India and Oman.
- It will also serve to reinforce the long standing bond of friendship between the two countries.
- Increasing naval cooperation is a tangible symbol of the commitment of both nations towards enhancing maritime stability.

2.16. SAUDI ARABIA OIL PREMIUM CHARGE

- It refers to Saudi Arabia’s decision to charge a premium for the oil it sells to Asian customers.
- As per state owned oil company they would be charging Asian customers 60 cents a barrel more.
- Saudi Arabia is conventionally is one of largest exporters of crude oil to Energy starved India.
- Indian refiners will have to operate at higher input prices from Saudi Arabia in the near term as they are likely to be bound by purchase contracts that have been signed.

Alternative to India’s energy Import Basket- AFRICA

- To diversify its energy basket India is looking at Africa to spruce up its oil and gas imports.
- Africa is blessed with vast hydrocarbon prospects, substantial acreage remains unexplored, giving rise to E & P opportunities for Indian companies.
- Africa already contributes around 15 per cent of India’s oil needs.
- Recently the 4th India-Africa Hydrocarbon Summit was held in Delhi that included 22 African nations where Opportunities for boosting India-Africa trade in oil and gas was also discussed.
- Last year, Nigeria overtook Saudi Arabia as the largest contributor to India’s oil imports for a short period of time and currently remains one of the top providers of oil to India.
- Indian companies have been seeking opportunities to collaborate in the gas discovery on the eastern coast of Africa.
- Indian companies have a significant presence in Mozambique, Algeria, South Sudan, Egypt, Ghana Gabon and Libya to name a few.
- Recently, an Indian engineering company won the largest consultancy contract for an oil refinery in Nigeria.
• India, with the **4th largest oil refinery capacity globally**, can be a suitable partner to complement Africa's needs in this space.
• India buys Urea in large quantities and can be a great destination for Africa to monetize its Gas.
• With India's demand for and Africa's supply of oil expected to grow, it is possible to harness the hydrocarbons complementarities to ensure economic development in India and Africa.
3. ECONOMY

3.1. FOURTH INDUSTRIAL REVOLUTION

- ‘Fourth Industrial Revolution’ or Industry 4.0 is the theme of the 2016 annual meet of World Economic Forum.

Meaning

- It is a collective term embracing a number of contemporary automation, data exchange and manufacturing technologies and denotes a fundamental change in the way business is being done in the present world.
- It is characterized by a wave of innovations and fusion of technologies that is blurring the lines between the physical, digital, and biological spheres.
- For example things like driverless cars, smart robotics, tougher and lighter materials, and a manufacturing process built around 3D printing technology, internet of things and internet of services.
- The characteristic is not just these new innovations but also that it is changing at exponential rates and disrupting every industry at a pace that is difficult to cope with.
- New technology, increased connectivity, artificial intelligence etc. has changed the way any industry functions, the consumer demand and the competition.
- The inexorable shift from simple digitization (the Third Industrial Revolution) to innovation based on combinations of technologies (the Fourth Industrial Revolution) is forcing companies to reexamine the way they do business.

Challenges posed by Fourth Industrial Revolution

- Risk of greater unemployment especially low skilled ones has increased
- Sustainability of businesses especially small ones is under threat
- Disruptions in existing industries as new ways of serving needs are coming up.
- The innovators are improving the quality, speed and price of services at a much faster rate due to better access to global digital platforms for research, development, marketing, sales, and distribution.
- Growing transparency and consumer engagement would demand more adaptation from the companies.
- IT security issues
- It also affects the governance system as well.
  o The accountability of the government has increased due to more citizen engagement.

WORLD ECONOMIC FORUM

- It is a Swiss Non-Profit foundation, based in Geneva. It is an international institution for public-private cooperation.
- Its mission is cited as "committed to improving the state of the world by engaging business, political, academic, and other leaders of society to shape global, regional, and industry agendas".
- Davos Panel: The annual WEF winter meet (Jan) at Davos, Switzerland. It has different themes. e.g. 2014- "The Reshaping of the World: Consequences for Society, Politics and Business", 2015- "New Global Context", 2016- "Mastering the Fourth Industrial Revolution"
- It was established in 1971 as 'European Management Forum' and changed to WEF in 1987 and sought to broaden its vision to include providing a platform for resolving international conflicts.
- It also works as a think tank giving out various reports; Global Competitiveness Report, Global IT Report, Gender Gap Report, Risks, Travel & Tourism, Enabling Trade.
At the same time governments would gain more technological powers to increase its control over people, based on pervasive surveillance systems and the ability to control digital infrastructure. The government’s dependence on private sector would also increase. On the whole governments will increasingly face pressure to change their current approach to public engagement and policymaking, as their central role of conducting policy diminishes owing to new sources of competition and the redistribution and decentralization of power that new technologies make possible.

### 3.2. STARTUP INDIA PROGRAMME

**Why in news**
- Prime Minister has announced the action plan for start-ups.
- The schemes offer incentives to entrepreneurs to start ventures in India.
- The Action Plan proposes a 19-point action list which will enable setting up of incubation centres, easier patent filing, tax exemption on profits, setting up a Rs.10,000 crore corpus fund, ease of setting-up of business, a faster exit mechanism, among others.

**Key Highlights**
- To encourage seed-capital investment, the government also exempted tax above fair market value for incubators in start-ups.
- With the intention of reducing regulatory burden on start-ups, they have been exempted from six labour laws and three environmental laws for a period of three years.
- Start-ups will also be provided free legal support in filing intellectual property rights (IPR).
- Patent applications filed by startup will be fast tracked at lower costs.
- To provide equal platform to startups in government procurements, the criteria of prior experience or turnover will be exempted without any relaxation in quality standards or technical parameters.
- Government will create a policy framework for setting up of incubators across the country in public private partnership, build innovation centres at national institutes and set up seven new research parks.
- Funding support of worth 10,000 crore rupees for next four years.
- Government to set up a Startup India Hub which will be a single-point of contact for Startups.
- In order to augment incubation and R&D efforts, 31 centres of innovation and entrepreneurship will be setup/ scaled up for providing facilities to over 1,200 Startups, at national institutes.
- 7 new research parks are proposed to be set up with an initial investment of Rs.100 crore each. These parks shall enable companies with a research focus to set up base and leverage the expertise of academic/ research institutions.

**Benefits of the scheme**
- It will help in economic growth of the country.
- It will create more employment opportunities in India.
- It will help in development of entrepreneurship culture in India.

**Criteria for a startup**
- The firm incorporated should be less than five years old.
- Annual Revenue of less than Rs 25 crore.
- Needs to get approval from inter-ministerial board to be eligible for tax benefits.
- Get recommendation from an Incubator recognized by government, domestic venture fund or have an Indian patent.
Challenges
• Forex regulations are a major reason for re-domiciling.
• Cost of the loan is high.
• Tax laws need more clarifications and simplification.
• Taxes on alternative investment funds and venture capital need rationalization.
• Fund set up by government is not enough to cater the needs of the all sections of the entrepreneurs; hence it becomes very difficult for the startups to mobilize funding.

Way Forward
• While the Action Plan is certainly a welcome and positive step towards the philosophy of promoting Startup innovation in the country, it will also be important to consider tax exemptions for angel investors, seed capital funds and stock options offered by Startups to employees.
• The Government should consider providing indirect tax incentives for Startups.
• There is a need to change the mindset of lenders who do not consider start-up entrepreneurs to be good borrowers so that quick funding is available to the startups.
• The easing of rules and creation of a conducive policy environment should not be restricted just to startups. It should be extended to all businesses.

3.3. STAND UP INDIA SCHEME

Why in news?
• The Union Cabinet has recently approved the “Stand Up India Scheme” to promote entrepreneurship among SC/ST and Women entrepreneurs.

Salient features
• The Scheme is intended to facilitate at least two such projects per bank branch, on an average one for each category of entrepreneur.
• Refinance window through Small Industries Development Bank of India (SIDBI) with an initial amount of Rs. 10,000 crore.
• Creation of a credit guarantee mechanism through the National Credit Guarantee Trustee Company (NCGTC).
• Hand holding support for borrowers both at the pre loan stage and during operations. This would include increasing their familiarity with factoring services, registration with online platforms and e-market places as well as sessions on best practices and problem solving.
• Focus is on handholding support for both SC/ST and Women borrowers.
• The overall intent of the approval is to leverage the institutional credit structure to reach out to these under-served sectors of the population by facilitating bank loans repayable up to 7 years and between Rs. 10 lakh to Rs. 100 lakh for Greenfield enterprises in the nonfarm sector set up by such SC, ST and Women borrowers.
• The loan under the scheme would be appropriately secured and backed by a credit guarantee scheme for which Department of Financial Services would be the settler and National Credit Guarantee Trustee Company Ltd. (NCGTC) would be the operating agency.
• The Stand Up India Scheme anchored by Department of Financial Services (DFS).
• It is expected to benefit at least 2.5 lakh borrowers.
• The expected date of reaching the target of at least 2.5 lakh approvals is 36 months from the launch of the Scheme.
• Presently only 9% of start-ups in India are led by women.
3.4. PRADHAN MANTRI FASAL BEEMA YOJNA

Why in news?

- On 13th January, 2016, the Govt. has launched a new crop insurance policy Pradhan Mantri Fasal Bima Yojna (PMFBY)
- It will replace two schemes National Agricultural Insurance Scheme (NAIS) and the modified NAIS (MNAIS).

Issues with earlier schemes

- As per government report, under the existing yield-based and weather-based crop insurance schemes about 37 million, or 27% of farming households were covered.
- Under the present crop insurance schemes - Risks were only partially covered.
- The existing premium rates vary between 2.5% and 3.5% for Kharif crops and 1.5% for Rabi crops but the coverage was capped, meaning farmers could recover only a fraction of their losses.
- The premium for commercial and horticulture crops was calculated on actuarial basis, which means premiums could be as high as 25% depending on the risk factor involved.
- Assessment of crop damage lacked transparency and didn’t use the latest technologies.
- Compensation took long, even going beyond a year in many cases.

Salient features

- The Pradhan Mantri Fasal Bima Yojana (PMFBY) is to be rolled out during the kharif crop season this year.
- Schemes targets to cover half of India’s cropped area in the next three years. Present coverage is 23% approximately.
- There will be a uniform premium of only 2% to be paid by farmers for all Kharif crops and 1.5% for all Rabi crops.
- In case of annual commercial and horticultural crops, the premium to be paid by farmers will be only 5%. There is no upper limit on Government subsidy. Even if balance premium is 90%, it will be borne by the Government.
- The government liability on premium subsidy will be shared equally by the Centre and states.
- Government has substantially increased the budget for crop insurance from Rs.2,823 crore in 2015-16 to Rs.7,750 crore in 2018-19.
- The new scheme will also seek to address a long-standing demand of farmers and provide farm-level assessment for localized calamities, including hailstorms, unseasonal rains, landslides and inundation.
- The use of technology will be encouraged to a great extent.
  - Smart phones will be used to capture and upload data of crop cutting to reduce the delays in claim payment to farmers.
  - Remote sensing will be used to reduce the number of crop cutting experiments.
- In the case of Weather-Based Crop Insurance Scheme (WBCIS), the government said premium rates would be rationalized on par with PMFBY. The PMFBY will be effective from the April 1, 2016.

Benefits

- With back-to-back droughts, and unseasonal rain and hail in certain pockets, it became clear that the risks in farming are on the rise, and the existing system of crop insurance was nowhere near meeting the needs of the peasantry.
- In this context, the new scheme is surely a step in the right direction and very timely — which will help in saving Indian agriculture from the increasing risks of nature.
• The premium rates to be paid by farmers are very low and balance premium will be paid by the Government to provide full insured amount to the farmers against crop loss on account of natural calamities.
• The low premium will drive penetration and enrolment and make the insurance scheme viable for insurers.
• Post-Harvest losses are also included, so it will provide safety and confidence to the farmers.

**Key issues that have been identified by farm rights groups as problematic with the PMFBY**

• Problems related to insurance run far deeper than premium rates. For e.g. In many states where premium rates are low in MNAIS still have very low subscription.
• The government’s expectation that insurance cover will go up from existing 23% to 50% in three years appears to be based more on hope than any evidence. Previous experience has belied all such hopes.
• Subsidies are to be borne in a 50:50 ratio between Centre and State. It is unclear yet if the states have agreed to bear their share of the subsidies.
• There does not seem to be anything in this scheme to address the problem of tenant farmers who bear the risk of crop failure but are not entitled for compensation and insurance payments.
• Risks such as destruction by wild animals are still not covered.
• One key problem of crop loss or damage compensation, the unit of assessment, remains unaddressed in the new scheme.

**Way forward**

• For the successful implementation of this scheme, it is important that
  o Crop assessment should be done in a transparent manner and within a specified period of time, and using high technology such as automatic weather stations (AWSs), drones and satellites etc.
  o Compensation must be paid to farmers’ accounts directly and as quickly as possible (within a week of assessment of crop damage) so that next agriculture cycle is not affected.
• Comparison with previous schemes

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<td>High</td>
<td>Lower than even NAIS and government to contribute 5 times that of farmer.</td>
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<td>Coastal areas - for cyclonic rain</td>
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3.5. SEBI PANEL SUGGESTS REFORMS TO GROW ALTERNATIVE FUNDS INDUSTRY

Why in news?

- An 21 member advisory panel under Narayan Murthy set up by SEBI has suggested a slew of tax reforms and changes in existing laws to facilitate capital-raising by AIFs and boost entrepreneurship.

Recommendations:

- Creating a favorable tax environment
  - Government should introduce a securities transaction tax (STT) on all distributions (gross) of AIFs, investment, short-term gains and other income and eliminate any withholding of tax.
  - After STT, need for parity with the taxation of investments in listed securities.
  - AIFs and portfolio companies be exempted from certain income tax provisions so that they are subjected to tax only when receiving dividend or interest income during the holding period, or realize capital gains at the time of exit.
  - The exempt income of AIFs should not be subject to withholding tax of 10%; the exempt investors too should not be subjected to the tax.

- Unlocking domestic pools of capital:
  - Large capital pools from pensions, insurance, DFIs and banks, and charitable institutions, which currently constitute only around 10% of the total private equity and venture capital invested in India annually, should contribute more to develop the AIF industry.
  - The panel urged the regulators to increase the investment limits for banks and insurance companies in AIFs from the current 10% to 20% of the total corpus of an AIF.
  - Domestic pension funds in India including the National Pension System and the Employee Provident Fund Organization should allocate up to 3% of their assets to AIFs by 2017, rising to 5% by 2020.

- Reform regulatory regime
  - The investment gains of AIFs should be deemed to be capital gains in nature and losses incurred by AIFs should be available to their investors for set-off.
  - The central board of direct taxes should clarify that investors in the holding companies are not subject to the indirect transfer provisions.
  - The panel suggested that AIFs should be allowed to invest in charitable and religious trusts also.
  - Eligibility norms: - Any individual with a total annual income of at least Rs.50 lakh (from 1 cr presently) should be allowed to put money in.

What is AIF?

- Anything alternate to traditional form of investments gets categorized as alternative investments.
- (AIFs) are defined in Regulation 2(1)(b) of Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012
- It refers to any privately pooled investment fund, (whether from Indian or foreign sources), in the form of a trust or a company which are not presently covered by any Regulation of SEBI nor coming under the direct regulation of any other sectoral regulators in India-IRDA, PFRDA, RBI
AIFs are categorized into the following three categories:
- **Category I** - AIF are those AIFs with positive spillover effects on the economy. Example: Venture Capital Funds, SME Funds etc.
- **Category II** - AIF are those AIFs for which no specific incentives or concessions are given. E.g. Private Equity or debt fund.
- **Category III** AIF are funds that are considered to have some potential negative externalities in certain situations and which undertake leverage to a great extent; with a view to make short term returns. No specific incentives or concessions from the government or any other Regulator. E.g. Hedge.

### 3.6. RECENT MEASURES TO BOOST SEZS

**Why in news?**
- Export Promotion Council for export oriented units and SEZs (EPCES) have raised certain issues with respect to SEZs.

**DEMANDS OF EPCES and SEZ Developers and units:**
- Removal or reduction of Minimum Alternate Tax (MAT) and Dividend Distribution Tax (DDT) on SEZs
- Abolition of all direct tax benefits for SEZs not operationalized before April, 2017. This Sunset Clause (provision relating to the expiry of the benefits to SEZs) on SEZs should be extended up to 2023.
- EPCES also wanted SEZ units to be allowed to sell in the domestic tariff area (DTA or domestic market) by shelling out the same duty applicable to imports from nations who are free trade agreement (FTA) partners of India.
- SEZs are duty and tax free enclaves, they have to pay regular duties for sales in the domestic market, which in turn makes their items costlier as compared to imports from FTA partner nations that enter India at zero or lower than regular duties.

### 3.7. EASWAR PANEL

**Why in news?**
- A committee, set up by the government to change direct tax laws, headed by retired high court judge R.V. Easwar, has submitted its recommendations.

**Recommendations**
- **Simplifying provisions** related to tax deducted at source (TDS), claims of expenditure for deduction from taxable income and for tax refunds.
- Several **taxpayer-friendly measures** to improve the ease of doing business, reduce litigation and accelerate the resolution of tax disputes.
- Deferring the contentious Income Computation and Disclosure Standards (ICDS) provisions and making the process of refunds faster.
- Income-tax department to desist from the practice of adjusting tax demand of a taxpayer whose tax return is under assessment against legitimate refunds due.
- Deletion of a clause that allows the tax department to delay the refund due to a taxpayer beyond six months and suggested a higher interest levy for all delays in refunds.
- Stock trading gains of up to Rs.5 lakh will be treated as capital gains and not business income, a move that could encourage more retail investments in the stock market.

Under the presumptive income scheme, such professionals or businesses will not need to maintain a book of accounts but just pay tax based on presumptive income calculations. For instance, for professionals it is proposed that 33.3% of their previous year’s receipts will be taken as income on which they will have to pay tax. If their profits are much lower, they will have to maintain a book of accounts clearly categorizing expenditure and pay tax accordingly.
• TDS rates for individuals be reduced to 5% from 10%. Dividend income on which dividend distribution tax has been levied should be treated as part of total income.
• Provide an exemption to non-residents not having a Permanent Account Number (PAN), but who furnish their Tax Identification Number (TIN), from the applicability of TDS at a higher rate.
•avored deferring ICDS.
• The processes of the income-tax department should be conducted electronically to minimize human interface.
• To make it easy for small businesses, the eligibility criteria under the presumptive scheme be increased to Rs. 2 crore from Rs. 1 crore. Launch a similar scheme for professionals. The presumptive tax is levied on an estimated income and makes life (and work) easier for small businesses.

3.8. IMF REFORMS

Why in news
• The IMF reforms came into effect on January 27 which was approved by it in 2010.
• The reforms were unable to implement due to the absence of its approval by the US Congress, which it did last year.

Voting Rights:
• The emerging and developing economies gained more influence in the governance architecture of the International Monetary Fund (IMF).
• More than six per cent of the quota shares will shift to emerging and developing countries from the U.S. and European countries.
• India’s voting rights increase to 2.6 per cent from the current 2.3 per cent, and China’s, to 6 per cent from 3.8, as per the new division.
• Russia and Brazil are the other two countries that gain from the reforms.
• The reforms bring India and Brazil into the list of the top 10 members of IMF, along with the U.S, Japan, France, Germany, Italy, the United Kingdom, China and Russia.
• Canada and Saudi Arabia slip below the top ten in the process.
• For the first time, four emerging market countries of the BRIC bloc —Brazil, China, India, and Russia —will be among the 10 largest members of IMF.

Financial strength:
• The reforms also increase the financial strength of IMF, by doubling its permanent capital resources to 477 billion special drawing rights ($659 billion).

IMF’s Executive Board:
• As part of the reforms, for the first time, the IMF’s Executive Board will consist entirely of elected Executive Directors, ending the category of appointed Executive Directors.
• Currently the members with the five largest quotas appoint an Executive Director, a position that will cease to exist.

ABOUT IMF:
• International Monetary Fund (IMF) was established along with the International Bank for Reconstruction and Development at the Conference of 44 nations held at Bretton Woods, New Hampshire, USA in July 1944.
• At present, 187 nations are members of IMF.
• India is a founder member of the IMF.
• The objectives of IMF is macro-economic growth, alleviation of poverty and economic stability, policy advice & financing for developing countries, forum for cooperation in monetary system, promotion of exchange rate stability and international payment system.
• India has not taken any financial assistance from the IMF since 1993.Repayments of all the loans taken from International Monetary Fund have been completed on 31 May, 2000.
IMF statement:

- These reforms will reinforce the credibility, effectiveness, and legitimacy of the IMF, an IMF statement said.
- It also said that the conditions for implementing IMF’s 14th General Quota Review, which delivers historic and far-reaching changes to the governance and permanent capital of the Fund, have now been satisfied.
- Following the effectiveness of the 14th General Review of Quotas, the focus will now turn to work on the 15th General Review of Quotas and securing the necessary broad consensus, including on a new quota formula.

3.9. IMF CUTS GLOBAL GROWTH FORECAST AS CHINA SLOWS

What is the news?

- International Monetary Fund (IMF) cut its global growth forecasts for the third time in less than a year on Tuesday

Key Observations:-

- World economy would grow at 3.4 per cent in 2016 and 3.6 per cent in 2017, both years down 0.2 percentage points from the previous estimates made in October’15.
- India and the rest of emerging Asia are projected to grow at a robust pace with growth forecast for India in 2016-17 unchanged at 7.5 per cent.
- IMF cited a sharp slowdown in China trade and weak commodity prices that are hammering Brazil and other emerging markets.
- Plummeting oil prices and no hope for rise in near future.
- Near-term fiscal policy should be more supportive of the recovery, especially through investments that would augment future productive capital.

3.10. INDEX OF INDUSTRIAL PRODUCTION

Why in news?

- Industrial production, measured by IIP, dropped for the month of November after a robust recovery till October.
- According to India Rating and Research, the drop is due to wide base and slowdown in various sectors globally.
- The agency emphasized that drop in numbers does not imply end of industrial recovery.

What is IIP

- IIP is a ratio which measures the growth of various sectors in the economy. Being a ratio, it represents the status of production in the industrial sector for a given period of time as compared to the reference period of time (base year).
- IIP data is released every month by CSO.
• The current base year is **2004-05.**

**Composition of IIP**

• The IIP comprises of **682** individual items. Sector wise, the items included falls into 3 categories viz. Manufacturing, Mining and Electricity respectively in decreasing order of their weightage to the index.

**Weightage of Core Industries in IIP**

• In terms of percentage, the weightage of all 8 core industries in IIP is around 38%.
• In IIP, the decreasing order of core industries among them is as:
  • ELECTRICITY> STEEL> REFINERY PRODUCTS> CRUDE> COAL> CEMENT> NATURAL GAS> FERTILIZERS

**3.11. SCOPE OF DBT TO BE ENLARGED BY BOTH CENTRE AND STATES**

• Centre to implement direct transfer of kerosene subsidy through DBT.
• The scheme would be to incentivize states, by granting 75% saved subsidy cash in first two years; 50% in 3rd year and 25% in 4th year.
• Eight states have agreed to implement the scheme in some districts on pilot basis.
• State government planning to roll out welfare pensions through DBT route, due to alleged lapses in disbursement through postal system.
• Under the scheme, the consumer would be required to purchase the **kerosene** at market price. The subsidy amount will then be transferred to their bank account.

**Benefits of kerosene subsidy through DBT**

• Containment of current leakages
• Improved targeting
• Curtail corruption and promotes transparency in distribution
• Paying at market price would give consumers a sense of ethical consumption of kerosene, even though they will be subsidized through bank transfer.

**Bottlenecks in kerosene subsidy through DBT**

• Determination of the quantum of subsidy, each household is eligible for, would be a complex task.
• Targeting – Identification of beneficiary (inclusion and exclusion errors).
• Highly subsidized kerosene would leave little scope for cleaner form of energy like solar energy to be promoted.
• Downsizing subsidy in future would become a political populist agenda.

**3.12. GLOBAL TALENT COMPETITIVENESS INDEX**

• Global Talent Competitiveness Index (GTC) is released by INSEAD business school in partnership with Adecco Group and the Human Capital Leadership Institute of Singapore.
• The index that measures a nation’s competitiveness based on the quality of talent it can produce, attract and retain.
• Reflecting an acute shortage of skilled labour force and difficult business conditions, India has slipped 11 places to rank 89th on a global index of talent competitiveness, a list which has been topped by Switzerland.
• India and China remain a net exporter of talent and many emerging countries that have invested in higher education have neglected vocational education.
• China and India fail to attract talent from abroad, particularly in the context of large emigration rates of high-skilled people in the past.
• Mobility is the key to talent development and creative talent cannot be developed if international mobility and ‘brain circulation’ are not encouraged.
• 200 million people are unemployed and about 1 in 2 jobs are at risk due to automation.

3.13. CSR IN INDIA

Why in news?
• It’s now been over a year since Section 135 of the Companies Act 2013 came into effect and it has sought to alter the way corporate social responsibility (CSR) is approached in India.

Provisions of CSR in India
• Under the Companies Act, 2013 companies **has to spend at least 2% of last 3 years average net profits on CSR activities.**
• The Act also urges companies to leverage their business acumen and core competencies to address social issues in the same manner as they would carry out other business operations.
• The Companies Act 2013 allows for collaboration between two or more companies by using a separate legal entity.
• However, rules do not provide any provision for monitoring and any punitive actions for the companies who fail to meet the CSR guidelines.

Salient Points
• CSR budgets have grown exponentially.
• **Promoting education and eradicating poverty** received the maximum funds last year through CSR funding.
• The next highest recipient of CSR funds was environmental sustainability with 57 companies spending Rs.683.07 crore.
• Energy companies spent the highest on corporate social responsibility (CSR) initiatives last year.
• According to data collected from the annual reports of 85 publicly traded companies by NextGen, the energy sector was followed by financial services and IT when it came to firms that committed to CSR.
• Consumer goods companies were the only companies that exceeded the mandatory spending limit of 2% of annual profits. The telecom sector spent only Rs.51 crore, while it was expected to spend Rs.194 crore.
• Most companies that have implemented social engagement strategies have not looked at their CSR strategies through the same lens as their core business functions.

Challenges faced by companies
• Lack of clarity about regulations with respect to what is allowed under the law,
• Lack of knowledge about sector and industry best practices,
• Few implementation partners who have the capacity to work with companies.
• A clear challenge in the first year of the new CSR rules implementation is impact assessment.

The six areas have failed to attract significant interest:
• Slum development.
• Technology incubators at academic institutions.
• Promotion of rural as well as Paralympic and Olympic sports.
• The Prime Minister’s Relief Fund.
• Preservation of national heritage, art and culture.
• Welfare of armed forces veterans and war widows.
Way Forward

- The government should leverage the CSR law to **meaningfully engage companies** in the development sector.
- Create frameworks that facilitate public-private partnerships for the implementation of long-term and impactful programmes.
- Impact Assessment should be encouraged to understand the success of programmes and initiatives.
- The CSR law will be a lost opportunity if stakeholders do not understand each other’s perspectives, leverage each other’s core competencies, and build capacity to deliver and create the right frameworks for knowledge sharing and collaboration.

### 3.14. DEVALUATION OF CHINESE YUAN

#### Why in news?

- The Yuan is hovering at a four-and-a-half-year low, down over 4% against the dollar since the beginning of the year 2015.
- The recent devaluation of Chinese currency yuan has triggered a global financial turmoil hurting stock and currency markets worldwide.
- The weakening of the yuan could lead to competitive devaluation of Asian and Emerging Market (EM) currencies.

#### Factors which caused devaluation of Yuan:

- Slowdown in Chinese economy.
- A lot of surplus production in China.
- To make Chinese economy more competitive.
- To retain international investment in China.

#### Impact of Devaluation on China

- By devaluing its currency, China gains an advantage in global trade. Its exports become cheaper, and more attractive, to foreign buyers.
- The yuan depreciation will make imports in China more expensive, depressing demand, especially for commodities. This will put further downward pressure on commodity prices.

#### Impact of Devaluation on Indian Economy

- Indian imports will be badly hit. This is also evident by the fact that India’s exports have plunged for 12 consecutive months, down 17.6% year-to-date because of anemic growth in developed and Asian economies.
- Decline in import will increase the Current Account Deficit (CAD).
- Around 12% of India’s imports come from China as of 2015. Any increase in Chinese competitiveness including through the Yuan depreciation could lead to a surge in such imports.
- This will lead to replacing imports from other trade partners of India by increasing Chinese imports and it could also impact these industries(such as electrical and electronics, organic chemicals, fertilizers and iron and steel etc.) in India.
- RBI will need to let the rupee decline against the dollar. This would put firms with exposure to external commercial borrowings in a difficult situation as their loan cost will increase.
Impact of Devaluation on World Economy

- The devaluation of Yuan is bound to affect the exports of several major countries across the world.
- A weaker Yuan may drive the global economy closer to a recession because the purchasing power of China deteriorates every time the currency is devalued.
- The devaluation also affects demand for commodities and imported goods, undercutting oil and other industrial commodities. This would in turn hurt EM economies like Chile and Brazil that depend on China to buy the copper and oil that they export.
- It would also hurt developed nations like Germany, which see China as a key growth market.
- This could also start a currency war as countries race to protect their exporters by devaluing in turn.
- The sharp fall in Yuan has also raised fears of cheaper Chinese goods hurting the sales of domestically manufactured products in many countries.

Can India also devalue Indian Rupee?

- Devaluation of Rupee to increase India’s exports cannot be taken as a counter-measure because India is not a supply-surplus economy.
- Also, with respect to China, we import around $60 billion and export is around $12 billion so it will further widen the trade deficit.

Way Forward

- In short term, Imposing import duty on Chinese products – This will help in protecting labour intensive sectors like textiles, steel, gems and jewellery etc. which are vulnerable to cheap imports.
- In long term
  - Labour reforms to encourage new business to set up.
  - Simplified tax structure – implementation of Goods and Services Tax.
  - Easy Compliance Process.
  - Single window clearance.
  - Availability of capital to MSME’s.

3.15. SEED FUNDING TAX TO BE REMOVED

Why in News?

Recently, government has decided to scrap the tax on seed funding by angel investors, which has been identified as a major impediment for entrepreneurs to get domestic funds.

Need

- Finance Act 2013, introduced a tax on seed capital provided to start-ups by local angel investors.
- India is the only country in the world to penalize local angel investors in such a manner.
- The existing tax norms view the funding as income, which takes away nearly 30 percent of the value of investments, so this would improve cash flow a lot.

Benefits

- It will help in easing up the process to start up and doing business in the country.
- According to certain estimates around 65 percent of the startups have moved out of India due to uncertain taxation. This move is aimed at preventing the exodus of startups from the country due to difficulties in doing business.
- It will also help in ensuring transparency, simplification and predictability in tax structure.
• It will improve the cash flow for the startups which will help them in their initial setup.
• It will encourage the local angel investors to invest in startups. Presently, 90 per cent of Indian start-ups are financed by foreign venture capital and angel funds.
• It will also ensure equal treatment of local investors with respect to foreign investors.

What is Seed Funding (Capital)?
• It is the initial capital used to start a business. It is provided to help a business develop an idea, create the first product, and market the product for the first time.
• Seed capital is needed to get most businesses off the ground. It is considered a high-risk investment, but one that can reap major rewards if the company becomes a growth enterprise.

Who is angel investor?
• An angel investor or angel is an affluent individual who provides capital for a business start-up, usually in exchange for convertible debt or ownership equity.

3.16. RAIL REGULATOR TO SET FARES, ENSURE FAIR COMPETITION

A concept paper, published by the Union government has proposed to set up a rail regulator i.e. Rail Development Authority of India
• It will be fixing fares and ensuring level-playing field for private investments in railway infrastructure.
• An appellate body is also proposed to be formed and the role, structure and composition of the body will be similar to regulators in telecom and electricity sectors.
• At present, the tariff is set by the Union government.
• As per provisional estimate, Railways losses will touch over Rs 30,000 crore in 2015-16 and the primarily reasons for this is due to sharp increases in input costs and no proportionate increase in fare over the same period.

Proposed Mandate
• To set passenger and freight tariff.
• Ensure fair play and level playing field for private investors in Railways.
• Maintain efficiency and performance standards.
• Disseminate information such as statistics and forecasts related to the sector.

Benefits of proposed rail regulator
• It will help in better functioning of Railways.
• It will help Railways in recovering their losses which in turn will make it economically viable.
• It will also attract more private investment in Railways and will help in utilizing the full potential of Railways.

Previous Year Question
GS Paper -2 Mains -2014 - The setting up of a Rail Tariff Authority to regulate fares will subject the cash strapped Indian Railways to demand subsidy for obligation to operate non-profitable routes and services. Taking into account the experience in the power sector, discuss if the proposed reform is expected to benefit the consumers, the Indian Railways or the private container operators.
3.17. SPACEX: SPACE START UPS

- SpaceX, the company run and founded by Tesla Motors’ Elon Musk, has successfully completed a vertical take-off and vertical landing (VTVL) with its Falcon 9 rocket after delivering a payload of commercial satellites, setting a new landmark in space travel technology.
- The fact that Falcon 9 was able to go into space, launch its commercial payload and then return to Earth is great news for SpaceX as it will bring down operational costs for the company. Space X has proved that its rockets can be refurbished and re-flown for commercial purposes.
- The SpaceX feat is important, given that this is the first time that an orbital rocket has come back to Earth intact. The rocket reached a height of approximately 200 kms before it landed back on earth, and it is this high altitude which made the company’s mission so difficult.
- The feat by SpaceX is expected to fuel competition for entry of private commercial platforms in space application.

3.18. OXFAM REPORT ON INEQUALITY

- The anti-poverty charity ‘Oxfam International’ gave report titled “An Economy for the 1%”

Salient points in report

- Since 2000 the poorest half of world population has received just 1% of the total increase in global wealth, while 50% increase has gone to top 1%.
- Total wealth of 62 individuals = wealth of 3.6 billion individuals
- According to a World Bank forecast, if pro-poor growth moves are not visible soon, by 2030, almost half-a-billion people will still live in extreme poverty.
- Inequality poses a threat to economic expansion and social cohesion around the world.

Suggestions in the report to reduce inequality:

- Check the influence of the very rich and to empower people who are currently excluded from the power structure
- For workers, they suggest increasing minimum wages towards living wages, promoting transparency on pay ratios and protecting workers’ rights to unionize and strike.
- End of tax havens, describing them as unjust and a legal means that allowed the rich to remain rich, estimating that tax havens help the rich hide $7.6 trillion.
- Governments should work towards creating a worldwide tax transparency system

3.19. MEDIUM TERM DEBT MANAGEMENT STRATEGY

Why in news?

- The government of India has put MTDS in public domain for a period of three years (2015-18).
- The plan aimed at lowering cost of borrowings and expanding the list of eligible investors which would deepen the local sovereign bond market.

What is MTDS?

- Medium-Term Debt Management Strategy is a framework that the government intends to use over the medium-term to ensure
  o Debt levels stay affordable and sustainable,
  o New borrowings are for a good purpose and that the costs and risks of borrowing are minimized.
• MTDS covers both external and internal debts including portfolio of government guarantees and contingent liabilities
• Reserve Bank of India act as the manager of govt. debt

3.20. CONVERSION OF MUDRA INTO BANK

Why in new?
• The govt. approved the conversion of MUDRA ltd into MUDRA Bank as a wholly owned subsidiary of Small Industries Development Bank of India (SIDBI) and creation of a Credit Guarantee fund for MUDRA loans.

Objective for creation of credit guarantee fund
• The CGF has been created to reduce the credit risk of MFIs/Banks/NBFCs/other financial intermediaries associated in disbursing loans to Micro and Small units. MFIs can now become Member Lending Institutions (MLI) with MUDRA (SIDBI) Bank for refinance or with NCGTC for credit guarantee.

3.21. HORTICULTURE STATISTICS

Why in News?
• Horticulture statistics releases for the first time by Agriculture ministry, pointed out a shift of farmers more towards horticulture crops than food grains.

Important data of the survey
• Area under horticulture rose by 18%, whereas, it is 5% for food grains
• Fruits and Vegetables accounts for 90% horticulture production of India.
• The inception to shift towards horticulture started from 2012-13, when horticulture production surpassed the food grain production.
• Area under horticulture crops rose by 2.7% per annum, and production by 7% annually.
• Highest annual production growth of 9.5 per cent recorded by fruits – especially citrus.
• Highest intake of vegetables and fruits is in urban areas as compared to rural areas.
• Grapes occupies the top position in terms of export over other horticulture fruits.

Following states are the leading producers of horticulture specific crops:
1. Fruits: Maharashtra
2. Vegetables: West Bengal
3. Flowers: Tamil Nadu
4. Spices: Gujarat
5. Plantation crops: Tamil Nadu

Importance of survey
• It would be helpful in formulating progressive policies towards the stakeholders.
• Dissemination of data would be helpful in averting the situations of surplus and deficit production which are frequently exploited by speculators and middlemen.
4. SOCIAL ISSUES

4.1. NATIONAL FAMILY HEALTH SURVEY

Why in News?
- The first set of the Fourth National Family Health Survey Report was released in early 2016. It covers data for only 13 states.

What is the National Family Health Survey?
- It is a large scale household sample survey conducted in a representative sample of households in India under the stewardship of Ministry of Health and Family Welfare.
- It is the main source of detailed health statistics in India.
- Background
- The first round of NFHS Survey took place in 1992-93. Three surveys have been conducted so far, third being in 2005-06.
- The International Institute for Population Sciences (IIPS) Mumbai, is the nodal agency for the survey.

HIGHLIGHTS OF THE FOURTH SURVEY
- **States Covered:** The 13 states covered are Andhra Pradesh, Goa, Bihar, Haryana, Karnataka, Madhya Pradesh, Meghalaya, Sikkim, Tamil Nadu, Telangana, Tripura, Uttarakhand and West Bengal plus Union Territories of Andaman and Nicobar Islands and Puducherry.
- **Infant Mortality**
  - Infant Mortality has reduced in all the states and Union Territories covered. All states have below 51 deaths per thousand births.
  - But it varies from 10 in Andaman to 51 in Madhya Pradesh.
- **Sex Ratio and Female Literacy**
  - Nine out of eleven states showed a declining sex ratio. These states are Goa, Meghalaya, UK, Tripura, TN, Sikkim, MP, Karnataka, Haryana, Bihar, and WB.
  - Only Uttarakhand saw its sex ratio rise. Meghalaya saw it stabilize.
  - Women’s literacy has risen in all these eleven states. It has increased by 12.5% in all these states since the last survey.
  - Goa tops the list in women’s literacy rate with 89% literacy rate.
- **Fertility Rate**
  - Women are having fewer children - FR varies from 1.2 in Sikkim to 3.4 in Bihar.
  - All First Phase States/UTs except Bihar, Madhya Pradesh and Meghalaya have either achieved or maintained replacement level of fertility.
- **Institutional Deliveries**
  - Children delivered in a medical institution under supervision increased by 32%.
  - In Bihar, it rose to three-fold, Haryana and MP also showed substantial increase.
- **Immunisation**
  - Full immunization coverage among children age 12-23 months varies widely
  - 6 out of 10 children have received full immunization in 12 of the 15 States/UTs.
  - Coverage of full immunization among children has increased substantially in the States of Bihar, MP, Goa, Sikkim, West Bengal and Meghalaya.
- **Nutrition**
  - Fewer children under five years of age are now found to be stunted, showing intake of improved nutrition.
  - But in Bihar, MP and Meghalaya more than 40% of children are stunted.
  - Anaemia has also declined, but still remains widespread. More than half of children are anaemic in ten of the 15 States/UTs.
Each state with the exception of Puducherry showed a sharp rise in obesity levels in both men and women.

- **Water and Sanitation**
  - Indian families in the First Phase households are now more inclined to use improved water and sanitation facilities.
  - Over two-thirds of households in every State/Union Territory have access to an improved source of drinking water.
  - More than 50% of households have access to improved sanitation facilities in all First Phase States/UTs except Bihar and MP.

- **Stress**: Since the last survey the number of people suffering from hypertension is more in rural India than in Urban India.

- **Child Marriages**
  - Child marriages saw a reduction since the last survey in the eleven states.
  - It has reduced by 13.17% for females and 6.7% for males.

- **Awareness of HIV**
  - Awareness about HIV/AIDS among women has been reducing substantially.
  - The percentage of women with comprehensive knowledge of HIV/AIDS in MP declined from 20.3% to 18.1%.
  - Similarly, in Bihar, it decreased from 11.7% to 10.1%.

- **Women’s Empowerment**
  - Marked increase in the percentage of women in the age group of 15-49 years having a savings account that they use themselves.
  - Goa at 82.8% has the maximum number of women who manage their own finances. But Tamil Nadu has shown a 83% increase from previous survey.
  - Bihar tops the list of women owning property with women owning up to 58% property while West Bengal has the least number of women owning property.

### 4.2. JALLIKATTU BAN

**Why in news?**

- The Indian Supreme Court has put on hold a recent government order lifting a ban on Jallikattu, a form of bullfighting which has been popular for centuries in the state of Tamil Nadu.

**Background**

- Animal activists have protested against the practice over the years. The Animal Welfare Board of India filed a case in the Supreme Court of India for an outright ban on Jallikattu because of the cruelty to animals and the threat to public safety involved.
- On 27 November 2010, the Supreme Court permitted the Government of Tamil Nadu to allow Jallikattu for five months in a year.
- The Ministry of Environment and Forests issued a notification in 2011 banning the event
- But the practice continued to be held under Tamil Nadu Regulation of Jallikattu Act, 2009.
- On 7 May 2014, the Supreme Court of India struck down the state law and banned Jallikattu altogether under The Prevention of Cruelty to Animals Act, 1960.
- On 8 January 2016, the Ministry of Environment and Forests permitted the continuation of the tradition under certain conditions, effectively ending the ban.

**What is Jallikattu?**

- Jallikattu is a bull-vaulting event practised in Tamil Nadu as a part of Pongal celebrations on Mattu Pongal day.
- Participants tackle the bull in an arena by its hump and try to hang on till they cross the finishing line.
- Jallikattu is popular in the districts of Madurai, Tiruchirappalli, Theni, Pudukkottai and Dindigul — a region also known as the Jallikattu belt.
- Jallikattu is an ancient sport. The seals of the Indus Valley civilisation depict it. Also Sangam literature (2nd BCE – 2nd CE), has many detailed references to Eru Thazhuvuthal (hugging the bull).

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• The Supreme Court of India on 12 January 2016 ordered a stay on grounds of cruelty to animals, issued notices to the central government and Tamil Nadu Government and later refused to lift the stay.

Arguments in favour of banning

• It is a cruel sport. In order to infuriate the bulls, they are beaten, and are made to pass through a narrow passage.
• During the process, both bulls and players suffer injuries. Few deaths also occurred in this bull taming sport.
• In few cases bulls were forced to drink alcohol, weren’t given food & water etc.
• By virtue of being an old tradition it cannot be regarded as a right sport. For example there were wrong practices like sati, untouchability etc. in our culture.
• Supreme Court during its hearing stated that cruelty should not be permitted in the name of culture. It also stated that if culture is at variance with law, law will take precedence.
• The Constitution of India says that it shall be the fundamental duty of every citizen of India to protect wildlife and to have compassion for all living creatures. Jallikattu, bull races and bull fights goes against this constitutional requirement of all Indian citizens and contravenes the PCA Act.
• Similar kind of event of bull fighting which is organized in Spain, has been banned in Catalonia State in year 2012.

Arguments against banning

• It’s a part of Tamil culture and has a centuries old history.
• There are rules in Jallikattu community to not harm the bulls. But some people are breaking the rules. Ban cannot be imposed just because of some rule breakers.
• Because of the ban, many bulls were sent to slaughter houses with the lack of money to maintain them.
• While conducting Jallikattu, medical teams check the bulls before allowing them to participate in the sport.
• Under the Convention on Biological Diversity and heritage status practices worldwide, it is customary that these ancient traditional practices are left as they are but with rules to organise and regulate them.
• If jallikattu is banned, livestock keepers will be forced to abandon the raising of native livestock, which already stands threatened due to the extensive use of motor pumps, tractors and mechanised agriculture.
• We will not only lose our breeds but also our self-sufficiency in milk production as well as promotion of organic farming. If we lose our breeds and import foreign breeds, multinational commercial companies will dominate the dairy industry in India.
• People who want a ban on jallikattu are far removed from village life and do not know how this chain works.

Way forward

• There is a clash of worldviews, and the disagreement reflects the absence of an inclusive approach to the problem. Animals definitely have the right to be treated in a humane way at the same time culture and tradition also must be respected.

4.3. NEED FOR SPECIAL LAW FOR CHILD RAPE (FAILURE OF POSCO)

Why in News?

• In 2015 Madras HC suggested the centre for considering castrating child sexual abusers while dismissing a petition filed by a UK national seeking to quash sex abuse proceeding against him
• Consequently SC in 2016 while hearing a petition filed by the Supreme Court women lawyers association advised Parliament to consider a law for harsher punishment for such crimes.
Child rapes in India:

- National Crimes Record Bureau statistics state that a total of 48,338 child rape cases were recorded from 2001 to 2011.
- India saw an increase of 336% of child rape cases from 2,113 cases in 2001 to 7,112 cases in 2011.
- These are only the tip of the iceberg as the large majority of child rape cases are not reported to the police while children regularly become victims of other forms of sexual assault too.
- It is known that about nine of 10 rapes and sexual assaults are carried out by people known to the victim.
- The insensitivity and unhelpful attitude of police, lawyers and untrained hospital staff makes prosecution and conviction difficult.

Why Child rapes are increasing?

- A rise in reporting:
  - Reporting of child abuse and rape cases have increased due to the lowering of the stigma attached.
  - The rise of social media has created awareness about child abuse.
  - Many instances of celebrities opening up about being abused in their childhood (for instance, the actor Kalki Koechin) have also motivated many parents to report.

- New criminal laws:
  - The introduction of POCSO in 2012 and the Criminal Law (Amendment) Act in 2013 was instrumental in higher reporting of rape against children.
  - The definition of rape now includes many more sexual actions than were earlier classified as sexual assault.
  - Age of consent for girls has been raised from 16 to 18 years. This means boys who have consensual sex can be charged with rape.

4.4. RESERVATIONS FOR WOMEN IN BIHAR GOVERNMENT JOBS

What is the new move all about?

- Bihar government introduced 35% reservations for women in the state government jobs in Bihar at all levels for which direct recruitment is made, in early 2016.

Similar Initiatives in Bihar in the past

- 50% reservations for women in panchayat and local body polls in 2006.
- 50% reservations for women as primary school teachers.
- 35% reservations for women for the job of police constables and Sub Inspectors.

Why is it needed?

- The labour rate participation of women of working age in Bihar is 9%, which is one of the lowest in India, with the all India average being 33%.
- Share of women in casual employment in Bihar amount to 50% as against the national average of 31%. This is evidence of gender disparity.
- Better representation in the formal work force with assured wages and incomes will help improve status of women.
Female literacy in the largely agricultural state stands at 51.5 percent against male literacy of 71.2 percent, and a national female literacy rate of 65 percent.

Criticism
- Not too many jobs get created in public sector so this policy is mostly symbolic.
- Government should ensure effective implementation of the policy.
- Government should ensure work environments are women friendly and free of patriarchal attitudes with stronger Sexual Harassment laws at Work place.
- Resolve the gender gap in literacy levels of women for more substantial empowerment.
- Supplement such policies with maternity leave benefits and crèche facilities.

4.5. PATERNITY LEAVE AND MATERNITY ENTITLEMENTS

Paternity leave
- Paternity leave, along the lines of maternity leave, is the paid or unpaid leave given to male employees when they become a parent.
- This is a benefit enjoyed by employees in several western countries for long and is increasingly becoming a demand and topic of discussion in India too.

Background
- Public sector grants 15 days of paternity leave while there is no law on paternity leave in the private sector in India.
- At least 78 countries provide this provision to their male Employees in varying degrees.

Importance
- Involvement of both parents becomes crucial in the wake of increasing number of nuclear families.
- Would lead to changes in the relationship and perception of parenting roles.
- Would lead to a gender balanced approach towards care giving and unpaid work.
- May reduce women taking career break due to pregnancy.
- Gives men an opportunity to develop a stronger bond with the child from birth.

Challenges for paternity leave
- No standard policy in the private sector in India.
- Lack of awareness and understanding of the importance of paternity leave.
- Could be misused by the employees
- Embarrassment associated with availing paternity leave for men.

Maternity entitlements provisions
- The increase maternity leave from 12 weeks to 26 weeks is being done in private sector in consideration of the six months of exclusive breastfeeding required for a child’s well-being.
- It would put India in a league of just 16 countries across the globe that give women the highest duration of paid maternity leave.
- Women employed in government jobs in India get a six-month maternity leave as per the Central Civil Service Rules 1972.
- Women government employees are allowed to take childcare leave of up to two years in phases at any point till their child turns 18 years old.
4.6. HUMAN DEVELOPMENT REPORT 2015

- The latest Human Development Report, 2015 was released in December 2015 by UNDP.

Background

- Human Development Report was first launched in the year 1990 by the United Nations Development Programme (UNDP).
- This approach was developed by economist Mahbub Ul Haq and Nobel Laureate Amartya Sen.
- HDR was a result of change in thinking from monetary indicators of national progress (like GDP) to broader indicators of human progress like health and education.

Three dimensions of Human Development

- First is **Standard of Living** which is calculated though the Gross National Income Per Capita.
- Second is **Health** which is calculated through Life Expectancy at Birth.
- Third is **Education** which is calculated through mean years of education among the adult population and expected years of schooling for children.

HDR also includes four other indices,

- **Inequality Adjusted HDI**: It calculates the HDI after taking account of the inequality prevalent in the country.
- **Gender Development Index**: It compares female and male HDI values.
- **Gender Inequality Index**: Presents a composite measure of gender inequality using three dimensions: reproductive health, empowerment and the labour market.
- **Multidimensional Poverty Index**: Measures non income dimensions of poverty.

Highlights of the 2015 Human Development Report

- The report studies 188 countries and territories of the world.
- Explores “WORK” as the one fundamental factor which increases or decreases human capability.
- It differentiates between “work” and “job”. While work is not necessarily always rewarded, a job is work done for a predetermined payment. Difference in their monetary evaluation causes widening inequality.
- Norway has ranked first with an HDI value of 0.944.
- Norway is followed by Australia, Switzerland and Denmark.
- United States ranks 8th while China ranks 90th.
- Pakistan and Bangladesh have a rank of 147 and 142 respectively.
- Sri Lanka ranks a very high of 73 and falls in the ambit of High HDI countries.
- India ranks lower than countries like Namibia, Tajikistan, Guatemala and even Iraq.
India

- **HDI**: India ranks 130th with an HDI value of 0.609 and falls in category of Medium Developed Countries, while the very high human development countries have an average value of 0.896.
- **Health**: India’s Life Expectancy at Birth is 68 years while the very high human development countries have an average of 80.5 years.
- **Education**: India’s expected years of schooling are 11.7 years while the very high human development countries have an average of 16.4 years.
- India’s Mean years of schooling is 5.4 years while the very high human development countries have an average of 11.8 years.
- **Progress**: From 2009 to 2014 India has risen six points in terms of HDI value.
- India’s improved ranking is not through improvements in education and health but mainly through income growth.
- **Inequality**: When India’s HDI is adjusted for inequality its value drops 28%, from 0.609 to 0.435. This trend is similar for neighbours, Pakistan and Bangladesh also.
- **Gender**: India’s Gender Development Index Value is 0.795 and India ranks below Bangladesh (0.917).
- India’s Gender Inequality Index value is 0.563 ranking 130 among 155 countries falling behind Bangladesh and Pakistan.
- **Multidimensional Poverty Index**: 55.3 per cent of India’s population were multi-dimensionally poor in 2005-06, while another 18.2 per cent lived near multidimensional poverty.
- **Maternal Mortality Rate** for India is 190 (deaths per 100000 live births) while the very high human development countries have an average of 18.
- **Infant Mortality Rate** for India in 2013 is 41.4 (per 1000 live births) while the very high human development countries have an average of 5.1.

Comparability of HDR 2015 with its Earlier Versions

- The 2015 report uses 2011 published PPP data while previous reports used 2005 data making comparisons with previous rankings misleading.
- This report also uses new population data released by UN Population Division. This has impacted the rankings of countries.

Way Forward

- India needs to address the deficiencies in terms of malnutrition, access and quality of education.
- Ensure work is quantitatively and qualitatively enhanced for a higher standard of living.
- Employment guarantee schemes not enough, need to reform rigid labour market and its obsolete laws, address child labour and forced labour, wage equality.

### 4.7. DISABILITY IN INDIA

**Why in News?**

- PM Narendra Modi made a suggestion of changing the nomenclature of disabled from “viklang” to “divyang”.
- Several disabled people’s organizations have opposed the use of the term “divyang”.

**Government Initiatives for the Disabled in India**

- Persons with Disability (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995.
- India signed the UN Convention on Rights of Persons with Disability.
- term “divyang” is being considered in place of “viklang” to change mindset
- the term would help in raising self-confidence and subsequent empowerment

**Definition of Disability in India**

Persons with Disability Act, 1995 defines Disability under seven categories: blindness, low vision, leprosy-cured, hearing impairment, locomotor disability, mental retardation and mental illness.

2001 Census says 2.21% are disabled in India.
Critique of “Divyang”

• Mere change of terminology is not going to bring about any change in the manner in which people with disabilities are treated.
• It will only invoke sympathy and underline that charity is what is needed
• disability is not a divine gift and would only tend to create myths

Issues around Disability in India

• Disability is not being measured properly in India.
  o Not all censuses in India have measured Disability.
  o The ones that have measured have used different definitions for disability making comparisons difficult.
  o Changes in definition makes someone disabled in one census and not disabled in another.
• India looks at disability from medical or pathological angle only.
• Most developed countries look from social angle, highlighting institutional and social arrangements preventing those with impairments from leading normal lives.
• Census depends on self-reporting of disability; this may leave out mental disability and even physical disability.
• Lack of Institutional and Infrastructural Support for the disabled in India.

Way Forward

• Kerala became first state to conduct a census of its own called Kerala Disability Census for 2014-15. Other states must follow example.
• The new Rights of Persons with Disability proposes to increase job reservations for the disabled from 3 percent to 5 percent.
• It also seeks to widen scope of disabilities covered under the bill from seven to nineteen.
• Accessibility and support services for persons with disability must be increased manifold.

4.8. DALIT CAPITALISM

What is Dalit Capitalism?

• A term being increasingly used by the Indian media to refer to the use of entrepreneurship by the Dalit community in India as a way of upward economic and social mobility.
• The central idea is money as the ultimate equalizer. Using capitalism as a way of obliterating the disadvantages imposed by caste.

Why in News

In a speech at the National Conference of Dalit Entrepreneurs in December 2015, PM Narendra Modi spoke about the importance of rapid industrialisation as the best bet for social advancement.

Background

• The Dalit Indian Chamber of Commerce and Industry (DCCI) was founded in 2005 along the lines of FICCI in 2005.
• The DICCI is an association of entrepreneurs from the Scheduled Castes and Scheduled Tribes
• It promotes business enterprises for Dalits in India and has the self-purported goal of “being job givers rather than job seekers”.
• They reject reservations by the government as a way of dalit emancipation and feel it has just added negative stereotype on the dalits.
• Kalpana Saroj and Milind Kamble, two Dalit billionaires, were awarded the Padma Awards in 2013. They are also members of DICCI.
• In 2013 DICCI also launched the DICCI SME fund which is a venture capital fund with a aim to raise Rs 500 crore over 10 years.
Why is Dalit Capitalism Needed?

- The condition of dalits bettered only marginally and data from the Economic Census show that as late as 2005, Scheduled Caste owned just 9.8 percent of the 42 million enterprises that employ around 99 million people, while they have a share of 16.4 percent in the population.
- National share of enterprises owned by SCs in 2005 was virtually the same as was in the year 1990.

Hurdles Faced by Dalit Capitalism

- Caste based discrimination still practiced in India even in the free market.
- Lack of access to existing and well established business networks which are a must in a country like India to successfully transact business.
- Banks don’t easily lend to the community depriving them of the much needed capital for starting ventures.
- Dalits are also a not a monolithic community and fissures of clan, strata might creep into the achievement of the goal of Dalit Capitalism

Criticism of Dalit Capitalism

- Leftist critique of Dalit Capitalism would argue that Dalits are using the inherently exploitative system of capitalism for their emancipation and advancement. The previously exploited will act as exploiters now.
- Free Market has not acted as an equalizer in the US where African Americans still languish at the bottom of most socio-economic indicators.

Government steps

- National Schedule Caste Finance and Development Corporation offers loans to the SC Community for Entrepreneurship development and other activities.
- The IFCI provides venture capital loans for the SCs up to an amount of 15 crores.
- Recently launched Start Up India Programme will provide support to entrepreneurs including credit guarantee programme for SCs.
- MUDRA Bank will give leading priority to SC/ST for extending credit facilities.
- DICCI SME fund plans to shell out loans worth 500 crore in the next 10 years.
- The government has launched the Green Business Scheme. Green Business Scheme envisioned financial assistance to Dalits to combat climate change.

4.9. END OF EBOLA EPIDEMIC

(For details refer August 2015 Current Affairs)

Background

- Ebola virus disease (EVD), formerly known as Ebola haemorrhagic fever, is a severe, often fatal illness in humans.
- The virus is transmitted to people from wild animals and spreads in the human population through human-to-human transmission.
- The worst affected countries were Sierra Leone, Guinea and Liberia.
- Guinea, Sierra Leone and Liberia had very weak health systems and lacked human and infrastructural resources.

What is the current status of the disease in Africa?

- Liberia was declared free of the disease by WHO in May, 2015 and then again in January 2016 as new cases emerged two times after that.
- November 2015, Sierra Leone and Guinea were declared free of Ebola virus by WHO.
How does WHO declare a country to be free of the virus?

- Declared free after the last confirmed case has tested negative twice on the blood samples a country has to go through an incubation period of 42 days.
- But thereafter the countries are placed on a 90 days heightened surveillance.

What was the impact of Ebola in its latest outbreak?

- Ebola has killed more than 11300 people since 2014 and infected 29000 people.
- Stigma and risk aversion have affected contacts with the West African countries and hence greatly affected the economy.
- Poverty and food insecurity could increase as a result of the impact on economy.

Is there a cure for Ebola?

- There is as yet no proven treatment available for EVD.
- However, a range of potential treatments including blood products, immune therapies and drug therapies are currently being evaluated.
- No licensed vaccines are available yet, but 2 potential vaccines are undergoing human safety testing.

Why is the WHO criticised?

- It had a very sluggish response to the disease when it began in 2014 although intensified efforts later.
- This lead to a very high death toll in the beginning.

Lessons for India

- Outbreak in any country is a threat to all countries.
- It is possible to contain the virus early if the response is swift and based on evidence.
- Crucial to invest in a sustainable public health infrastructure or health systems.
- The panic and hysteria can lead to counterproductive measures.

4.10. KERALA BECOMES THE FIRST TO ACHIEVE 100% LITERACY

- Kerala became the first state in the country to achieve 100 percent primary education.
- This has been achieved through the primary education equivalency drive of the state literacy mission — Athulyam.

More about Athulyam

- It was launched in March 2013 and was carried out in two phases.
- It had identified people who had not completed their primary education.
- The programme was meant to provide primary school education to people aged between 15 and 50.
- After this these people were given five-month training, enabling them to attend the fourth equivalency examination.
- Two Lakh people were enrolled under this programme.

4.11. NATIONAL CENTRE FOR AGEING

- The Union Health Ministry recently approved two National Centre for Ageing to come up in India.

What are the National Centres for Ageing?

- Highly specialized centers of excellence for geriatric care or care of the elderly.
- They will develop manuals for home care and provide training to the specialists and formulate protocols in areas of elderly care.
• The Centres will be set up under the National Programme for Health Care of the Elderly.
• They will be set up during the twelfth five year plan period at the All India Institute of Medical Sciences, New Delhi and the other at the Madras Medical College in Chennai

Objectives
• To provide specialized health care to the elderly as they are highly prone to diseases.
• To fill the gap caused by no specialization in geriatric medicine in India.
• Training of health professionals in the area.
• Research Activities in geriatric care.
• 200 bedded in patient facility for the elderly.

What are the Problems faced by elderly in India?
• Seventy percent aged depend on others for their day to day maintenance. It’s 85 percent in case of elderly women.
• 79% in rural areas and 35% in urban areas do not get any benefits after retirement.
• 10% of elderly in India suffer from depression and 40-50% require psychiatric or psychological intervention at some point.
• Informal support and family structures are disappearing fast and formal structures have not replaced them adequately.

Way Ahead
• Promoting awareness about the concept of healthy ageing and the health problems and to involve the community in the process of their mitigation.
• Exploration of PPP models in the infrastructure development of health care for elderly.
• Special attention to elderly who are disabled, poor, in rural areas, SC/STs, women, destitute.

4.12. BALAMURTHAM PROGRAMME

What is Balamrutham?
• Balamrutham is the weaning food introduced under ICDS to provide improved supplementary nutrition to children between 7 months to 3 years.
• It is fortified and thus provides 50% of iron, calcium, vitamins and other RDA that children require per day.

What is the Balamrutham Programme?
• The Balamrutham Programme was started by the Andhra Pradesh Government in 2013.
• Under this programme children enrolled with Anganwadis were given Balamrutham of 2.5kg per child to provide quality diet to infants

What is the Controversy surrounding Balamrutham?
• AP foods which is located in Telangana now, used to supply Balamrutham to the whole of Andhra.
• After the bifurcation, supply of Balamrutham to Andhra stopped

Other Government Nutrition Initiatives in India
• National programmes such as Sarva Shiksha Abhiyan, Mid-Day Meal Programme, the NRHM or Janani Shishu Suraksha Karyakram.
• National Nutrition Mission.
• Rashtriya Bal Swasthya Karyakram
• Weekly Iron Folic Acid Supplementation
• Universal supplementation of iron and vitamin A.
What is the significance of the Balamrutham Programme?

- Poor quality diet is among the chief reasons for the increasing IMR in the country.
- According to the Human Development Report, 2015 India has an IMR of 41 per thousand live births which is very high compared to the developed countries.
- Nutritious food for their infants is out of the reach of most mothers in India.
5. SCIENCE AND TECHNOLOGY

5.1. ZIKA VIRUS

Origin
- It was first identified in monkeys in Uganda in 1947.
- The first human case was detected in Nigeria in 1954 and there have been further outbreaks in Africa, South East Asia and the Pacific Islands.

Countries Affected
- In May 2015, it was reported in Brazil and has spread rapidly.
- It has since also been reported in: Barbados, Bolivia, Colombia, the Dominican Republic, Ecuador, El Salvador, French Guiana, Guatemala, Guadeloupe, Guyana, Haiti, Honduras, Martinique, Mexico, Panama, Paraguay, Puerto Rico, Saint Martin, Suriname and Venezuela.
- Recently, few cases of Zika Virus has been confirmed in Texas, USA.
- According to senior experts in WHO, the Zika virus outbreak in Latin America could be a bigger threat to global health than the Ebola epidemic.

Cycle of Spread
- It is spread by Aedes mosquitoes.
- They are found throughout the Americas except for Canada and Chile where it is too cold for them to survive.
- If mosquitoes drink the blood of an infected person they can then infect subsequent people they bite.
- Unlike the mosquitoes that spread malaria, they are mostly active during the day, so bed nets offer limited protection.

Affected People
- Most virus carriers are symptomless.
- It is a silent infection in a group of highly vulnerable individuals – pregnant women which in turn is associated with a horrible outcome for their babies.

How to prevent it?
- As there is no treatment/vaccination available for the treatment of Zika virus, the only option is to reduce the risk of being bitten. Hence people are advised to:
  - Use insect repellents
  - Cover up with long-sleeved clothes
  - Keep windows and doors closed

Actions Taken
- The Indian Health Ministry have started constituting a technical group to monitor the spread of Zika virus in India.
- At International level, the WHO will also convene an international health regulations emergency committee on Zika on February 1st.
5.2. SPACE PARKS: ISRO

- The Indian space agency will open a 100-acre Space Park in Bangalore where private industry players would be allowed to set up facilities to make subsystems and components for satellites.
- ISRO wants to groom and engage domestic industry in the launch vehicles area from integrating sub-systems up to assembling, and even launching the PSLV.
- On the spacecraft front, ISRO plans to increasingly support small and mid-sized industries at its 10-year-old second spacecraft complex, the 100-acre ISITE, at Marathahalli in Bengaluru.
- The Space Park will also contribute to the government’s ‘Make in India’ initiative as the private industry and HAL (Hindustan Aeronautics Ltd) have been helping us in making rockets and satellites over the years.
- Also in the pipeline is allowing private players to make satellites and providing them facility at Sriharikota for launch.

Why is ISRO helping private sector?

- It could help ISRO to focus on its other core activities and
- Develop an ecosystem (including private players) in space research and production.
- To cater to the increasing demand – new satellites and replacing old ones.

5.3. canSAR DATABASE

- It is a huge 3-dimensional pool of Big Data that provides information about cancer drugs, chemicals, and molecular structures — for improving cancer therapy designs.
- Launched in 2011, it was developed at the Cancer Research UK Cancer Therapeutics Unit at the Institute of Cancer Research.
- The goal was to create a massive database that would map how millions of drugs impact human proteins and molecules, then combine that with information about genes and clinical trial results.
- The database provides 3-dimensional models of the structures of 110,000 molecules to identify the cavities on cancer-causing molecules, and then create new drugs to attack them.

5.4. NANO TECHNOLOGY AND SUPERBUGS

- A new, adaptive, light-activated Nano therapy could kill superbugs that have become resistant to antibiotics.
- The dots, which are about 20,000 times smaller than a human hair and resemble the tiny semiconductors used in consumer electronics, successfully killed 92 percent of drug-resistant bacterial cells in a lab-grown culture.
- Special Features of Quantum dots based therapy
  - Targeted tissue damage: Previous research on nanoparticles showed that gold and silver nanoparticles can be harmful to healthy tissue as well as the target bacteria. But that kind of collateral damage doesn't seem to be a problem with the new quantum dots.
  - Made of semiconducting materials like cadmium telluride instead of metal, they can be tailored to specific infections, slipping inside the disease-causing germs and, when activated by light, triggering chemical reactions that destroy them.
- A typical weak light source (a lamp, well-lighted room, sunlight, etc.) is enough to activate these quantum dots.
- Depending on the nature of the infection several applications for quantum dots can be: covering infected cuts might simply be with nanoparticle-impregnated bandages and injecting quantum dots into infectious system.
- In addition, hospital rooms and medical instruments might be treated with a dot-containing disinfectant in order to reduce the risk of spreading infections from patient to patient.
- But more research, including clinical trials, will be needed to develop quantum dot therapy and prove its safety and effectiveness in humans.
5.5. HYDROGEN BOMB

Why in news?

North Korea announced on January 6 that it had successfully tested a hydrogen bomb.

What is a hydrogen bomb?

- Hydrogen bombs are thermonuclear weapons.
- A thermonuclear weapon is a nuclear weapon that uses the energy from a primary nuclear fission reaction to compress and ignite a secondary nuclear fusion reaction.
- The result is greatly increased explosive power when compared to single-stage fission weapons.
- It is colloquially referred to as a hydrogen bomb or H-bomb because it employs fusion of isotopes of hydrogen.

Salient Features of Hydrogen Bomb

- A Hydrogen bomb is a much more powerful atomic weapon.
- The energy released in a Hydrogen bomb is several magnitudes higher than an Atom bomb.
- Hydrogen bombs use the fusion of hydrogen atoms, hence its name.
- A fusion bomb is more sophisticated and difficult to make, since it requires a much higher temperature -- in the order of millions of degrees centigrade. So a fission is carried out first to produce more energy, which is then used to initiate fusion. In a fusion bomb, a fission device has to be triggered first.
- It is easier to make Hydrogen bombs in small size, so it is easier to place them in missiles.
- Hiroshima and Nagasaki both were atomic bombs and till date Hydrogen bombs have never been used in war.
5.6. HVDC TECHNOLOGY

Why in News?

- In next three years, India will see some 34,000 megawatt (Mw) of power being transported over long distances, primarily to the northern and the southern regions.
- This will be made possible through setting up of large trunk transmission HVDC lines.

What is HVDC?

- High-voltage direct current (HVDC) is a technology developed to increase the efficiency of power transmission over long distances by using Direct current transmission at high voltage.

Background and Technology:

- Power stations generate alternating current (AC) and most power lines carry AC that oscillates with 50 or 60 cycles per second, whether for the high, medium or low-voltage distribution grid.
- Power also reaches consumers in homes, industries and offices as AC.
- Direct current doesn't oscillate, so less energy is lost during transmission using DC.
- The current is changed in a converter station and transmitted to the receiving point by an overhead line or cable.
- It is then restored to AC in another converter station and injected into the receiving AC network.
- A 2,000-km long DC transmission line at 800 kV loses about 5 percent of its power, while the power losses in an AC line of similar voltage are about twice as high.

Why HVDC demand is increasing?

- rising energy needs
- less electricity is lost in transmission than with conventional AC technology
- requires fewer transmission lines, meaning that less land has to be cleared
- Why HVDC only for longer transmission?
- Because special equipment is needed to convert electricity from alternating current to direct current, HVDC is cheaper only over long distances, typically more than 600 kilometers for overhead lines and more than 50 km for underwater cables.

DELIVERING RENEWABLE ENERGY WITH HVDC

- Wind Power
- AC Transmission Lines
- AC to DC Converter Station
- HVDC Transmission Lines
- DC to AC Converter Station
- AC Transmission Lines
- Distribution Line
- Homes and Businesses

WIND RESOURCE CONVERTER STATION

- Converts energy from AC power to DC power
- Energy is transmitted on the transmission line

DELIVERY CONVERTER STATION

- Energy is received from the transmission line
- Converts energy from DC power to AC power
- Connects with existing transmission system
HVDC’s relevance for renewable energy?

- There are challenges to large scale integration of renewable generation into the energy mix.
- To be viable, projects have to be installed where they can be fully and efficiently utilized, and such locations are typically far away from load centers that need the energy the most.
- Hence, integrating renewable generation on a large scale will also require a considerable increase in power transmission capacity and efficiency.

India’s first HVDC transmission line

- India’s first high-voltage, direct-current (HVDC) transmission line was built by the state-owned PowerGrid connecting the northern states with the north-eastern ones.
- The HVDC corridor would facilitate transfer of 24,000 Mw from future power generation projects in the northeastern region and Bhutan.
- The corridor would help resolve the issue of congestion in the north and northeast regions.

5.7. OPOGENETICS AND CLARITY

Why in news?

- Prof. Deisseroth (Professor of Bioengineering and of Psychiatry and Behavioural Sciences at Stanford University) was recently awarded prestigious Life Sciences Breakthrough Prize for 2016.
- He has devised two path-breaking techniques that are changing understanding and control of the brain.

What is Optogenetics?

- It is combining genetics and optics.
- It is a neuromodulation method employed in neuroscience that uses a combination of techniques from optics and genetics to control and monitor the activities of individual neurons in living tissue—even within freely-moving animals—and to precisely measure the effects of those manipulations in real-time

Use of optogenetics

- It has potential to treat disease like Parkinson’s disease.
- It can also be used to cure blindness.

What is CLARITY?

- CLARITY (Clear Lipid-exchanged Acrylamide-hybridized Rigid Imaging / Immunostaining / in situ-hybridization-compatible Tissue hydrogel) is a method of making brain tissue transparent using acrylamide-based hydrogels built from within, and linked to, the tissue.

5.8. CLOUD COMPUTING AND BIG DATA

Why in news?

- At the recently concluded 103rd Indian Science Congress, experts said that Cloud computing can be the solution to Big data problem.
What is Big Data?

- Big data is a term that describes the large volume of data – both structured and unstructured beyond the ability of commonly used software tools to capture, curate, manage, and process data within a tolerable elapsed time.
- It’s what organizations do with the data that matters. Big data can be analyzed for insights that lead to better decisions and strategic business moves.
- Big data is characterized by 3Vs

Applications of Big Data

- Companies use big data to better understand and target customers by bringing together data from their own transactions as well as social media data and even weather predictions.
- Businesses optimize their processes by tracking and analyzing their supply chain delivery routes and combine that data with live traffic updates. Others use machine data to optimize the service cycles of their equipment and predict potential faults.
- Big Data is used in healthcare to find new cures for cancer, to optimize treatment and even predict diseases before any physical symptoms appear.
- Big Data is used to analyze and improve the performance of individuals (at sports, at home or work) where data from sensors in equipment and wearable devices can be combined with video analytics to get insights that traditionally where impossible to see.
- Police forces and security agencies use big data to prevent cyber-attacks, detect credit card fraud, foil terrorism and even predict criminal activity.
- Big Data is used to improve our homes, cities and countries by e.g. optimizing the heating or lighting in our homes, the traffic flow in our cities, or the energy grid across the country.

How is cloud computing related to Big data?

- Cloud computing is very important in BIG data analytics due to its application sharing and cost effective properties.
- This technology will help in current genomic data storage and analysis.
- To head towards sustainable livelihood and development, such analyses with respect to agriculture including plants and animals are crucial.
- 90% of the data in the world today has been created in the last two years alone.

5.9. FACEBOOK’S FREE BASICS TUSSLES WITH TRAI

Why in news?

- The Telecom Regulatory Authority of India accused Facebook for turning the consultation over differential pricing of data services into an “orchestrated opinion poll” on its Free Basics product.
- India’s telecom regulator has received over 14 lakh responses in support of Facebook’s Free Basics, virtually all redundant for formulating a policy as the regulator had sought views on the principle of differential pricing for data services.

What is Free Basics?

- Internet.org was rechristened Free Basics in September.
- According to Facebook, it is an open platform that gives Indian developers the opportunity to make their services and websites available free of cost to those who cannot afford internet access.
- However, this free access is limited to partner websites and applications.

TRAI’S Consultation paper:
The consultation paper on differential pricing of data services raises concerns over zero-rating tariff models — a practice wherein service providers offer free data to users for select applications and websites. According to Internet activists, this model violates the principle of net neutrality as it restricts access to free, open Internet for users, making the paper key to the ongoing debate on net neutrality.
• It was launched two years ago globally in partnership with Samsung, Ericsson, MediaTek, Opera Software, Nokia and Qualcomm.

What’s the problem with Free Basics?

• It doesn’t offer equal and unbiased access to all services.
• Facebook is partnering with ISPs to provide preferential and selective access to a set of app developers and services.
• Critics argue that the internet should be free and equal for all users. This is also the cornerstone of net neutrality.

5.10. HISAR CENTRE SECOND INSTITUTE TO CLONE BUFFALO

• ICAR-Central Institute for Research on Buffaloes (CIRB) has produced cloned calf called ‘HISAR GOURAV’.
• This cloned buffalo calf is distinct from the earlier clones produced in India, as this is produced from cells of ventral side of tail of superior buffalo bull.
• This part is least exposed to sunlight and may have less mutation rate, and can be good choice for isolation of donor cells to produce healthy clones.
• It has been emphasized that the use of adult somatic cells of proven males or quality females for cloning can bring revolution by multiplying the superior buffalo germplasm in country.
• With this achievement CIRB becomes world’s third and India’s second institute to produce cloned buffalo.
• National Dairy Research Institute in Karnal was the first to produce a cloned calf in India.
• This achievement has been made under the project entitled, Cloning for conservation and multiplication of superior buffalo germplasm.

5.11. ARTIFICIAL INTELLIGENCE

In the news:

• Marvin Minsky, a pioneer of Artificial Intelligence died on 24 January due to cerebral haemorrhage.

What is artificial intelligence?

• It is the science and engineering of making intelligent machines, especially intelligent computer programs.
• It is related to the similar task of using computers to understand human intelligence, but AI does not have to confine itself to methods that are biologically observable.
• AI is not always about simulating human intelligence. There is something about how to make machines solve problems by observing other people.
• However, most work in AI involves studying the problems the world presents to intelligence rather than studying people or animals.
• AI researchers are free to use methods that are not observed in people or that involve much more computing than people can do.

5.12. EXPERIMENTAL MEDICINES UNDER THE EXCEPTIONAL CIRCUMSTANCES

Why in news?

• World Health Organization (WHO) in August 2014 declared that it was not unethical to use experimental medicines (Zmap and convalescent plasma therapy) under the exceptional circumstances as witnessed in West Africa during Ebola outbreak.
What is convalescent plasma technique and how does it work?

- The rationale of techniques is that the plasma taken from survivors will have antibodies (against the virus) that would fight the virus. It is similar to passive immunity (which results when a person is given someone else’s antibodies) technique.
- However, its potential depends on amount of antibodies introduced. There is a direct correlation between antibody level and its effectiveness.
- It had once been used successfully to treat measles, mumps, pneumonia, influenza and diphtheria.

Results of the trial:

- It was seen that both antibody and cell mediated responses are important to treat Ebola.
- Higher amount of Antibodies need to be infused to make it effective.
- Children younger than five and pregnant women have been found to benefit the most when compared with others.
- The plasma was not found to be safe for treatment of the Ebola virus disease.
- The virus has been found in semen and in the eye long after it was cleared from the blood, care need to be taken to avoid giving plasma containing the virus.
- WHO has said trial is “acceptable” at all stakeholders level — patients, family, health-care providers and researchers.
- Such trails are essential for future experiments.

5.13. 103RD INDIAN SCIENCE CONGRESS AND TECHNOLOGY VISION DOCUMENT 2035

Why in news?

- 103rd Indian Science congress in Mysuru was organized with the focal theme ‘Science and Technology for Indigeno us Development in India’.
- It has been prepared by Technology Information, Forecasting and Assessment Council, (TIFAC)

Aim of Technology Vision Document 2035:

- The Aim of this ‘Technology Vision Document 2035’ is to ensure the Security, Enhancing of Prosperity, and Enhancing Identity of every Indian.

It also identifies twelve (12) prerogatives- (six for meeting individual needs and six for the collective needs) that should be available to each and every Indian. These are:

- It categorizes technologies into a six-fold classification from an Indian perspective which is as follows:
  - Technology Leadership – niche technologies in which we have core competencies, skilled manpower, infrastructure and a traditional knowledge base eg., Nuclear Energy, Space Science.
  - Technology Independence – strategic technologies that we would have to develop on our own as they may not be obtainable from elsewhere eg. Defence sector.
  - Technology Innovation – linking disparate technologies together or making a breakthrough in one technology and applying it to another eg. solar cells patterned on chlorophyll based synthetic pathway are a potent future source of renewable energy.
  - Technology Adoption – obtain technologies from elsewhere, modify them according to local needs and reduce dependence on other sources eg., foreign collaboration in the sectors of rainwater harvesting, agri-biotech, desalination, energy efficient buildings.
  - Technology Constraints – areas where technology is threatening and problematic i.e. having a negative social or environmental impact because of serious legal and ethical issues eg., Genetically Modified(GM) Crops.
The Vision Document gives a ‘Call to Action’ to all the key stakeholders

- **Technical Education Institutions** engage in advanced research on a large scale leading to path-breaking innovations.
- **Government** enhances financial support from current 1% to long-envisioned 2% of the GDP.
- **Full-time equivalent Scientists** in the core research sector should increase.
- **Private Sector Participation and Investment** in evolving technologies that is readily deployable and is translatable from lab to field thereby increasing efficiency in terms of technology and economic returns.
- **Academia-Intelligentsia-Industry connect** is established via idea exchange, innovative curricula design, based on the needs of the industry, industry-sponsored student internships and research fellowships inter alia.
- **Creation of a Research Ecosystem** to achieve translation of research to technology product/process by integrating students, researchers and entrepreneurs.

Three key activities identified as a part of the ‘Call to Action’

- **Knowledge creation:** It says that India cannot afford not to be in the forefront of the knowledge revolution, either applied or pure.
- **Ecosystem design for innovation and development:** the primary responsibility for ecosystem design must necessarily rests with government authorities.
- **Technology deployment:** with launching certain national missions involving specific targets, defined timelines requiring only a few carefully defined identified players.

### 5.14. 23RD NATIONAL CHILDREN SCIENCE CONGRESS (NCSC)

- 23rd NCSC (started in 1993) was based on the theme of ‘Understanding Weather and Climate’
- Nearly 1,400 students in age group 10 to 17 years, from various schools presented projects under various categories depicting the problems faced by world due to climate change or possible solutions.
- More than 300 scientists and researchers from Department of Science and Technology also participated.
- To stimulate scientific temperament and learning the scientific methodology.

#### Objectives of NCSC:
- Forum for young scientists to pursue their natural curiosity and to quench their thirst for creativity by experimenting on open-ended problems.
- To make children feel that science is all around and you can gain knowledge as well as solve many problems.
- To encourage children to visualize future of the nation and help build generation of sensitive, responsible citizens.
6. INTERNAL SECURITY/LAW AND ORDER

6.1. NATIONAL SECURITY DOCTRINE

Why in news?
- In the aftermath of Pathankot attacks experts are of views that there is an imminent need for National Security Doctrine.

Issues in India’s national security
- Inconsistent security response i.e., calling of NSG to combat in Pathankot, even when trained army personnel acquainted to local terrain were available at the site itself.
- Similarly, in Mumbai attacks, NSG was stationed in city itself but took long time to come to action.
- Ignoring or inaction on intelligence inputs.
- Heavy casualties due to improper co-ordination among security agencies.
- No accountability even after failures of any agency

WHY INDIA NEEDS A SECURITY DOCTRINE
- Prompt and relevant decision making would result in consistent security response at the time of insurgencies. The decisions would be guided by the national security strategy enshrined in the doctrine.
- Maintaining proper co-ordination among security establishments at both at central and federal level. This would avoid terror attacks which occurred even when intelligence agencies have inputs.
- This would make the security establishment more accountable in case of any failures to combat terror attacks.
- A prompt and successful handling can ensure peace, progress and development within the country.

WHAT IS A NATIONAL SECURITY DOCTRINE?
- A Doctrine is a stated principle of government policy in different domains viz foreign affairs, military etc.
- NSD is a document which guides the government on security matters at both strategic and operational level.
- NSD is applied through strategy, tactics and specific operations at different situation underlined in the doctrine.
- Currently, only defense establishment in India have a doctrine for external security.

6.2. ANALYSIS OF PATHANKOT ATTACK

Why in News?
- On 2 January 2016, a heavily armed group attacked the Pathankot Air Force Station, part of the Western Air Command of the Indian Air Force.

Impact of such attacks on India-Pakistan relations
- The attack on the Pathankot IAF base is part of a long string of “spoiler” attacks aimed at undermining India-Pakistan relations.
- Pakistani militants with deep connections to the Pakistan army, such Lashkar-e-Taiba and Jaish-e-Muhammad, have regularly struck after signs of a thaw.
- A research shows that such spoiler attacks will not have significant impact, as successful “spoiling” rests on conditions that currently don’t exist in India.

Pathankot Air Force Station is a military airport located 3 km from Pathankot, India, on the Pathankot–Majra Road. It is part of the Western Air Command of the Indian Air Force and covers an area of approximately 2000 acres.
Concerns

- Ineffectiveness of India’s Pakistan Policy
- New Delhi lacks the capability to impose costs for cross-border terrorism
- India still has no written national security doctrine, and whatever is practised as the doctrine, and strategy, is vastly inadequate.
- Lack of Political consensus on national issues
- Security lapses- lack of security, terrorists penetrated the camp with ease.
- Lack of robust national security doctrine
- Lack of coordination between various security agencies
- Lack of cohesive command and control structure
- Too many holes in the intelligence security ecosystem  
  o Pinpointed intelligence input ignored.
  o Perimeter of the Pathankot airbase not secured despite warnings.
  o National Security Guard (NSG) sent in when the Army has a crack Special Forces unit nearby.
  o Border Security Force ineffectiveness.
  o Ineffectiveness of surveillance equipment and night vision devices.

Lessons from Pathankot attack/Way forward

- Need to differentiate between the Pakistan government and non-state actors and show greater diplomatic restraint
- Need to Evolve national security doctrine to respond to such attacks  
  o The proposed security doctrine must be anchored in the foundational values of the Constitution.
  o The doctrine must be accompanied by a national security strategy that spells out the command and control structures for meeting eventualities such as terror strikes.
- Revival of NATGRID.
- Political consensus must be evolved, in a publicly transparent manner, to reflect the complex challenge facing the country.
- Security around a forward air force base needs to be much better.
- As these attacks have become predictable, India needs to have blueprints in place to protect Indian nuclear installations and naval bases, as well as Indian diplomatic missions.
- Punjab is facing two serious challenges- corruption and drug trafficking – India cannot afford such mismanagement of a strategic border state.
- India must now activate its diplomacy in the U.S. to act tougher on Pakistan.
- India must prepare for an effective and integral response to the threat of cross-border terrorism. When it comes to dealing with terrorism, there is a need to further improve Centre-state collaboration as well as civil-military coordination.
- Border defence, intelligence and internal security reforms are the best defence against these “urban spectacular” threats.

6.3. COOPERATION IN CYBERSECURITY

- Cyber-attacks in India have increased in last few years.
- As the government aims to increase the Internet penetration further, more and more local organizations may be exposed to cyberattacks.
- The present government is making efforts to establish extensive cybersecurity cooperation to ensure protected cyber networks.
- This would help in mutual sharing of information and best-practices, both of which are critical a constructing a robust response to conspicuous cyber incidents. For instance,  
  o India and UK are collaborating for joint training of its cybersecurity professionals and setting up a Cybersecurity training center for exchange of information and expertise. UK would also help in establishing a Cybercrime Unit in India.
India and China are establishing high level ministerial mechanisms under their respective Home ministries to help in information exchange, law enforcement and technical capacity building to jointly combat cybercriminal activity.

India and USA have jointly committed to strengthen cooperation on a range of cybersecurity issues.

**LATEST DEVELOPMENT**

- The Indian Computer Emergency Response Team (CERT-In) has signed cooperation pacts with its counterparts in Malaysia, Singapore and Japan for cyber security.
- This will also facilitate regular dialogues pertaining to prevalent policies and best practices and mutual response to cyber-security incidents.

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**6.4. NATGRID**

*Why in news?*

- To fight against terrorism Central government has decided to revive **NATGRID** (National Intelligence Grid).

*What is NATGRID?*

- **NATGRID** is the integrated intelligence grid connecting databases of core security agencies of the Government of India to collect comprehensive patterns of intelligence that can be readily accessed by intelligence agencies.
- It was conceived in the wake of the 2008 Mumbai attacks.

*Functioning*

- NATGRID is an intelligence sharing network that collates data from the standalone databases of the various agencies and ministries of the Indian government.
- It is a **counter terrorism measure** that collects and collates a host of information from government databases including tax and bank account details, credit card transactions, visa and immigration records and itineraries of rail and air travel.
- This combined data will be made **available to 11 central agencies**, which are: Research and Analysis Wing, the Intelligence Bureau, Central Bureau of Investigation, Financial intelligence unit, Central Board of Direct Taxes, Directorate of Revenue Intelligence, Enforcement Directorate, Narcotics Control Bureau, Central Board of Excise and Customs and the Directorate General of Central Excise Intelligence.

*Need for Revamp*

- In its present form, NATGRID suffers from many inadequacies, some due to bureaucratic red tape and others due to fundamental flaws in the system.
- Social media and other platforms have become recruitment sites and propaganda machines for terrorist groups, and formal banking channels are used as much as informal ones to transact terror funding.
- Weaknesses in India's intelligence gathering and action networks.
- India is not far from the days when cyber warfare will become its primary security issue. For example in September last year, the website of the government of Kerala was hacked by Pakistani hackers.
Importance of NATGRID

- It will become a secure centralised database to stream sensitive information from **21 sets of data sources**.
- The database would be accessible to authorised persons from **11 agencies** on a case-to-case basis, and only for professional investigations into suspected cases of terrorism.
- It can provide the real time tip-offs and predictive intelligence to deal with the terrorist threat.
- It will help to collate scattered information into a transparent, accessible, integrated grid and do away with the inefficiencies associated with information asymmetries that hitherto delayed counter-terror operations.
- It will help fight Financial Terrorism.

Criticism

- The state police or different defence departments are not mentioned among the 10 "user agencies" who will be able to electronically access 21 sensitive databases.
- NATGRID effectiveness will be reduced if the Central agencies are not willing to share current intelligence with the State agencies.
- NATGRID faced opposition on charges of possible violations of privacy and leakage of confidential personal information.
- NATGRID will have access to all kinds of data under one roof and can also prove to be counter-productive if misused.
- NATGRID also faces issues like consolidating data from a huge population, lack of compatibility with data sets in regional languages, risk of spies ratting out vital information to outside sources and security from external attacks.

Precautions

- As the NATGRID will have very sensitive information about individuals, potential for its misuse is also very high.
- Government must take measures to ensure that the information does not fall through the firewalls that guard it.
- NATGRID has the potential to become India’s go-to grid for a 360-degree perspective to prevent and contain crises.

6.5. TEJAS

- India’s indigenous Light Combat Aircraft (LCA) Tejas participated in the Bahrain International Air Show 2016 recently. This was the first appearance of Tejas at a foreign air show.
- LCA Tejas has not been inducted into the IAF yet.
- Starting in 1984, Tejas has been designed and developed by Aeronautical Development Agency with Hindustan Aeronautics Ltd and Defence Research and Development Organisation.

JF-17

- JF-17 Thunder is a third-generation fighter co-produced by Pakistan and China. It has been in service since 2010.
6.6. INDIAN RESERVE BATTALION FORCES

- The central government has recently decided to raise additional 17 IRB for Jammu and Kashmir and LWE affected areas.
- It included 5 battalions in J&K, 4 in Chhattisgarh, 3 each in Jharkhand and Orissa and 2 in Maharashtra.
- There is emphasis placed on the recruitment of local youths for these forces and if required the age and educational criteria will be relaxed. E.g. 60% of the recruitment in J&K has to be done from the border districts.
- The government has so far sanctioned 153 battalions to various states under its scheme of Indian Reserve Battalions introduced in 1971.

SIGNIFICANCE OF THE DECISION

- This will add to the anti-Maoist and anti-terrorist strength of the state police.
- The provision of recruitment of local people would be crucial in many ways:
  - It will reduce the trust deficit between Army & CAPFs and local populace.
  - Knowledge of local conditions is better for intelligence gathering and carrying out operations.
  - Generating employment opportunities in these areas would help in removing poverty and also checking the radicalization and diversion of the youth by bringing them into mainstream.

About Indian Reserve Battalion

- The Indian Reserve Battalion (IRB) is an elite force meant to handle serious law and order problems in a state, mainly left-wing extremism and terrorism.
- It provides touch support to the local police forces in dealing with such activities in whatever shape they may take place in different parts of the state.
- It is trained and equipped to deal in specific circumstances and not designed to supplant the normal functions of police force.
- The initial funding for raising the IRB is done by using central funds. Their management, however, rests with the respective states.
7. ECOLOGY AND ENVIRONMENT

7.1. INTERNATIONAL SOLAR ALLIANCE (ISA)

**Why in News**

- On his recent visit to India, French president along with Indian Prime Minister has laid the foundation stone for an interim secretariat of the International Solar Alliance (ISA) in Gurgaon.
- Earlier, India and France had launched an International Solar Alliance (ISA) at the CoP21 Climate Conference Paris in Dec, 2015.
- The ISA Secretariat would be set up at National Institute of Solar Energy, Gurgaon in India.
- Indian government will provide land and $30 million to form a secretariat for the Alliance, and will support it for five years.

**Objectives**

- Promote solar technologies and investment in the solar sector to enhance income generation for the poor and global environment.
- Formulate projects and programme to promote solar applications.
- Develop innovative Financial Mechanisms to reduce cost of capital.
- Build a common Knowledge e-Portal.
- Facilitate capacity building for promotion and absorption of solar technologies and R&D among member countries.

**Benefits to India**

- Launching of ISA has set up the stage for India's proactive and forward-looking leadership on climate change and the transition to a less carbon-intensive growth trajectory.
- This will help India in meeting its solar energy target which is to generate the 100GW of solar energy by 2022.
- It will also help in bringing down the price of solar technology which will further help in accelerating the development of the country.
- It will also help India to meet its Intended Nationally Determined Contribution target.

**Challenges Ahead**

- **Funding:** Although alliance talks about developing “innovative financial mechanisms”, it does not address how the capital would be provided.
- **Technology Sharing:** There is need to create a comprehensive framework to share the modern solar technologies at low cost.

7.2. BHARAT STAGE VI NORMS BY 2020

**Why in news?**

- In a move to curb vehicular pollution, Indian government has decided to move up to the toughest emission standards of **BS-VI from the current BS-IV by April 2020** skipping BS-V standard.
By switching to BS-VI, India will join the league of the US, Japan and the European Union, which follow Euro Stage VI emission norms.

BS-VI is the Indian equivalent of Euro Stage VI.

Currently BS-IV norms are currently followed across 63 Indian cities for petrol and diesel, while the rest still use BS-III fuel.

Need

Considering the environmental impact, rising pollution levels and health hazards due to vehicular pollution, has led to this decision.

According to a study conducted by CSE, air pollution claims at least 10,000-30,000 lives a year in Delhi. It is one of the top 10 killers in the world and the fifth leading cause of death in India.

BS VI Norms

The BS-IV compliant fuels have Sulphur concentration of 50 parts per million (ppm).

This will come down to as low as 10 ppm in BS-VI compliant fuels and auto engines. This means a lower level of harmful emissions and reduced incidence of lung diseases.

The switch to BS-VI norms will also reduce concentration of carbon monoxide, unburnt hydrocarbons, nitrous oxide and particulate matter from emissions.

This jump will make a huge impact and significantly bring down share of vehicular pollution in the overall air pollution of the country.

Challenges

It will make cars, sports utility vehicles (SUVs), trucks and buses more expensive.

Moving to BS-VI directly will require significant technological upgrades and auto companies may have to invest heavily.

Generally, it requires four years to graduate from one stage to another. And in this case, skipping one stage, companies may need more time to implement this. Even, the Auto Fuel Policy had recommended implementation of BS-VI norms by 2024.

A bloated population of vehicles using fossil fuels has affected travel speeds, worsening pollution levels.

Poor civic governance has left roads unpaved and public spaces filled with debris and construction dust, constantly re-circulating particulate matter in the air.

And also, the monitoring of diesel passenger and commercial vehicles which are the biggest contributors to total emissions, is not efficient and effective.

Way Forward

Government should also focus on raising the fuel standard and introducing policy initiatives that would influence passenger behaviour and cut personal travel kilometers by 25 per cent.

Government must show the diligence in making policy changes in partnership with State governments to clean up the air.

Bharat Stage Norms

Bharat stage emission standards are emission standards instituted by the Government of India to regulate the output of air pollutants from internal combustion engine equipment, including motor vehicles.

The standards and the timeline for implementation are set by the Central Pollution Control Board under the Ministry of Environment & Forests and climate change.

The standards, based on European regulations were first introduced in 2000.
7.3. DELHI'S ODD EVEN POLICY

What is Odd Even Policy?

- The policy envisages reducing the number of vehicles on Delhi roads by about 50%, which is expected to reduce the level of air pollution in the city.
- Odd numbered cars to ply on odd dates, even numbered cars on even dates.
- A fine of Rs 2000 will be imposed on people who violate the Odd-Even Formula.
- Odd-even policy will not be in effect on Sunday, it will be in force on other days from 8am to 8pm.
- There are few exemptions such as Women driving alone, VIP’s, VVIP’s etc.

Need of such policy

- Levels of tiny particles known as PM 2.5 in the Indian capital often exceed those deemed safe by the United Nations World Health Organization.
- In the case of Delhi, the contribution of vehicles to air pollution is quite high. Certain studies estimate it to be up to 80% of the total.
- Base noise levels in the city have exceeded acceptable standards.
- Increasing number of vehicular count adds to air pollution and global warming.
- The growing vehicle population gives rise to unrestrained noise pollution and associated health effects and can cause both short term as well as long term psychological and physiological disorders.
- From an economic perspective, congestion on roads results in loss of man-hours as travel time gets longer.
- Slow-moving traffic leads to higher fuel expenditure at the household level and larger imports of crude oil at the macro level, which has implications for valuable foreign exchange.

Benefits

- Heightened public awareness regarding the environmental impact of pollution on society.
- Mass public participation - Citizens in Delhi has demonstrated an overwhelming level of compliance with this experiment.
- De-congestion of roads has reduced the travel time. It has also helped in reducing noise pollution.

Challenges

- As per the Government of Delhi (2015), there are 88,27,431 vehicles as of March 2015. Of these, 64.36% are motorcycles and scooters, while 31.61% are cars and jeeps—together they make up 96%.
- The share of buses is a meagre 0.22%, while taxies and auto-rickshaws comprise nearly 1% each. So a very limited source of pollution was targeted under this scheme.
- To create a deeper impact, policy should have targeted more vehicles under it.
- Vehicle emissions contribute only between 20% to 40% of the PM 2.5 in Delhi’s air.
- To broaden the scope of this policy, government should also try to consider the other sources of pollution such as power plants, fuel standards, agricultural pollution etc. and try to minimize their impact on environment.
- China The policy of banning odd- and even-numbered vehicles on specific days has prompted households in Beijing to go for a second car. Same experience was also felt in Mexico city.
- Considering a very high per capita income in Delhi, Rs 2,40,849 in 2014–15, there is a possibility that most people may go for the purchase of second car if this policy is implemented for longer duration.

Way Forward

- Through several advertisements and awareness campaigns, the government should aim at educating people. Campaign for use of public transport (Ab Bus Karein—let us take a bus) and car-pooling are two prominent examples in this regard.
- Strengthen the public transport system so that its capacity will be increased.
- Increasing road tax and parking charges which will discourage people from going for private vehicles.
- Use of high standard fuel such as Bharat Stage VI fuel as early as possible.

### 7.4. POLICY ON PROMOTION OF CITY COMPOST

#### Why in news?
- Union cabinet has given its approval for a Policy on Promotion of City Compost

#### What is compost?
- Compost is organic matter that has been decomposed and recycled as a fertilizer and soil amendment.
- At the simplest level, the process of composting simply requires making a heap of wetted organic matter known as green waste (leaves, food waste) and waiting for the materials to break down into humus after a period of weeks or months

#### Salient Features of the Policy:
- Market development assistance of Rs. 1500 per tonne of city compost for scaling up production and consumption of the product. It would lower MRP of city compost for farmers.
- Eco-Mark standard for City Compost.
- Distribution:
  - Co-marketing by Fertilizer companies.
  - The companies will also adopt villages for promoting the use of compost.
- Information Education and Communication network:
  - Concerned Ministry/Department will carry out IEC campaigns to educate farmers.
  - The Agricultural Extension Machineries including KVKs of ICAR will also make special efforts in this regard.
  - Initially, marketing and promotion of city compost is proposed to be done through the existing fertilizer companies. In due course, compost manufacturers and other marketing entities recognized by the concerned State Government may also be included for the purpose with the approval of Department of Fertilizers. The market development assistance shall be routed through the entity which is marketing it.
- Monitoring:
  - A joint mechanism will be set up by Department of Fertilizers, Ministry of Urban Development and Department of Agriculture to monitor and facilitate availability of adequate quantity of City Compost at terms mutually agreeable between compost manufacturers and Fertilizer Marketing companies.
  - They will also be authorised to resolve any co-ordination related issue that may arise.

#### Advantages of City Compost:
- Soil health improvement:
  - It contains useful soil microbes and humus that aerates soil, and improves water retention and resistance to both drought and water logging, thereby reducing irrigation requirements.
  - It can restore India’s 21.7 million hectares of saline and alkaline soils.
  - To counter the galloping depletion of micro-nutrients in soil since heavy chemical-fertiliser use began.
  - Heavy-metal levels will come down when compost is used along with chemical fertilizers, since single super-phosphate and rock phosphate, for example, contain twice as much lead and 9-15 times more cadmium than the standards now specified for city composts.
- Environmentally better suited.
- Protects groundwater pollution.
- Effective mechanism of solid waste management- Aligned with Swachh Bharat Mission – cleaner cities.
- Employment generation in the urban areas and enhance the livelihood of waste managers.
7.5. STRANDED CARBON

Why in news?
- A London-based energy think tank has warned that fossil fuel producers across the world are wasting up to US $ 2.2 trillion after 2020 by investing in projects that could hinder world’s fight against climate change.
- This is because much of to be discovered fossil fuel would remain unused because of the carbon budget.

What is stranded carbon?
- It refers to fossil fuel energy resources that cannot be burnt if the world is to adhere to a given carbon budget. Therefore some of proven reserves of fossil fuels will never be burnt and will remain stranded.

How much Stranded Carbon?
- Within the 2°C target; we only have about 1,100 Giga Tonnes (gt) of carbon dioxide (CO2) that can still be emitted.
- Current proven reserves of fossil fuels are about 812 billion tonnes of oil equivalent (oil, gas and coal).
- Just burning all these proven reserves (not counting contingent reserves or those yet to be discovered) would generate about 2,512 gt of CO2 equivalent emissions.
- Thus no more than 40 per cent of the existing proven reserves of fossil fuels can ever be burnt.
- Probably even less, as some of the carbon budget will be taken by non-fossil fuel applications like agriculture.

Implications:
- The Middle East would need to leave about 40% of its oil and 60% of its gas underground
- The majority of the huge coal reserves in China, Russia and the United States would have to remain unused
- Undeveloped resources of unconventional gas, such as shale gas, would be off limits in Africa and the Middle East, and very little could be exploited in India and China
- Unconventional oil, such as Canada’s tar sands, would be unviable.

7.6. BHARAT INNOVATION FUND

- Bharat Fund is a public-private-academia partnership set up by Indian Institute of Management (IIM) Ahmedabad’s Centre for Innovation Incubation and Entrepreneurship (CIIE).
- The Fund was launched by the Prime Minister in September 2015 during the Startup Connect event in California.

Salient features:
- The Fund will be managed and coordinated by CIIE at the IIM, Ahmedabad.
- It will support innovation and innovative startups in areas of healthcare and life-sciences, sustainability, and digital technologies
- The Fund will use important tools such as labs, mentorship, funding, and networking to support entrepreneurs who take on hard challenges of an ever-broadening Indian market.
- The (DBT) will engage with the Bharat Fund for Startup India initiative, to help commercialize technologies from its labs and facilities, while also mentoring startups in the healthcare, agri-tech, and other biotech-related areas.
- The DBT will also invest Rs. 50 crore over the next 3 years to support startups through this Fund.

Why this fund?
- Innovation-led economic development in a modern knowledge economy requires equal and consistent support from the public and private sectors.
This Fund is an effort by one of India’s leading academic institutes to bring together public and private resources, such as experts, finances and labs, to provide the fertile ground for innovation that will seed the Indian multinationals of the next few decades.

7.7. IMD LAUNCHES A SYSTEM TO MONITOR AIR RISKS AND BLACK CARBON IN ATMOSPHERE

The Indian Meteorological Department (IMD) has launched a System of Aerosol Monitoring and Research (SAMAR) which will help the country in studying concentration of black carbon in atmosphere due to air pollution and its impact on climate.

- It is a network of 16 Aethalometers, 12 Sky radiometers and 12 Nephelometers.

What are Aerosols?

- They are a subset of air pollution that contains gases, fumes and dust in harmful proportion.
- These particles can be both solid and liquid which also affects environmental visibility.
- They are suspended particulates in the atmosphere and have implications for climate and health through different mechanisms.
- Several studies have suggested that aerosols may be mitigating global warming by increasing the planetary albedo,
- Although the sign and magnitude of aerosol effects on climate are still uncertain as outlined in the Intergovernmental Panel on Climate Change (IPCC) reports.

What is Black Carbon?

- Black carbon (BC) aerosol assumes importance due to its high absorption characteristics, which in turn depends on its production mechanism.
- In addition to exerting its own radiative impact, black carbon aerosol can substantially contaminate other aerosol species, thereby altering the radiative properties of the entire aerosol system and in fact their ability to act as cloud condensation nuclei.
- The sources of BC are fossil fuel through burning of diesel and solid coal, indoor burning of biomass fuels for cooking and heating and outdoor burning of crop residues, savannas and forests.
- Black carbon warms the atmosphere due to its absorption and by reducing albedo when deposited on snow and ice.

7.8. BIODIVERSITY DATABASE FOR URBAN INDIA

- A biodiversity database for urban India will be prepared for better species diversity management.
- This will be dovetailed to the smart city initiative.
- This project will be implemented by the Council of Scientific and Industrial Research (CSIR).
• It will be helpful in maintenance of sustainable environment and health.
• It will also help the public and local bodies in enabling them to make the best choice for local plantation.

7.9. MINISTRY OF SHIPPING LAUNCHES PROJECT GREEN PORT

• With an aim to make major ports in India greener and cleaner, government has launched Project Green Ports. The project has two verticals --- Green Ports Initiative and Swachh Bharat Abhiyan.
• The Green Port Initiative comprises 12 time-bound sub-initiatives.
  o Some of the plans are preparation and monitoring plan,
  o acquiring equipment required for monitoring environmental pollution,
  o acquiring dust suppression system, setting up of sewage/waste water treatment plants/ garbage disposal plant,
  o setting up projects for energy generation from renewable energy sources,
  o completion of shortfalls of Oil Spill Response (OSR) facilities (Tier-1), prohibition of disposal of almost all kind of garbage at sea,
  o Improving the quality of harbor wastes etc.
• Under Swachh Bharat Abhiyan, the Ministry has identified 20 activities with certain time-line to promote cleanliness at the port premises.
  o cleaning the wharf, repairing of sheds, cleaning and repairing of port roads,
  o modernizing and cleanliness of all the toilet complexes in the operational area,
  o Beautification and cleaning of parks, boards indicating cleanliness messages,
  o Cleaning and repairing of all drainages and storm water systems and tree plantation.
• In order to achieve these objectives, regular training will be provided to the staff in order to generate awareness and inculcate a positive attitude towards keeping the environment clean and green.

7.10. INITIATIVES UNDER NAMAMI GANGE PROGRAMME

1. Ganga Gram Yojana Launched

• Government recently launched Ganga Gram Yojana in Hapur District Of U.P.
• 1600 villages situated along the banks of river Ganga will be developed under this scheme.
• First phase of the programme will cover 200 villages.
• In these villages open drains falling into river Ganga will be diverted and alternative arrangements for sewage treatment will be made.
• The villages will have toilets in every house hold.
• It is proposed to incur and expenditure of Rs. One crore on every village.
• These villages will be developed under the Sichewal model. Sichewal is situated in Punjab, where cooperation of the villagers has been solicited for the water management and waste disposal in a meticulous way.

2. Approval of Hybrid Annuity Based Public Private Partnership (PPP) Model

• In this model, a part of the capital investment (upto 40%) will be paid by government through construction linked milestones and the balance through an annuity over the contract duration upto 20 years

Expected Benefits

• This will help taking up more number of projects with the same allocation as made available under Namami Gange programme with reduced financial liability in the initial years.
• Spreading the stakes of private participant over the entire period of concession would ensure continued operations over long term.
• Linking of performance standards with the annuities will ensure desired objective of treated water of appropriate standard.
• It would help gradual capacity building of the Urban Local Bodies by setting ground for recovery of user charges on Polluter Pays Principle.
• Development of the market for treated water will lead to reduced demand on riverine freshwater and will result in enhanced flows in river Ganga.
• These steps would also kick start the process of responsible use of water in general and go a long way in mitigating the projected water shortage in the country.

3. Deployment of Ganga Task Force
• The first company of Ganga Task force Battalion was deployed at Garhmukteshwar.
• Three such companies will be deployed soon at Kanpur, Varanasi and Allahabad.
• Jawans of the Ganga Task force will be deployed on the banks of the river Ganga to ensure that industry and civilians do not pollute the river.

7.11. GREEN SIGNAL TO 'RAPTOR MOU'
• The Government has approved signing of Memoranda of Understanding (MOU) on the Conservation of Migratory Birds of Prey in Africa and Eurasia-also called the Raptor MOU-with the Convention on Conservation of Migratory Species (CMS).
• It aims to promote internationally coordinated actions to conserve and reserve the decline of birds of prey.
• They include species such as eagles, kites, vultures, hawks and owls.
• Although legally non-binding, it will help India gain knowledge in effectively managing the habitats of these raptors.
• MoU extends its coverage to 76 species of birds of prey. Of these, 46 species, including vultures, falcons, eagles, owls, hawks, kites, harriers, are found in India.

About Convention on CMS
• Under the aegis of the United Nations Environment Programme (UNEP), CMS provides a global platform for the conservation and sustainable use of migratory animals and their habitats.
• CMS brings together the States through which migratory animals pass, the Range States, and lays the legal foundation for internationally coordinated conservation measures throughout a migratory range.
• Appendix I - Migratory species threatened with extinction.
• Appendix II - Migratory species that need or would significantly benefit from international co-operation.

7.12. CONSULTATION ON BIODIVERSITY FINANCE INITIATIVE BEGINS
• The Environment Ministry started a two-day National Stakeholder Consultation Meeting on Biodiversity Finance Initiative to conserve India’s biodiversity.
• This National Stakeholder meeting has been organized to understand the BIOFIN project and to seek professional inputs from experts of various fields in strengthening the biodiversity conservation efforts in the country.
• The idea behind implementing BIOFIN is to first assess the gap between the ‘available funding’ and the ‘required funding’ for biodiversity conservation and then to plan for resource mobilization.

What is Biodiversity Finance Initiative (BIOFIN)?
• Biodiversity Finance Initiative – BIOFIN, is a new global partnership seeking to address the biodiversity finance challenge in a comprehensive manner – building a sound business case for increased investment in the management of ecosystems and biodiversity.
7.13. SNOWFLAKE CORAL - A SERIOUS THREAT TO BIODIVERSITY

- Snowflake coral is posing a major threat to the coral reef colonies in the Gulf of Mannar, Gulf of Kutch and the Andaman and Nicobar Islands.
- It can destabilize the marine ecosystem because it may crowd out other species like corals, sponges, algae, ascidians that contribute to the rich marine biodiversity of the region.

What is Snowflake Coral?

- The snowflake coral, (Carijoa riisei) is a species of soft coral in the family Clavulariidae.
- It is native to the tropical western Atlantic Ocean and has spread to other areas as an invasive species.
- It was first reported as an invasive species from Hawaii in 1972. Since then, it has spread to Australia, Thailand, Indonesia and the Philippines.
- It is considered invasive because of its capacity to dominate space and crowd out other marine organisms.
- It is known to inhabit reefs and underwater structures such as shipwrecks and piers, attaching itself to metal, concrete and even plastic.

7.14. OCEANS TO HAVE MORE PLASTIC THAN FISH BY 2050

- Report Published by the World Economic Forum, says the world's oceans may have more plastic debris than fish by the year 2050.
- The study found that whopping 32 percent of all plastic packaging escapes collection systems and finds its way into natural ecosystems, including the oceans.
- This releases toxic chemicals that may be digested by fish and end up in the human food chain.
- This has potential to poison animals, which can then adversely affect human food supplies

Way forward

- The most effective way to stop plastic pollution in our oceans is to make sure it never reaches the water in the first place.
- We all need to do our fair share to stop plastic pollution: individuals need to recycle and never litter, but producers of single use plastic packaging need to do more.
- We need producers to design packaging so that it is fully recyclable, and so there is less waste.
- We also need producers to help cover the costs of keeping their products out of the ocean.

7.15. ORGANIC FARMING

Citing the successful example of Sikkim, Prime Minister called for expansion of organic farming across the country as part of efforts to transform the agriculture sector, entailing better remuneration for the farmers.
Organic Farming

- Organic agriculture is a holistic production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity.
- Thus Organic farming uses natural fertilizers and pesticides and strictly limits (not eliminates completely) the use of synthetic and non-natural processes.

Principles of Organic Agriculture

- **Principle of Health**: Organic agriculture should sustain and enhance the health of soil, plant, animal and human as one and indivisible.
- **Ecological Principle**: Organic agriculture should be based on and work with living ecological systems and cycles, emulate them and help sustain them.
- **Principle of Fairness**: Organic agriculture should be built upon relationships that ensure fairness with regard to the common environment and life opportunities.
- **Principle of Care**: Organic agriculture should be managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment.

Advantages of Organic Farming

- Organic farming is definitely healthier and safe than non-organic farming.
- Organic farms have higher levels of soil biological activity and biodiversity;
- Farmers can reduce their production costs because they do not need to buy expensive chemicals and fertilizers.
- Organic agriculture causes less pesticide contamination in food, people and the environment;
- In the long term, organic farms save energy and protect the environment.
- Pollution of ground water is stopped.

Disadvantages

- Lack of convenience.
- Organic food is more expensive.
- Food safety concerns.

Scope

- About 1-2% of the world's food is produced with organic methods. The market however is growing very quickly - by about 20% a year. In Europe, Austria (11%), Italy (9%) and the Czech Republic (7%) are the countries in which organic food production as it its highest.

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**7.16. EL NINO AND WARM WINTER**

Why in news?

- This winter has been lesser cold and temperatures are 4-5 degrees Celsius above the normal for this time.
- Western parts of Rajasthan which used to experience extreme coldness, the average temperature is 5 to 8 degrees Celsius above normal.

Reasons

- **Global factors**: Persisting El Niño phenomenon
  - By the time neutral conditions are expected to be established in the Pacific Ocean later this year, the El Niño would have persisted for 15 months, spanning two seasons.
  - Winters that follow an El Niño event are slightly warmer than usual.
Scientists say the Pacific warming spreads to the Indian Ocean with a lag of about 2-3 months, leading to a warming over the subcontinent.

- **Regional Factors:** Usually westerlies used to bring rain system in most of Northern and Eastern India, pulling down temperatures. But this year, the Westerlies have been kept north of the Indian landmass by two different wind systems.
  - An anticyclonic wind system that is usually located south of the Indian peninsula has been pushed northward, and is located where the westerlies are usually found at this time of the year. This anticyclonic system is warmer and drier.
  - Jet streams which used to locate in higher atmosphere, and generally operate in the mid-latitudes, north of the Indian landmass. But this year, they are positioned much to the south, aligned to the foot of the Himalayas and the Gangetic plains.

### 7.17. SIMULTANEOUS TEMPERATURE RISE AND SHRINKAGE OF GLACIER ICE SHEETS AT NORTH POLE

- Temperatures at the North Pole rose above freezing point in December, 20 degrees Celsius above the mid-winter norm and reflecting latest abnormality in a season of extreme weather events.
- This rise in Temperatures at the North Pole is estimated to be due to very violent and extremely powerful depression caused by Storm Frank.
- This deep depression has pushed hot air as far as the North Pole, where temperatures are at least 20 degrees above normal, at around freezing point, between zero and two degrees.
- After tormenting the North Atlantic, the depression is expected to head towards Russia’s Siberia, where the inhabitants can expect a heat wave of sorts.
- El Niño has also been cited as a factor in the genesis of these devastating storms.
- However, the sudden rise in winter temperatures in the North Pole could interfere with the usual process of the growth of winter ice in the Arctic.
- Sea ice during the winter maximum is becoming younger and thinner.

### 2015 HOTTEST YEAR ON RECORD

- Data released by NASA and NOAA (National Oceanic Atmospheric Administration) show that in 2015, the global mean surface temperature was the warmest on record and reach significant milestone of 1° Celsius above the pre-industrial era.
- In the Northern hemisphere (spring of 2015) the three-month global average concentration of CO2 crossed the 400 parts per million barrier for the first time.
- The year 2015 stands out because of the unusually strong El Niño.

### 7.18. INDIAN CLIMATE MODEL TO AID FUTURE IPCC REPORTS

- India will have its own climate change models to project the impact of global warming over the decades and these will form part of the forthcoming Sixth Intergovernmental Panel on Climate Change Reports that is expected to be available in 2020.
- This will be helpful in getting clear picture of Indian environmental conditions.
- These climate change models have been framed considering Indian climatic conditions.
- The climate models, being developed by the Earth Sciences Ministry, will be prepared by the Pune-based Centre for Climate Change Research.

### 7.19. ASSESSMENT OF CITIES UNDER SWACHH BHARAT MISSION (SBM)

- To assess the Swachh Bharat Mission, the Ministry of Urban Development has decided to study and rank 75 cities under the mission “Swachh Survekshan”.
- The task of executing the mission has been entrusted with the Quality Council of India.
- It will cover all state capitals and 53 other cities.
- There will be three streams of data collection
  - Citizen feedback,
  - Municipality self-evaluation
  - Independent assessment
- The results are to be announced on the MyGov website.
- It will be helpful in measuring the impact of the mission year-on-year basis.
- Based on the findings, rules can be modified and new steps can be taken to correct the measures and effective and efficient implementation can be ensured.

### Parameters for evaluation
- Strategies to stop open defecation and integrate the city’s solid waste management systems.
- Efficacy of communication strategies on information, education and behaviour change.
- Effectiveness of systems for sweeping, door-to-door collections and transportation of waste.
- Efficiency in processing and disposal of waste.
- How good is deployment of public and community toilets?
- Progress made in construction of household individual toilets.

#### The Himalayan Forest Thrush - A New Species of Bird
- Scientists have described a new species of bird in northern India and China, called the Himalayan forest thrush.
- The bird has been named Himalayan Forest Thrush (Zoothera salimalii). The scientific name honors the great Indian ornithologist Dr Sálim Ali.
- The species differs in its song from that of the alpine thrush.
- The Himalayan Forest Thrush is a variant of the Plain Backed Thrush and the European Alpine Thrush.
- The Himalayan forest thrush has a more musical call while that of the Alpine thrush is raspy and grating.