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FEBRUARY 2017

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1. POLITY AND CONSTITUTION

1.1. REFORMS IN FUNDING TO POLITICAL PARTIES

Why in news?

The union budget 2017-18 announced certain reforms to bring transparency in funding to political parties.

Reforms

- The maximum amount of cash donation that a political party can receive will be **2000/- from one person.**
- Political parties will be entitled to receive donations by **cheque or digital mode** from their donors.
- An amendment is being proposed to the **Reserve Bank of India Act** to enable the issuance of **electoral bonds (India will be the first country in the world)** in accordance with a scheme that the Government of India would frame in this regard.
- Every political party would have to file its return within the time prescribed in accordance with the provision of the Income-tax Act.
- The existing exemption to the political parties from payment of income-tax would be available only subject to the fulfillment of above conditions.

> **Electoral bonds**
> - The bonds will only be issued by a notified bank.
> - It could only be bought using cheques or digital payments.
> - The bonds purchased by donor will be given to a political party for a fixed period of time.
> - A political party using their notified bank account can convert these bonds into money.
> - All political parties are required to notify their bank account to the Election Commission.
> - This bond will be like a bearer cheque which will facilitate donor's anonymity.

Background

- Election Commission had asked the government to amend law to ban anonymous contributions of Rs. 2000 and more to political parties.
- Association for Democratic Reform highlighted in its report that **75% funding** to parties came from anonymous sources between 2004-05 to 2014-15

Sources of Funding (in Percentage)

9%
16%
75%

- Known Sources (Donations above 20,000)
- Other Known Income
- Unknown Sources of Income

Sources of Income

Rs. 435.85 Crores: Known Sources of Income from Donation above Rs 20,000

Rs. 785.60 Crores: Other Known Sources of Income

Rs. 3674.50 Crores: Unknown Sources of Income

Impact

- It will help to root out the problem of financing of Political Parties using black money.
- Money power in elections will decrease significantly as parties can now accept only up to RS 2000 in cash.
- Functioning of Political Parties will become more transparent and thus become more accountable towards public.
- It will reduce nexus between big corporate houses and political parties.
- In long term it will result in ethical politics and reduction in criminalization of politics.

Challenges

- The proposal does not disrupt the flow of illicit political donations but only channels it differently, and will not reduce the proportion of cash from unverifiable sources in the total donations received.
- The political parties would now have to do is to find more people to lend their names to these donations, hence transparency would still be compromised in funding.
- Electoral bonds provide a mechanism of anonymity for its buyers. The move though aimed to safeguard general public can be used by corporate houses to fund political parties to develop nexus with party at the receiving end.
- The Budget makes it mandatory for political parties to file returns within a time limit, but in the absence of extreme penal provisions compliance is likely to be low.

Way forward

- There is a need to put cap on funding by big corporate houses. Such donations should be made public as done in US. Also, law could be enacted to prohibit political parties giving any undue benefits to corporates
- Political parties should be brought under the ambit of RTI as followed in countries like Bhutan, Germany etc.
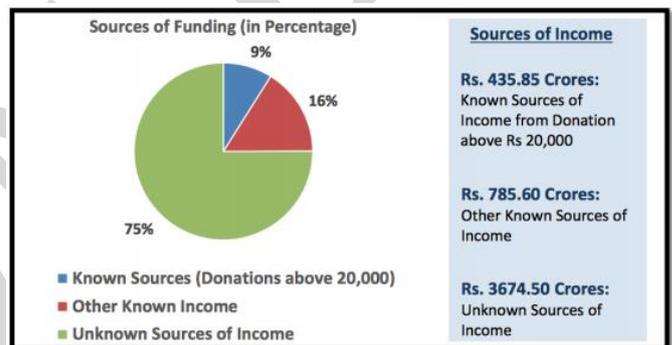
- Budget should have placed a cap on the amount a party may receive in cash as a donation.
- State funding of elections should be considered as recommended by Dinesh Goswami committee (1990).
- To ensure transparency stricter provisions should be enacted so that parties maintain list of donors and which can be scrutinized easily by IT department.
- The funds of the political party should be audited by an independent auditor .The responsibility should not be given to the inside auditor. The details should be placed in public domain.

Arguments in favour of state funding	Arguments against state funding
• State funding increases transparency inside the party and also in candidate finance, as certain restrictions can be put along with state funding	• Through state funding of elections the tax payers are forced to support even those political parties or candidates, whose view they do not subscribe to.
• State funding can limit the influence of wealthy people and rich mafias, thereby purifying the election process	• State funding encourages status quo that keeps the established party or candidate in power and makes it difficult for the new parties.
• Through state funding the demand for internal democracy in party, women representations, representations of weaker section can be encouraged.	• State funding increases the distance between political leaders and ordinary citizens as the parties do not depend on the citizens for mobilization of party fund.
• In India, with high level of poverty, ordinary citizens cannot be expected to contribute much to the political parties. Therefore, the parties depend upon funding by corporate and rich individuals.	• Political parties tend to become organs of the state, rather than being parts of the civil society

1.2. MINISTRY OF URBAN DEVELOPMENT: NEW REFORM MATRIX

Why in news?

Ministry of Urban Development has evolved a new reform matrix to enable State and City Governments to implement reforms over the next three years for a turnaround in urban governance, planning and finance.

Major Reforms Suggested in the Reform

- **Moving to a Trust and Verify Approach**:
  - ✓ The present system requires verification first and then issuing approval. Instead trust needs to be reposed in the citizens and approvals may be accorded first and to be verified later.
  - ✓ This approach has been recommended in respect of Permissions for building construction, Change of title in municipal records (mutation) and Birth and Death registration, involving the largest number of physical interactions between city governments and citizens.
- **Formulating Land Titling Laws**:
  - ✓ As per McKinsey **over 90% of the land** records in the country are unclear. Land market distortions and unclear land titles cost the country 1.30% of GDP per year.
  - ✓ This calls for enactment of Land Titling Laws and their implementation in a specific time frame.
- **Credit Rating of Urban Local Bodies (ULBs) and Value Capture Financing**:
  - ✓ Total revenues of the municipal sector accounts for only 0.75% of the total GDP which is 6% for South Africa, 5% for Brazil and 4.50% for Poland.
  - ✓ So, municipalities need to recover some of the value it creates for private individual. This can be done by issuing Municipal Bonds for meeting the capital expenditure needs of cities.
- **Improving Professionalism of ULBs:**
  - ✓ As per Goldman Sachs, a bureaucracy that is based on merit rather than seniority could add nearly a percentage point annually to the country's per capita GDP growth.
  - ✓ Also, shortage of qualified technical staff and managerial supervisors in ULBs prevent innovation.
  - ✓ Professionals in city governments should be inducted by encouraging lateral induction and filling top positions in cities through open competition.

Steps to Incentivize Above Steps

- Increase **Reform Incentive Fund** from Rs.500 cr during 2017-18 to over Rs.3, 000 cr per year over the next three years of implementation period.
- **Ranking of Cities** based on performance under each reform category for providing reform incentive under AMRUT Guidelines.

- Introduction of new initiatives viz., Transit Oriented Development Policy, Metro Policy, Green Urban Mobility Scheme, Livability Index for Cities, Value Capture Policy and Fecal Sludge Management Policy.

1.3. NEW CBI LAW

Why in News?

- Government of India (GOI) **turned down** the recommendation of Parliamentary Standing Committee on Personnel, Public Grievances, Law and Justice **(PSC)** on a new law for the CBI.

Background

- Supreme Court in **Vineet Narain case** gave reforms for making CBI independent.
- SC ruled that the Director of the CBI should be appointed on the recommendations of a committee headed by the **Central Vigilance Commissioner**, **Home Secretary** and **Secretary in Department of Personnel** as members.
- Earlier Supreme Court (SC) has termed CBI as a **caged parrot with many masters** on account of political interference in CBI's functioning.
- PSC 85th report wanted to **replace Delhi Special Police Establishment (DSPE) Act** of 1946 by a new CBI law.

> **Central bureau of Investigation**
> - It is the **main investigation agency of the central government** for cases relating to corruption and major criminal probes.
> - It has its origin in **Special Police Establishment** set up in 1941 to probe bribery and corruption during World War II.
> - CBI was set up by a **resolution of Ministry of Home Affairs** in 1963 after **Santhanam committee** recommendation.
> - Superintendence of CBI rests with CVC in corruption cases and with Department of personnel and training in other matters.
> - Presently it acts as an **attached office under DOPT**.
> - Although DSPE Act gives legal power to CBI, **CBI is not a statutory body as**:
>   - ✓ Word 'CBI' is not mentioned in DSPE act.
>   - ✓ Executive order of MHA did not mention CBI to be constituted under DSPE Act.
> - **Functions of CBI include** solving:
>   - ✓ Corruption Cases
>   - ✓ Economic Crimes like financial frauds, narcotics,

Need of an independent law

- **Effective Cadre management-** Currently, vacancies in CBI have to be plugged through State or other Central forces. So, under a separate law, CBI could manage its cadre more efficiently.
- **Administrative autonomy-** CBI Director should be given the powers of ex-officio Secretary to allow direct reporting to the Minister of Personnel reducing the hassles in going through DoPT for even basic administrative issues.
- **Financial Powers-** Currently the CBI is not financially independent, thus making it prone to being interfered by the government.

Issues involved

- New CBI law will have to be passed by a **constitutional amendment in State List relating to law and order** which may violate the spirit of cooperative federalism.
- CBI powers are misused for vested gains leading to **poor transparency and accountability** of the agency to the people at large.

Significance of the report

- A new law **will make CBI a statutory body**, thus giving it more autonomy to function and reducing political interference.
- CBI is involved in multiple functions making it a large monolithic organization. A **new law will clearly define its roles and responsibilities**.

Steps taken by government to strengthen CBI

- **Operationalizing CBI courts** for effective prosecution.
- CBI has been **exempted from consultation with UPSC for recruitment** to the post of DSP for a period of 3 years in 2017.
- **Advanced Certified Course for CBI officers** to enhance their investigation skills, forensic data collection, collection of evidence, skills etc. by training from National Law School of India University and IIM Bangalore.
- Various schemes for Modernization of training centers in CBI, CBI e-governance, comprehensive modernization of CBI branches/offices etc are being implemented.

Way Forward

The role, jurisdiction and legal powers of the CBI need to be clearly laid down. It will give it goal clarity, role clarity, autonomy in all spheres and an image makeover as an independent autonomous statutory body. Therefore CBI law will be a step in the right direction. Apart from this Lokpal Bill and CVC should be strengthened to make CBI truly robust.

1.4. REVIEW OF STATUS OF ATTORNEY GENERAL UNDER RTI

Why in news?

The Delhi HC ruled that the office of Attorney General (AGI) **does not** come under the **ambit of RTI** Act as it is not a public authority under **section 2(h)** of the act.

Present status

Recently a two judge bench of HC held that AG is not a public authority because:

- The relationship between AG and GOI is of a **lawyer and client** as AG is appointed **under article 76** of the constitution to provide advice on legal matters to the government.
- AGI maintains a **legal and trustworthy relationship** with the Government of India and does not occupy an office of profit and hence cannot be held to be a "public authority" within the meaning of **Section 2(h) of the RTI Act.**
- As the functions performed by AG are similar to an advocate thus he is not empowered to change relations or rights of others. Hence AG can be considered a public authority under the act.
- The essential services provided by the AGI are to advice the Government upon legal matters and perform other duties such of a legal character as may be assigned.
- Further AG cannot put in public domain his opinions or materials forwarded to him.

> Various constitutional provisions related to AG include:
> - **Article 76** mentions about AG as the highest legal officer in the country.
> - **Article 88** mentions about rights of AG with respect to the Houses of Parliament and its Committees, which includes:
>   - ✓ He has the **right to speak and to take part in the proceedings of both Houses** of Parliament and their joint sittings and any committee of Parliament of which he may be a member.
>   - ✓ But he does not have the right to vote in the Parliament.
> - **Article 105** defines that powers, privileges and immunities of AG are similar to Member of Parliament.

1.5. EXIT POLLS

Why in News?

- FIRs were filed in Uttar Pradesh against the editor of Dainik Jagran and the head of the surveying agency, Resource Development International (I) Pvt. Ltd after they let publish the results of an exit poll online.

Issues involved

- Supreme Court in PUCL case (2013) acknowledged the importance of free and fair elections.
- It is alleged that both opinion polls and exit **polls hinder the conduct of free and fair elections**.
- **Influence of Paid news** has further increased the resistance to such polls.
- Voters also have a **fundamental right to information** and media through exit and opinion polls.

Background

- In 1998 Lok Sabha and State Assembly polls, Election commission introduced guideline under Article 324: While carrying the results of exit and opinion polls, newspapers and channels shall disclose-
  - ✓ Sample size of the electorate
  - ✓ Details of polling methodology
  - ✓ Margin of error
  - ✓ Background of the polling agency
- In 1999, guidelines were challenged by media and a Constitutional Bench said that ECI cannot enforce guidelines in the absence of statutory sanction. Therefore ECI took them down.
- In 2004 ECI gave recommendation to amend the Representation of the People Act 1951 to ban both exit and opinion polls during a period as specified.
- In 2010, restrictions were imposed **only on exit polls through the introduction of Section 126(A) in the ROP Act 1951**.

Significance

- Opinion and Exit polls are useful **to gain insight into what people think of the policies and programmes of the government**.
- Polls also help people get aware about their rights. It helps the voters decide better thus **enhancing our deliberative democracy.**

Criticism

- Proposal to ban Exit polls is considered to be a move against freedom of speech and expression.
- Critics say they opinion and exit polls are politically motivated and influence the choice of the voter unfairly.

Way Forward

- An **independent regulator** that could set up standards of professional integrity for all poll research and accredit the agencies better scrutiny.
- The regulator can also be empowered to setup standards on parameters of survey like sample size, sampling methodology, timeframe, quality of training of research staff etc.

Exit poll

- **An exit poll** is a **post-election survey** conducted immediately after people have voted.
- Exit poll results cannot be published till the last round of elections is over. It covers even other states when polls are being held in more than one.
- For eg. In 2017 state elections in Punjab, Goa, UP, Uttarakhand and Manipur, exit poll results cannot be published till voting for the current round of elections in these five states ends.
- EC bans exit polls **from the time the poll begins till half-an-hour after the polling ends**.

Opinion Poll

- **An opinion poll** is a **pre-election survey** to gather voters' views on a range of election-related issues.
- Results of any opinion poll or any other poll survey in any electronic media is prohibited during the period 48 hours, including the hour fixed for conclusion of voting in each of the phases in connection with the elections.

Global Practices

- Sixteen European Union countries ban reporting of opinion polls 1 to 24 hours before polling.
- In the United States, opinion polls and its publication is an integral part of free speech in elections. The only restriction is to not report likely outcomes from exit polls before voting.

1.6. ARTICLE 370

Why in news?

Scenes of pandemonium were witnessed in J&K Assembly following statement of Chief Minister Mehbooba Mufti in which she termed those acting to weaken Article 370 as anti-nationals.

Background

- Jammu and Kashmir High Court (in Oct 2015) had ruled that Article 370 has assumed place of permanence in the Constitution and the feature is beyond amendment, repeal or abrogation.
- However, the Supreme Court said that only Parliament can take a call on scrapping Article 370 that accords special autonomous status to Jammu and Kashmir.
- The Supreme Court in a fresh appeal in November, 2016 has **agreed to examine the inviolability** attached to Article 370.
- **Article 370, Article 35A** and other aspects of J&K's special status have been challenged in four important cases in the Supreme Court and two in the Delhi High Court.

Can Article 370 be Revoked Unilaterally?

- According to the clause 3 of Article 370, "The President may, by public notification, declare that this article shall cease to be operative, 'provided that he receives the "recommendation of the Constituent Assembly of the State (Kashmir)."
- Thus, Article 370 can be revoked only if a new Constituent Assembly of Kashmir recommends revocation.
- Since the last Constituent Assembly was dissolved in January 1957 after it completed the task of framing the state's Constitution, so if the Parliament agrees to scrap Article 370, a fresh constituent Assembly will have to be formed.
- The constituent Assembly will consist of the same MLAs elected to the State Assembly. Simply put, the Centre cannot repeal Article 370 without the nod of J&K State.

About Article 370 and Article 35A

- Article 370 of the Indian Constitution is a **'temporary provision'** which grants special autonomous status to Jammu and Kashmir.
- Except for **defence, foreign affairs, finance and communications**, the Parliament needs the state government's concurrence for applying all other laws.
- **Article 35A** gives special rights and privileges to permanent residents of J&K, and empowers its legislature to frame any law without attracting a challenge on grounds of violating the right to equality of people from other states or any other right under the Indian Constitution.

Special Status to J&K

- **Legislative powers:** The state's residents live under a separate set of laws, including those related to citizenship, ownership of property, and fundamental rights, as compared to other Indians.
- **Territory**: Indian Parliament cannot increase or reduce the borders of the state and Indian citizens from other states cannot purchase land or property in Jammu & Kashmir.
- **Emergency Provisions**:
    - ✓ The Union government cannot declare emergency on grounds of internal disturbance or imminent danger unless it is made at the request or with the concurrence of the state government.
    - ✓ Centre can declare emergency in the state only in case of war or external aggression.
    - ✓ The Center has no power to declare financial emergency under Article 360 in the state.
- **Constitutional Amendment**: a Constitution amendment becomes applicable to J&K only after the President issues an order.

1.7. PROMOTION OF NATIONAL SONG

Why in News?

- Supreme Court **rejected a plea to direct the Central government to frame a national policy under Article 51A** of the Constitution to promote the National Anthem, the National Flag and a 'National Song'.
    - ✓ It also rejected making the National Anthem compulsory in offices, courts, legislative houses and Parliament.
    - ✓ However the court **"kept alive"** the plea that schools should play or sing National Anthem on working days.

Background

- **Article 51A (a)** – It shall be the duty of every citizen of India to abide by the Constitution and respect its ideals and institutions, **the National Flag and the National Anthem.**
- The Supreme Court ordered in 2016 to **mandatorily play the National Anthem before screening of a movie in cinema halls** when the audience must stand and show respect.

Arguments given

- **Fundamental Duties cannot be made compulsory**. They only direct individuals to become a better citizen. They are also not enforceable in courts.
- The Supreme Court has pointed out that the **National Song has not been mentioned in the Fundamental Duties**.
- Forcing abidance to national symbols is not an ethical way to promote a feeling of nationalism and patriotism in the citizens.

> **National Song**
> - Our national song is 'Vande Matram', composed in Sanskrit by Bankimchandra Chatterji.
> - It was first sung at the 1896 session of the Indian National Congress.
>
> **National Anthem**
> - Indian National Anthem is the first stanza of Rabindra Nath Tagore's composition called 'Jana Gana Mana' originally composed in Sanskritized Bengali.
> - It was translated to Hindi and Urdu by Abid Ali.
> - It was first sung in 1911 convention of Congress.

Significance

- By rejecting the idea of a policy on National anthem, flag and song, Supreme Court has **avoided national symbols becoming a tool of promoting moral policing**.
- Supreme Court has also **held personal choice over dictating patriotism** in this decision.

Way Forward

- Gradual steps should be taken rather than radical changes. Educating the people on the national flag, anthem and songs will increase acceptance of them in a citizen's life. They will also understand their fundamental duty to promote them. A policy on them seems to be a futuristic idea and is not relevant in present times.

1.8. SPOILS SYSTEM

Why in News?

- 11 appointments made by the State Governor to the Tamil Nadu Public Service Commission were set aside by the Madras High Court and the Supreme Court (SC) recently.

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Spoils System

- It is also called patronage system.
- Under this, a **winning political party rewards its campaign workers and supporters by appointing them to government posts** or by other favours.

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Background

- The Madras HC observed that **appointments were made in a hurry and the process was suspicious**.
- E.g. Selection of chairperson of Tamil Nadu Commission for Protection of Child Rights created a legal controversy as the qualifications for the post was not met, thus violating the law.
- In **Upendra Narayan Singh case (2009)**, SC observed that the Public Service Commissions are becoming victims of spoils system.
- Even **appointments and exits of Governors** with changes in political dynamics is an indication of a shift towards spoils system in constitutional posts.

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Article 14: State shall not deny equality before law or equal protection of law on grounds only of religion, race, caste, sex or place of birth.

Article 16: State shall not deny equality of opportunity in employment for public employment on grounds only of religion, race, caste, sex, descent, place of birth, residence or any of them.

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Issues involved

- In **Ramashankar Raghuvanshi case (1983)**, SC observed that employment based on the basis of past political loyalties **violates Article 14 and 16 of the constitution**.
- Spoils system creates a **conflict of interest in the appointee**. It may create a **lack of transparency and accountability** in the public administration.
- Since it is **against meritocracy**, it may **hurt administrative inefficiency**.

Steps taken to remove this system

- **Article 320** resulted in the establishment of **Public Service Commissions** to frame service rules and conditions for selection of meritorious candidates to civil services.
- Kerala government has recently decided to have a **dedicated law to prevent nepotism in government appointments**.

What needs to be done?

- 2nd ARC recommends **laying down certain principles** for administrative recruitments to avoid spoils system. These principles are:
  - ✓ **Well-defined merit-based procedure** for recruitment to all government jobs.
  - ✓ **Wide publicity and open competition** for recruitment to all posts.
  - ✓ **Minimization of discretion** in the recruitment process.
  - ✓ Selection primarily on the basis of **written examination** or on performance in existing board or university examination with minimum weight given to interview.
  These principles can be included in a **Civil Services Bill**.
- An independent civil services board at state level with the appointment made by a committee constituted by Chief Minister, Judges, Lokayukta etc. can help in making the recruitment transparent.

Way forward

- Government needs to prevent this spoils system by making the institutions independent of political interference. This will help improve administrative efficiency and maximize governance by giving emphasis on merit system.

1.9. UN BODY DEFERS NHRC ACCREDITATION

Why in news?

The Global Alliance for National Human Rights Institutions (GANHRI), affiliated to the UN High Commissioner for Human Rights, has deferred National Human Rights Commission (NHRC) re-accreditation until November 2017.

Reasons cited

- Flaws in Selection process
  - ✓ not sufficiently broad and **transparent**
  - ✓ lack of **uniform and precise criteria** for appointing members
  - ✓ no advertisement for vacancies in top posts is given out
- **Flaws in Investigation process**
  - ✓ **Non-independent investigators** - involvement of serving or retired police officers in the investigation of human rights violations, particularly where the alleged perpetrators are the police itself.
- **Composition**
  - ✓ Only 20% of the NHRC's staff is women and since 2004, there hasn't been a single woman on the governing body.
  - ✓ The legislative requirement of having an ex-CJI as Chairperson and choosing members of the senior judiciary **restricts the potential pool** of candidates who can be appointed, especially women.
- **Other problems**
  - ✓ mammoth backlog of cases-around 40,000 cases pending
  - ✓ the complaint redressal mechanism and the quasi-judicial functioning of the NHRC is not satisfactory as all **stakeholders do not have equal and unfettered access** to the process

NHRC is a statutory body constituted under the Protection of Human Rights Act, 1993.

NHRC (National Human Rights Commission) consists of:

- Chairperson, should be retired Chief Justice of India.
- One Member who is, or has been, a Judge of the Supreme Court of India
- One Member who is, or has been, the Chief Justice of a High Court.
- Two Members to be appointed from among persons having knowledge of, or practical experience in, matters relating to human rights.
- In addition, the Chairpersons of four National Commissions of (Minorities, SC and ST, Women) serve as ex officio members.

PARIS PRINCIPLES

The UN Paris Principles provide the **international benchmarks** against which NHRIs can be accredited under five heads: The institution shall

- **Monitor** any situation of **violation of human rights** which it decides to take up.
- Able to **advise the Government** on specific violations, on issues related to legislation and general compliance and implementation with international human rights instruments.
- Be able to relate to regional and international organizations.
- Have a **mandate to educate** and inform in the field of human rights.
- **some institutions should be given a quasi-judicial competence**

Need For Accreditation

- Accreditation confers international recognition and protection of the National Human Rights Institution besides its compliance with the Paris Principles
- A-status accreditation (full compliance with Paris Principles) grants participation in the work and decision-making of National Human Rights Institutions (NHRI)'s International Coordinating Committee (ICC) as well as the work of the Human Rights Council and other UN mechanisms.

1.10. CONTEMPT BY JUDGE

Why in news?

- In a first, the Supreme Court started contempt proceedings against Justice C S Karnan, a sitting judge of the Calcutta High Court.
- He had earlier suo motu stayed a Supreme Court Collegium recommendation to transfer him from the Madras High Court to the Calcutta High Court.

Contempt of Court

Transfer of a High Court Judge
Article 222(1) of the Constitution says that the "President may, after consultation with the Chief Justice of India, transfer a judge from one High Court to any other High Court."

- **Contempt of court consists of** words spoken or written which tend to bring the administration of Justice into contempt, to prejudice the fair trial of any cause or matter which is the subject of Civil or Criminal proceeding or in any way to obstruct the cause of Justice.
- **Article 129 and Article 142 (2) of the Constitution** enables the Supreme Court to issue notice and punish any one including Judges of the High Court for its contempt or contempt of any subordinate courts.
- **Need of Such Powers:** Contempt provisions have been provided to ensure that the Judges do not come under any kind pressure either from media criticisms or by general public opinion and discharge their duties without any kind of fear and favour or any external influence whatsoever.

Arguments against Contempt of Court

- Contempt of Court proceedings have the **effect of muzzling free speech** guaranteed under Article 19(1)(a) of the Indian Constitution.
- Article 19(2) includes 'contempt of court' as a reasonable restriction on free speech but its justification in its present form is not tenable in a democracy.
- **Pandit Thakur Das Bhargava** in the Constituent Assembly said that powers to reprimand contempt concerned only actions such as the disobedience of an order or direction of a court, which were already punishable infractions.
- Speech in criticism of the courts, he argued, ought not to be considered as contumacious, for it would simply open up the possibility of gross judicial abuse of such powers; which has now been proved true in many instances.
- Interestingly, in England, whose laws of contempt we have adopted, there hasn't been a single conviction for scandalising the court in more than eight decades.

Conclusion

The Contempt powers should be used in such a way as not to violate Right to Freedom of Speech while also ensuring independence of the Judges.

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2. INTERNATIONAL/INDIA AND WORLD

2.1. ROHINGYA ISSUE

Why in News?

The UN human rights office said that Myanmar's security forces had committed mass killings and gang rapes of Rohingya Muslims and burned their villages.

Reason for present crisis

Since October-2016 Myanmar's army has carried out **"clearance operations"** in the north of the western state to root out insurgents accused of deadly raids on police border posts.

Challenges of crisis

> **About Rohingya**
> - More than one million people in Myanmar identify as Rohingya, a predominantly Muslim group living mainly in Rakhine State on the country's western coast.
> - **Myanmar is a multicultural society with 135 communities**. But the country's **1982 Citizenship Law,** which was promulgated by the erstwhile military junta, does not recognise the Rohingyas as one of the **"national races".**
> - These people lack documentation to satisfy the constitutional requirement that their ancestors settled in the country before 1823.
> - UN has often described **Rohingyas as one of the most persecuted minorities in the world**.

- At least 69,000 Rohingya have fled to neighbouring Bangladesh, alleging rape, murder and torture at the hands of security forces.
- A large number of those escaping the violence end up in the **trafficking networks**.
- The crisis, if left at its current precarious stage, risks spiraling out of control and will have **security and economic implications for its neighbours.**
- The persecuted Rohingya Muslims are likely **to provide fertile recruiting grounds for extremists.** There are reports of increasing radicalisation in the community.
- Bangladesh fears that Islamist hard-liners, who staunchly support the Rohingya Muslims, are trying to exploit the situation for their political benefits.
- Some sections of the Rohingyas have formed **armed guerilla groups in Rakhine to fight Myanmar's** Army and operate along the mountainous border.
- Despite Myanmar's transition towards democracy, the country's government refuses to address the issue. **Aung San Suu Kyi** has chosen the path of political expediency in the face of **strong anti-Muslim sentiment in the Buddhist majority country.**

Way forward

- The Rohingya crisis is, first of all, **a political issue in Myanmar**. The ultimate solution lies in the granting citizenship and ensuring equal rights in their ancestral home.
- Until a permanent solution is found in Myanmar, it is the responsibility of refugee hosting countries, including Bangladesh, to ensure that Rohingya people can live with basic human rights and dignity.
- **China and India** share a border with Myanmar and also have vested economic interests owing to trade and investment ties. They should use creative diplomacy to persuade Myanmar to resolve the Rohingya crisis.
- International community also needs to play more proactive role in resolving present crisis. Due to lack of economic interest in Myanmar, **western world is not very enthusiastic to resolve the crisis and deals it as internal problem of Myanmar.**
- ASEAN should play a key role in working out a solution with Myanmar's leaders.
- Recently, Dhaka announced a plan to relocate the refugees to **Thengar Char, an uninhabited island in the Bay of Bengal,** some 60 km off the mainland. The island, about 30,000 hectares in size, is often flooded during monsoon. The plan has come under attack from human rights groups as well as the UN.

2.2. H1 VISA ISSUE

A Bill backing key changes in the H1-B visa programme that allows skilled workers from other countries to fill jobs in the U.S. has been reintroduced in Congress by two lawmakers.

What is the H1-B visa programme Bill?

- The Bill prohibits companies from hiring H1-B employees if they employ more than 50 people and more than 50 per cent of their employees are H1-B and L-1 visa holders.
- The Bill encourages companies to recruit American workers.
- It explicitly prohibits replacement of American workers by H1-B or L-1 visa holders.
- Earmark 20% of H-1B visas for small and start-up employers.

- Strict audit and vetting by Department of Labor to clamp down on fraud or misuse.
- Prohibit spouses of H-1B visa holders from working in the US.
- Give preference to students educated in the US for H-1B visas rather than computerized lottery system.
- Crack down on outsourcing companies that import workers for temporary training and then send them back home to do the same job
- The Bill seeks to increase the minimum salary of H1-B visa holders to $1, 30,000 per annum.
- Currently, firms need not go through extensive paperwork if the potential H1-B employee has an equivalent of a Master's degree or higher and is paid at least $60,000 annually. The Bill aims to do away with the Master's degree exemption (as "they are easily obtained by foreign workers").

How does this affect India?

Given the fact that India's IT companies are a major beneficiary of these visas, the move would have a big impact on their costs and earnings.

- Indian outsourcing firms such as Infosys, Wipro, Tata Consultancy Services will be badly hit.
- Indian students migrating to the states for pursuing a higher degree and tech companies that send their workers on off-site projects will be among the most affected by the changes to the visa policy.
- Apart from visa curbs, US had also recently hiked the visa fee for certain categories of the H1-B and L1 visas.

Impact on US economy

- The Indian IT industry believes that this Bill does not address the root cause of the problem – shortage of STEM skills (or those in the areas of Science, Technology, Engineering and Math) in the U.S.
- Similarly, unless skill-based criteria are used in addition to wage-level restrictions, numerous U.S. firms will struggle to fill mid-level jobs with qualified Americans.
- If IT companies within this group are impacted by onerous new restrictions, they would likely prefer to entirely offshore their operations to India. Ironically, that could lead to job losses for American workers.

2.3. INDIA-EAST AFRICA

Why in news?

Vice-President paid official visit to Rwanda and Uganda, in a bid to strengthen ties with the East African countries. This was the first high-level visit to Uganda from India since 1997 and first high-level visit to Rwanda.

A. India- Rwanda

- India and Rwanda have concluded a bilateral air services agreement enabling direct flights between the two countries.
- The other two MoUs pertained to the setting up of an entrepreneurial development centre in Rwanda and exemption of visa for entry of diplomatic and official passports.

Highlights of VP visit

- Vice President launched the **India-Rwanda Innovation Growth Program** as a major Science and Technology initiative
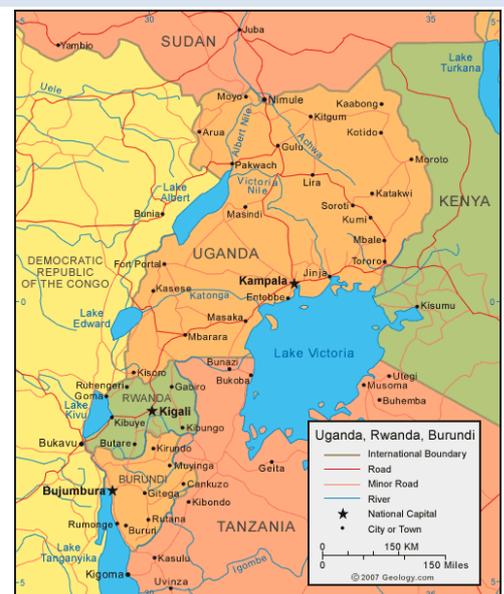
- The Vice president reiterated India's decision to open a **resident Indian Mission in Rwanda** highlighting that this will further cement the strategic partnership.
- Rwanda has about 3,000 people from Indian community.
- Vice president also paid tribute to the victims of the **1994 massacre** at the Kigali Genocide Museum

> **About Tutsi genocide in Rwanda**-In just 100 days in 1994, some 800,000 people were slaughtered in Rwanda by **ethnic Hutu extremists.** They were targeting members of the minority **Tutsi community,** as well as their political opponents, irrespective of their ethnic origin.

B. India- Uganda

Both sides agreed to cooperate in the vocational training, space technology and peaceful uses of atomic energy.

- As goodwill gesture the Vice President presented medicines worth US$ 2million and medical equipment worth US$ 1million to Uganda.
- India supports some development projects in Uganda, including a **tele-medical center** at the national referral hospital that is connected to 11 hospitals in India.
- India is one of the largest trade partners of Uganda. Bilateral trade is estimated to around US$ 615 million.
- There is, at present, a 30,000-strong Indian community in Uganda that is heavily invested in the economy of the country.

2.4. WORLD TRADE ORGANIZATION

WTO Director General Roberto Azevêdo visited India. During the visit, India flagged number of issues pending in WTO to be resolved before **December 2017 Ministerial Conference (MC) in Argentina**.

- Commerce Minister highlighted the need to ensure that the processes on outstanding issues- including arriving at **a permanent solution to the issue of public stock-holding for food security purposes**- of the WTO's Doha Round negotiations are completed before the December 2017 Ministerial Conference (MC) in Argentina.
- India will send an expert team to the World Trade Organisation headquarters in Geneva to ensure that negotiations on **food security issues and the proposed global services pact are expedited.**

India's opposition to inclusion of new issues:

India is against introduction of **'new issues'** into the formal agenda of the WTO-level negotiations on liberalisation of global trade without consensus among all the WTO Members. The issues that have been identified for inclusion in the WTO are **electronic commerce and investment**.

A. Electronic commerce issue

- Their inclusion has been supported by the **International Chamber of Commerce (ICC) and the B-20** (Business 20, representing the business groups of G-20 countries).
  - ✓ The ICC and B-20 tabled a proposal in September 2016 for the adoption of a "WTO package" on e-commerce.
  - ✓ This proposal speaks of **promoting micro, small and medium enterprises (MSMEs) through the better adoption of e-commerce.**
  - ✓ The proposal argues that an effective e-commerce environment would level the playing field between large and small businesses, thus enabling the latter to overcome the hurdles in accessing markets.
  - ✓ The WTO Director General has given strong endorsement to e-commerce. He has pointed out that the increase in Internet penetration (43% of the global population).
  - ✓ In 2015, Internet penetration in the least-developed and low income countries was 12.6% and 9.4%, respectively. Even for the low middle income countries, the figure was below the global average.
- Due to **huge disparities in Internet penetration** between developed and developing countries the likely beneficiaries from e-commerce would be developed countries.

B. Investment issue

- The focus is on **the investor state dispute settlement process,** using which investors can sue their host states in private international panels.
- India has opposed the **attempts** by some rich countries to work towards a global investment agreement at the WTO-level that would incorporate a contentious **Investor-State Dispute Settlement mechanism.**

Way forward

- It is quite clear that the inclusion of e-commerce and investment in the WTO would further drive the **wedge between the rich and the poor nations.**
- The growing disenchantment with the existing model of globalisation has provided a historic opportunity to frame new rules that give equal opportunities to all countries and their citizens in the global marketplace.

2.5. EVACUATION POLICY

At present, India does not have a comprehensive evacuation policy to evacuate Indian stranded in conflict zone.

- India has conducted more than thirty evacuation operations across Africa, Asia, and Europe, including its largest-ever civilian airlift of 110,000 people from the Persian Gulf in 1990.
- However, given the lack of **formal doctrine or emergency plan,** the success of India's missions has mostly been due to individual sacrifices of officials from its diplomatic corps, flagship carrier and armed forces.
- US, UK, and the NATO have institutionalized non-combatant evacuation operations (NEO) doctrine. Among the developing countries, Brazil too has institutionalised a standard operating procedure (SOP).

Why need for comprehensive policy?

- The increasing size and complexity of the diaspora requires the government to expand capacity and improve procedures.
- More than **11 million Indians now reside abroad and 20 million travel internationally every year.**
- As political instability rattles the **West Asian region**, which hosts more than **seven million indian**.

What needs to be done?

- First, the government **needs to build on its rich experience** in conducting such operations. Studying India's history, best practices and lessons learned will help institutionalize them.
- Second, **an inter-ministerial committee** should prepare a manual with guidelines that establish a clear chain of command and division of competencies
- Third, India's diplomatic cadre must be given **specific training** to operate in hostile environments.
- Fourth, the success of future operations will also rely on New Delhi's willingness to work together with **friendly governments**.
- Fifth, the government will have to assign **a greater role to its armed forces,** in particular by strengthening the Navy and Air Force's capacity to operate in tandem with civilian authorities.
- Sixth, to minimize redundancies, the government must **institutionalise a permanent inter-ministerial coordinating mechanism for emergency evacuations,** incentivize inter-agency cross-posting of officials dealing with diaspora affairs, and encourage State governments to create regional contingency plans.
- Seventh, to avoid cost inflation and delays, **government must establish a permanent civil reserve air fleet that pools aircraft from all** Indian airlines based on pre-established requisition and reimbursement process.
- Eighth, **invest in new technologies to better monitor the diaspora's profile and mobility.**
- Finally, the government must expand efforts **to manage public opinion** and be able to conduct a quiet diplomacy that is crucial to safely extricate Overseas Indians from conflict zones.

2.6. INDIA-TAIWAN

Why in news?

The three-member Taiwanese parliamentary delegation visited India. Taiwan is represented in New Delhi by a **"Taipei Economic and Cultural Centre"** and India has an **"India-Taipei Association"** in Taiwan.

Importance of bilateral relation

Greater cooperation between India and Taiwan could prove critical in helping New Delhi and Taipei achieve their economic goals at home and their strategic aims in the region.

A. Economic Security

- **India and Taiwan have complementary economic structures**. Taiwan is known for hardware manufacturing while India has an established software industry.
- Taiwan has long been a world leader in high-tech hardware manufacturing, and is able to contribute to the **"Make in India", "Digital India" and "Smart Cities" campaigns.**

- Trade between the two countries reached $5.91 billion in 2014. But Taiwan's share of trade with India is around 1% of its global trade.

B. Strategic interest

India and Taiwan **share similar values and there are no serious disputes between the two countries**. On the strategic security front, both India and Taiwan have concerns about China's growing assertiveness in the region.

- Taiwan has a better understanding of **China's strategic depth because** of their close geo-strategic proximity and linguistic and cultural ties. A closer relationship with Taipei will help understand Beijing's strategic thinking.
- Strategically, both the countries have security threats from China.
- India has a long-standing territorial dispute with China. On the other hand, experts have opined that Beijing can use military power to annex Taiwan if their "one-China policy" comes under threat, considering it a breakaway from mainland China.
- Additionally, they share a common interest of preventing China from making South China Sea its exclusive zone.
  - ✓ Through this, Taiwan can further consolidate its identity as an independent state and India can ensure freedom of **navigation in the South China Sea through** which 50 per cent of its trade takes place.
  - ✓ India can further expand its **oil and gas exploration activities in the region**.
- Taiwan believes that **India's presence in the region will provide some sort of balance.**

> **New Southbound Policy of Taiwan**
> Taiwan's new government under President Tsai ing-Wen has launched the "New Southbound policy" which aims to energise Taiwan's ties with ASEAN, Australia, New Zealand and India.
> - Apart from increased bilateral trade, it is also aimed at people-to-people contact in the fields of tourism and culture.
> - **India's 'Act East Policy'** with this policy presents a chance to consolidate an already existing relationship.

Obstacle in full development of relations

- Taiwan still does not have **full diplomatic relations with India** and other important countries – due to the One China policy.
- India has followed the **"One China Policy"** for decades, and places restrictions on the official-level exchanges with Taipei.

Chinese reaction to visit

- China considers Taiwan a **breakaway province**, which could be reunited by force if necessary.
- China opposes any diplomatic relations as well as political contacts with Taipei by countries which has diplomatic relations with it.
- China has lodged a protest against India for hosting a Taiwanese parliamentary delegation and asked it to deal "prudently" with Taiwan-related matters.
- China has maintained that countries that have diplomatic relations with it should follow **'One China' policy.**

2.7. INDIA-BANGLADESH

India and Bangladesh signed a Memorandum of Understanding (MoU) for the sustainable development of **Sylhet city with financial aid from India.**

- Under the project, India will provide aid for the construction of a five-storey School Building, a six-storey cleaner colony building; and for some development work at a total cost of around Taka 240 million.
- The signing was the follow-up of an earlier MoU of 2013 for the implementation of sustainable development projects in socio-economic sectors of Bangladesh.

About Sylhet

- Sylhet is an ancient city and a historically vibrant city.
- Originally part of the Bengal Presidency and later Eastern Bengal and Assam.
- The town was part of Colonial Assam between 1874 and 1947, when following a **referendum and the partition of British India; it became part of East Bengal**.
- It has been a focal point for 1971 Liberation War.

2.8. INDIA-USA

Recognising India's status as a **'Major Defence Partner,'** the U.S. has made changes in its export control laws that will benefit India by facilitating smoother transfer of technologies and arms.

Significance

- It "institutionalises the progress made to facilitate defence trade and technology-sharing with India to a level at par with that of the United States' closest allies and partners.
- The new rule **"creates a presumption of approval"** for Indian companies seeking to import Commerce Department-controlled military items, except Weapons of Mass Destruction-related goods.
- This means that only under the **rarest circumstances will India be denied licenses**.
- The new rule also amends the law so that companies will not need a license at all after becoming a **Validated End User (VEU).**

2.9. SOUTH SUDAN

Why in news?

An Indian national was shot dead by rebel fighters in disputed region **of Abyei, South Sudan.**

- This is the first casualty of an Indian in the civil war, which began last year.
- India launched **"Operation Sankat Mochan"** in July 2016 to evacuate nationals caught in the escalating civil war in south sudan.
- South Sudan is caught between a border disputes with its northern neighbour Sudan, and is facing an internal power battle between President Salva Kiir and former vice president Riek Machar.

About Abyei region

Abyei is an energy-rich region between Sudan and South Sudan which remains disputed.

2.10. ISRAEL-PALESTINE

Why in news?

Israel's Parliament, the Knesset, passed a law that would retroactively legalise Jewish settlements on privately owned Palestinian land.

- The legislation allows the Israeli government to expropriate private Palestinian land if the land-owners are unknown. If known, they will be compensated in cash or kind.
- The legislation, which for the first time since the annexation of East Jerusalem seeks to extend Israeli law to the West Bank, can be overturned by the judiciary.
- Since Israel occupied the **West Bank and East Jerusalem** five decades ago, about 140 settlements have been built in Palestinian territories that house more than 600,000 Jews.

Criticism of law

Critics say the legislation enshrines into law the theft of Palestinian land, and it is expected to be challenged in Israel's Supreme Court.

- The international community overwhelmingly opposes settlements and sees them as an obstacle to peace.

- Among the law's problematic elements is that the West Bank is not sovereign Israeli territory and that Palestinians who live there are not citizens and do not have the right to vote for the government that imposed the law on them.

2.11. RISK OF FAMINE IN AFRICA

UN Secretary-General António Guterres raised the alarm about the risk of famine in northern Nigeria, Somalia and Yemen and recently the United Nations declared famine in a patch of South Sudan.

- Nations facing famine are either in war or recovering from decades of conflict
- 20 million people are on the brink of famine, including 1.4 million children at imminent risk of death.
- Famine is a rare and specific state. It is declared after three criteria are met:
    - ✓ When one in five households in a certain area face extreme food shortages;
    - ✓ More than 30% of the population is acutely malnourished; and
    - ✓ At least two people for every 10,000 die each day.
- Famine was last declared in Somalia in July 2011
- **Mr. Guterres cited two reasons for the crisis.**
    - ✓ Funding: the UN needs $5.6 billion to address the needs. Barely 2% of that money is in hand.
    - ✓ As all four countries **are reeling from conflict,** in many instances, the leaders of warring parties are blocking aid workers from delivering relief where it is most needed.

3. ECONOMY

3.1. DIRECT BENEFIT TRANSFER IN FERTILIZER SECTOR

Why in News?

- Pilot projects to introduce Direct Benefit Transfer (DBT) in fertilizer sector have been taken up in 16 districts.

Why fertilizer sector is suitable for DBT?

- Fertilizer sector has high leakages of about 40%. DBT can help in prevention of leakages to make subsidies efficient and targeted.
- **Central government control** over fertilizer sector is high. This minimizes administrative complexity.
- Government has a real time **Fertilizer Monitoring System** that monitors the fertilizer supply chains.
- Economic Survey considers it ideal to introduce DBT in fertilizer sector with
  - **Direct Benefit Transfer** given in cash
  - **Biometrically Authenticated Physical Uptake (BAPU)** – certifying identity using Aadhar and physically taking subsidized goods.

> **Direct Benefit Transfer (DBT)**
> - **DBT scheme was started on 2013** to:
>   - Reform Government delivery system for simpler and faster flow of information/funds.
>   - Ensure accurate targeting of the beneficiaries by preventing de-duplication and fraud.
> - **DBT Mission was created in the Planning Commission** to implement the DBT programmes.
> - In 2015 it was placed in Cabinet Secretariat under Secretary (Co-ordination & PG).
> - JAM i.e. **Jan Dhan, Aadhaar and Mobile** are the three enablers of DBT.

> **Uniqueness of DBT in fertilizer sector**
> - The subsidy would be given to the fertilizer companies rather than to the beneficiaries as given in DBT in LPG.
> - The subsidy varies with different fertilizers and also from company to company.

Challenges of DBT in Fertilizer Sector

- With respect to fertilizer subsidy, the **beneficiaries and entitlements are not clearly defined**.
- Subsidy in case of Urea is more than double its MRP. Therefore, **farmer may be burdened financially** to give MRP and subsidy upfront to receive the DBT afterwards.
- Before DBT, there is a need of reforming the subsidy structure in fertilizers which promotes the excessive use of Urea and destroys soil health.

Suggestions

- **Decanalizing urea imports**: Allowing more agencies to import urea and giving them more freedom in procurement decision would allow flexibility in adjusting to demand.
- Bringing urea under **nutrient based subsidy** compared to current practice of cost based subsidy.
- Secure long term supplies from locations where energy prices are cheap. For eg. Agreements from Iran and Oman.

> **Some other reforms in fertilizer sector**
> - **Neem Coated Urea** – It checks diversion of urea from agriculture uses and also reduces leaching of nitrogen into soil.
> - **Gas price pooling** - Under this, price of domestic natural gas is averaged or pooled with cost of imported LNG to create a uniform rate for fertilizer plants.

Way Forward

- Government should make full use of universalization of banking via the Jan-Dhan Yojana, efficient targeting via Aadhaar, and the increasing spread of smartphones, to extend DBT to fertilizer sector..

3.2. WORLD EMPLOYMENT AND SOCIAL OUTLOOK REPORT

Why in News?

- International Labour Organization recently released the World Employment and Social Outlook –Trends 2016 Report.

Findings of the Report

- It predicts that the **number of jobless in India will increase from 17.7 million in 2016 to 18 million by 2018**. It also predicts the employment rate to go down from 3.5% to 3.4% in 2017.

> **Vulnerable Employment**
> - As per ILO, vulnerable employment **covers the own account workers and unpaid family workers**.
> - They most likely lack decent working conditions, social security or any representation in unions.

- Its **predictions related to 'vulnerable employment'** are:
  - It may fall by less than 0.2% per year for the next two years, showing only marginal improvements.
  - It is expected to remain above 42% of the total employment in 2017 and account for 1.4 billion people all over the world.
  - In emerging countries like India, one in two workers fit this category while in developing countries it is four out of five workers.
  - South Asia and sub-Saharan Africa are the most affected areas by vulnerable employment.

About International Labour Organization

- It was established in 1919 as a part of Treaty of Versailles post WWI.
- It is the **only tripartite UN agency,** brings together governments, employers and workers of member states.
- Its **aim is to set labour standards, policies and programmes** to promote decent work for all women and men.
- India is the **founding member** of ILO.
- It has three main bodies –
  - **International Labour Conference** – It sets the labour standards and broad policies.
  - **Governing Body** – It is the executive body taking the final decisions.
  - **International Labour Office** – It is the permanent secretariat of ILO supervised by Governing Body.

3.3. INDIA INNOVATION INDEX

Why in News?

The World Economic Forum, NITI Aayog, the World Intellectual Property Organization and the Cornell University will work together to develop an India Innovation Index.

Background

- The Global Innovation Index (GII) is an **annual ranking of countries** according to their capacity and success in innovation.
- It is published by Cornell University, INSEAD, and the World Intellectual Property Organization, in partnership with other organizations and institutions.

More about India Innovation Index

> **GLOBAL INNOVATION INDEX**
> - GII is co-published by World-Intellectual Property Organization (WIPO), Cornell University and INSEAD with CII as a Knowledge Partner
> - Since inception in 2007, it has been ranking world economies according to their innovation capabilities and outcomes using 82 indicators among a host of other important parameters
> - India currently ranks 66th out of 128 countries on the Global innovation Index (GII) 2016.
> - It has established itself as both a leading reference on innovation and a 'tool for action' for policy makers.

- It will be a "first-of-its-kind online platform" where Global Innovation Index (GII) indicators and India-centric data from various states will be updated periodically.
- The index will measure and **rank the innovation performance of all Indian states**
- It will be structured based on the **best practices followed in Global Innovation Index (GII) indicators** and additionally by adding India-centric parameters those truly reflect the Indian innovation ecosystem.
- The index will be based on key pillars of innovation and sub-indices that together will assist in tailoring policies that promote inclusive growth.
- The pillars include the strength of institutions, capacity of human capital and research, supporting infrastructure and the level of business sophistication, among others.
- The first ranking is expected **to be released at the India Economic Summit** in New Delhi on October 4-6, 2017.

Significance

- Will identify and measure the grassroots issues that affect innovation capabilities and can help move India to an **innovation-driven economy**.
- Identifying the root cause problems might eventually help in growth of innovation in the innovation laggard states such as UP, Bihar, etc.

- It will also help in upgrading the overall rank of India in innovation sector globally. Currently India ranks 66 in Global Innovation Index.
- More transparency would eventually help in better policy making and more aware general public and media.
- The ranking among states will also **promote competitive federalism.**
- It will also be giving more impetus to Make In India, Digital India, Start Up India, etc. campaign.

3.4. RAIL SAFETY

Why in news?

- The Railways Ministry is planning to consult the World Bank to identify areas that require investment from the special rail safety fund announced in the Budget.

Background

The **union budget 2017-18** made following announcements for rail safety:

- For passenger safety, a **Rashtriya Rail Sanraksha Kosh** will be created with a corpus of ` 1 lakh crores over a period of 5 years.
- Besides seed capital from the Government, the Railways will arrange the balance resources from their own revenues and other sources.
- Government will lay down **clear cut guidelines** and timeline for implementing various safety works to be funded from this Kosh.
- Unmanned level crossings on **Broad Gauge lines** will be eliminated by 2020.
- Expert international assistance will be harnessed to improve safety preparedness and maintenance practices

Reasons for rail accidents in India

- Derailments constitute 50% of the total rail accidents, followed by 36% accidents at unmanned level crossings gates.
- **Lack of fire detection systems:** Most trains in India still lack effective systems to detect smoke and fire.
- **Lack of anti-collision technologies:** These are devices that automatically halt the train if it overshoots a red signal. India, which has the world's fourth-largest railway network after the U.S. China and Russia, still doesn't have such safety devices.
- **Staff deficit:** Speeding and skipping red signals are the main causes of concern, human error is another common cause of accidents. The reason for this is partly that there is a shortage of staff, meaning that workers are often overworked.
- **Inappropriate maintenance of tracks:** According to the Khanna Railways Safety Review Committee Report, nearly 25 per cent of the total railway track in India is over aged and is due for replacement.
- **Resource crunch:** The Khanna Committee had further reported resource crunch is said to be the main cause of all these happenings in the Indian Railways.
- **Poor Rolling stock:** Rolling stock, namely locomotives of most trains are not equipped with the Linke Hoffman Busch (LHB) coaches.
- **Negligence of the Government:** There were three high level committees constituted on the Railways constituted recently like Sam Pitroda Committee on Modernization of Railways, Anil Kakodkar Committee on Railway Safety review, Bibek Debroy Committee on Restructuring of Railways etc. All of those reports are lying dormant and recommendations un-implemented.
- Accidents also occur due to sabotage.

Steps needed for reducing railway accidents

- Strict auditing regarding the integrity of tracks needs to be carried out regularly.
- Ultra sound fault detection machines used for precise fault detection need to be expeditiously installed.
- Strict legal action should be taken against employees for allowing trains to be loaded heavily beyond the prescribed limits.
- Need to ensure materials used in the construction of tracks are of high quality. Strict auditing of signaling and integrity of tracks.
- Use LHB coaches in place of the ICF coaches so that even if derailments occur due to sabotaged tracks, casualties are minimized.

- The customization to Indian conditions of foreign technologies like Anti-Collision Device and the Train Protection and Warning System
- A time-bound filling up of vacancies in Critical Safety Categories and Manpower Planning Issues, addresses the demand by railway unions.
- Prioritizing the completion on Sethu-Bharatam project, so that unmanned railway crossings are eliminated.
- There should be an independent body like Railway Safety Authority under the government with chairman and experts from outside

3.5. RAIL CADRE MANAGEMENT

Why in News?

- A senior team of bureaucrats have recently argued against the idea of a single unified management cadre in the Indian railways.

Background

- Presently Indian Railways cadres are organized as follows –
  - **Five cadres directly engaged in train operations** - Traffic (operations and earnings), Civil Engineering (track, stations and such assets), Mechanical (Rolling Stock), Electrical, and Signaling.
  - **Three cadres are in back-end support roles**: Accounts (Finance), Personnel (Human Resources) and Stores (Procurement).
- Vinod Rai committee suggested constituting **a single Senior Management Cadre** for all general top posts to end departmental conflicts.
- After this, a team of senior officers was constituted to analyze Vinod Rai committee recommendations which gave its report recently.

Need of the proposal

- Vinod Rai committee noted that presently there have been **interdepartmental conflicts due to less exposure** of other department's working in Indian Railways.
- Other railway committees on railways like Rakesh Mohan Committee, Sam Pitroda Committee etc. have also been apprehensive on the **rising departmentalism in Railways**.
- Vinod Rai recommended an officer for top Railways posts only if he/she had experience of department other than his own for 3 years. This proposal **may increase synergy in the different cadres of railways**.

3.6. FIPB TO BE ABOLISHED

Why in news?

Government announced in the Budget 2017-18 its intention to abolish FIPB (foreign investment promotion board) in fiscal year 2018.

Background

- Foreign Direct Investment (FDI) flows into India in **two ways**, the automatic route and through government approval.
- FIPB offers a single window clearance mechanism for FDI applications in sectors under **the approval route**. The board has handled investment proposals worth up to ₹5,000 crore.
- FIPB is located in the **Department of Economic Affairs**, Ministry of Finance and the Finance Minister is in charge of the FIPB.

Reasons Cited

- At present, **more than 90%** of the FDI inflows are routed through the **automatic route** which do not require prior approval from the FIPB and are subject to sectoral rules.
- For the rest of the FDI (about 8% of the total FDI inflows), every department concerned has a framework or a regulator for it.
- Further, FIPB has successfully implemented e-filing and online processing of FDI applications.
- Therefore, the government feels that it has now reached a stage where FIPB can be phased out.

3.7. PROPOSED BAN ON FDI IN TOBACCO

Why in News?

- Ministry of Commerce has proposed a blanket ban on Foreign Direct Investment (FDI) in tobacco sector.

Background

- Although **FDI in tobacco manufacturing has been banned since 2010** in India, foreign tobacco companies can invest through technological collaborations, licensing agreement and by forming trading companies.
- The proposal has been opposed by NITI Aayog.

Issues involved

- India has an **$11 billion tobacco industry**. There will be a loss of employment and foreign exchange with proposed restrictions.
- India **can be challenged under various BITs** on account of causing discrimination in domestic and foreign manufacturers.

> **Bilateral Investment Treaty (BIT)**
> - A BIT is a treaty between two countries that provides basic protections to the investors of one state investing in another. Eg. Most Favoured Nation provision
> - India has about 83 BITs with different countries
>
> **India's model draft on BIT**
> - After losing in the 2011 White Industries case, India prepared a model BIT. Some of its provisions are-
>   - ✓ **Deleting the MFN clause**.
>   - ✓ **Enterprises based definition of investment**- Investors who do not set up an enterprise in India to carry business cannot seek protection under BIT.
>   - ✓ **Compulsorily exhausting the local courts first** before approaching international tribunal for dispute resolution.
>   - ✓ List of subject exceptions where provisions of BIT would be invalid are health, environment etc.

Significance of the proposal

- As per its obligation under **WHO's Framework Convention on Tobacco Control (FCTC)**, India has to reduce higher consumption of tobacco products.
- Such proposal may help in reducing government's health expenditure related to tobacco consumption.

Limitations of the proposal

- It will end participation of foreign companies in India leading to loss of investments and livelihoods of tobacco farmers.
- WHO's FCTC does not contain any provisions for banning FDI in tobacco sector as a means of reducing tobacco use.
- Foreign tobacco companies like Phillip Morris International of USA says such a **ban may be protectionist and discriminatory**.
- It is unsure that banning foreign manufacturers would reduce tobacco use. The foreign manufacturers may be replaced by domestic ones with the problem unsolved.

Way Forward

- India should **consider alternative regulatory mechanisms** which may better achieve a reduction in tobacco consumption like plain packaging regulations, increase taxes on cigarettes, involving bidis in taxation etc. rather than having a blanket ban on FDI in tobacco sector.

3.8. CBDT SIGNS FOUR ADVANCE PRICING AGREEMENTS

Why in news?

- The Central Board of Direct Taxes (CBDT) announced signing of four more unilateral Advance Pricing Agreements (APAs) in February, 2017.
- The APAs signed pertain to the manufacturing, financial and Information Technology sectors.
- With this, the total number of APAs entered into by the CBDT has reached 130. This includes eight bilateral APAs and 122 Unilateral APAs.

> **Why APAs were introduced**
> - Multi-National Companies apart from genuine cases can misuse this by shifting profits to tax haven countries using transfer pricing mechanism
> - Here, APAs play crucial role. They can define the mechanism for Arm's Length Price
> - They also fix the taxes to be shared between the countries on the profit made by the parent company in future.

What are APAs?

An APA is a contract, usually for multiple years, between a taxpayer and at least one tax authority specifying the pricing method that the taxpayer will apply to its related-company transactions. **They can be classified as:**

- Unilateral APA- between taxpayer and tax authority of country where the taxpayer is located.
- Bilateral APA- between taxpayer, tax authority of host country and the foreign tax authority.
- Multilateral APA-between taxpayers, tax authority of host country and more than one foreign tax authorities.

Related concepts
- The price at which divisions of a company transact with each other is called **transfer price.**
- A transaction in which buyers and sellers of any products act independently and have no relationship with each other is known as **Arm's length** transaction.

Advantages of APAs

- Obtains certainty for complex, high risk transactions to be done in future.
- Avoids double taxation as there is agreement between the tax authorities of countries.
- Avoids litigation costs and saves time for tax payers and tax authorities.
- Reduces the burden of record keeping.
- It promotes the better business environment.

3.9. CIVIL AVIATION REFORMS

Why in News?

- There are some proposals in recent times to reform civil aviation sector
  - ✓ Amending the Airports Authorities of India Act (AAI Act) to monetize the land with AAI.
  - ✓ Transformation of PSUs like Air India, Pawan Hans etc.

Airports Authority of India
- It is a statutory body constituted in 1995.
- It is entrusted with the responsibility of creating, upgrading, maintaining and managing civil aviation infrastructure both on the ground and air space in the country.

Issue 1: Amending AAI Act

- **Need of the proposal**
  - ✓ Airports Authority of India Act is **very restrictive on monetizing the lands** under the possession of the Airports Authority of India.
  - ✓ For eg. The Act mentions land for activities like hotels, restaurants, restrooms and do not have a comprehensive list.
- **Significance of the proposal**
  - ✓ Monetizing the land better would allow government to **build more airports** in line with Civil Aviation Policy.
  - ✓ Building airport infrastructure would become self-funded and self-sufficient.

Issue 2: Transformation of civil aviation PSUs

- **Background**
  - o **Air India** has the largest fleet in India including new planes. It also has a 17% market share and controls 14.6% of the domestic passenger market.
  - o Air India has a debt of Rs 46,570 crores. A bailout package for 10 years was approved in 2012 and already Rs 24,000 crores has gone into it.

CAG report on Air India (2011)
- **Failed acquisition plans** - Report says that the basic reasons that Air India is financially crippled is that –
  - o **Money was wasted to purchase and lease aircrafts.**
  - o Acquisition took 8 years (1996-2004).
  - o In early 2004, planes were inducted despite being no demand for that.
  - o No cost benchmarks were sent before buying planes.
  - o Acquisition was funded by raising high interest loans and debts.
- **Merger of Air India and Indian Airlines –** It would have benefitted only before massive fleet expansion by both.
- **Subsidized and free travel for VIPs hurt airline.**
- **Liberalized policy on international routes** like non-stop flights to US were loss making.

- o In 2016, government completed the strategic sale of Pawan Hans Ltd also.
- **Need of the proposal**
  - o A recent report ranked Air India as **globally the third-worst performing airline** in 2016
  - o Although Air India's losses have decreased compared to previous year and it also had an operational profit in 2014-15, **Air India needs funding to sustain it**.
- **Significance of the proposal**
  - o Government has limited resources to finance the airline. Also money used for its restructuring can be used in other welfare schemes.
  - o It would help the government shift focus from non-core activities to core activities of governance.

Challenges Involved

- The private sector has the objective of maximizing profit. Privatizing the national airlines may be an obstacle to the objectives of the recently proposed civil aviation policy. For eg. Capping of air fares.
- There is also an apprehension towards staff retrenchment after the proposed privatization.

Way Forward

- In recent times **airport privatization has taken the form of awarding management contracts rather than a change in ownership**. For eg. Jaipur and Ahmedabad airports. This is a welcome step.
- FDI in civil aviation sector has also been relaxed to 100% with government approval for above 49%. This is also a gradual step in opening the civil aviation sector of India.
- Civil Aviation PSUs should be reformed gradually starting from alternatives like outsourcing smaller operations to private sector.

3.10. CENTRE TO DOUBLE SOLAR PARK CAPACITY

Why in News?

- Cabinet has approved the **doubling of solar park capacity to 40,000 MW**.
- State will identify the solar park developer and also the land on which it would be built.

Need of the move

- The move is aimed at India's greenhouse emissions commitment at the global stage as part of INDCs.
- As of now, 34 solar parks have been commissioned equivalent to 20000 MW. Now this move would add other such parks.

> **Intended Nationally Determined Contributions**
> - They are the public commitments on post-2020 climate actions that were made by countries at the COP21 meet of UNFCCC in 2015.
> - The aim of the commitments is to hold the increase in global average temperature to well below 2 degree Celsius.

> **Solar Energy Corporation of India (SECI)**
> - It is a **not-for-profit company** under Ministry of New and Renewable Energy.
> - It is currently the **implementing agency of many solar programs of government of India**.

Eligibility of the scheme

- All the States and UTs are eligible for this scheme.
- **Solar Energy Corporation India (SECI)** will administer the scheme under Ministry of New and Renewable Energy.

Significance of the move

- This move would help set up at least 50 solar parks of about 500MW wach by 2019-2020. This would help **promote transition towards a better energy security**.
- It would give India an ecologically sustainable growth by reduction in carbon emissions and carbon footprint.
- It would **generate large direct & indirect employment opportunities** in solar and allied industries like glass, metals, heavy industrial equipment etc.
- The solar parks will also provide **productive use of abundant uncultivable lands** which in turn facilitate the development of the surrounding areas.
- Centre would also give a grant of up to 25 lakh apart from a central funding assistance of 20 lakh per megawatt or 30% of the project cost, whichever is lower. This would **improve credit flow for green projects**.

3.11. ENERGY SAVING CERTIFICATES

Why in News?

- Under the Draft Energy Savings Certificates regulations, Central Electricity Regulatory Commission (CERC) has approved the trading of ESCs on power exchanges.

Proposal

- The Power System Operation Corporation Limited has to perform the role of registry of the ESCs.
- The Bureau of Energy Efficiency has been assigned the role of administrator for exchange of ESCs.
- CERC will supervise and approve the procedures as framed by the Administrator from time to time. It would also exercise market oversight over the power markets.

Significance of the move

- This would **create a transparent and efficient platform** to exchange ESCerts.
- It would enable power exchanges like Indian Energy exchange to become a one-stop shop to buy and sell Electricity, Renewable Energy Certificates and ESCerts.

Way Forward

- Trading of the ESCs through power exchanges is a welcome step. The government should also setup a **floor price to the ESCerts** so that in case of oversupply of them, their prices do not fall below market prices.

Perform Achieve and Trade scheme

- It is a scheme under the **National Mission on Enhanced Energy Efficiency**.
- It was introduced as an instrument to reducing specific energy consumption in energy-intensive industries.
- It is aimed at major industries like thermal power, fertilizer, cement etc.
- It is a market-based mechanism that allows the trading of ESCerts (energy saving Certificate)
  - ESCerts were introduced in 2013 by the Bureau of Energy Efficiency (BEE) for industries which achieved energy efficiency standards.
  - They are issued by BEE or Ministry of Power.
  - One certificate is equal to the energy consumed in terms of **one metric tonne of oil equivalent (mtoe).**

Renewable Energy Certificates:

- It addresses the mismatch between availability of Renewable Energy sources and mandatory Renewable Purchase Obligations.
- Its value is equivalent to 1 MWh of electricity injected from renewable energy sources.

3.12. AGRICULTURAL MARKETING

Why in News?

- Recent Budget has proposed **to integrate spot and derivatives market for farm produce** using electronic National Agriculture Market platform.

Significance

- Integration of spot and derivatives market will:
  - **End uncertainty on delisting of commodities**.
  - It would **help farmers to get best prices for their produce**.

Related information

- **Spot Market -** It is an electronic trading platform which facilitate-
  - Purchase and sale of specified commodities like agricultural commodities, metals and bullion
  - It provides **spot delivery contracts** which are immediate contracts or those in 11 days.
- **Derivatives Market** - Derivatives are financial contracts that derive their value from an underlying asset.
  - These could be stocks, indices, commodities, currencies, exchange rates, or the rate of interest.
  - These help make profits by betting on the future value of the underlying asset.

3.13. TAX TERRORISM

Why in News?

- Finance Bill 2017 proposed that **tax official may not disclose the 'reason to believe' to conduct a searches and surveys**. This step is being considered to be a step towards tax terrorism.
- It plans to amend Section 132 (1) of the Income Tax Act for the same.
- The Budget 2017-2018 also proposes to give **tax officials power of provisional attachment for 6 months** with prior approval of a senior official.

Reasons of Tax Terrorism

- The root cause of tax terrorism is the **setting of unrealistic revenue collection targets** in the Union Budgets.
- **Complex and multiple tax laws**. Eg. High number of exemptions
- Tax avoidance by **Base Erosion and Profit Shifting practices** leads to loss of revenue to government and it taking drastic steps leading to tax terrorism.

Need for the proposals

- The government says that this step will arrest a **decline in tax-GDP ratio** from 12 per cent in 2008 and to 9 per cent in recent times occurring due to a fall in collection of excise, customs duties and corporate tax.
- Presently assessee's property is attached only after its request for stay on property's attachment is rejected by the Income Tax Commissioner.
- Proposed provisional attachment powers can **help curb the problem where the tax evaders sell their property** during the investigation to escape law.

3.14. PROPOSED PAYMENT REGULATORY BOARD

Why in News?

- RBI has differed on opinions given by **Ratan Watal committee on payment regime** in India and especially on the recommendation of a new Payment Regulatory Board.

Background

- Watal committee recommended constituting a **Payment Regulatory Board** (**independent of RBI**) **to promote competition and innovation** in the payment ecosystem in India.
- Presently **Board for Regulation and Supervision of Payment and Settlement Systems overlooks the payment ecosystem in India.**
- Recent Budget has recommended that Payment Regulatory Board would be setup in the RBI with 6 members:
  o 3 from RBI and 3 external members nominated from the centre.
  o RBI Governor would remain the chairman.
  o Deputy RBI Governor in charge of Payments and settlements would also be a member.

Need of the proposal

- Present Payment and Settlement Systems Act 2007 (PSS Act) restricts the reach of digital payments, thus promoting cash transactions.
  o E.g. it is **silent on data protection issues**.
  o Committee also says that the **present law does not focus on promoting competition in the payments sector**.
- Payment regime is a **more technology-business driven activity** that should be viewed independently from the banking sector.

> **Board for Regulation and Supervision of Payment and Settlement Systems**
> - It is a sub-committee of the Central Board of the RBI
> - It is the highest **policy making body on payment systems**.
> - It is empowered **to authorize, prescribe policies and set standards to regulate and supervise all the payment and settlement systems** in the country.
> - It secretariat is at the Department of Payment and Settlement Systems of RBI.
> - It is a **statutory body set as per Payment and Settlements systems Act 2007**.

Significance of the proposal

- It is envisaged that an independent body focused on the goal to facilitate digital payments would increase the **digital payments from the current 5% to about 20% in 3 years**.

Challenges Involved

- It may be a **threat to RBI's autonomy** after already constituting a Monetary Policy Committee (MPC) to set inflation targets.
- **Banking is not much different from payments systems** because non cash payments require the existence of financial intermediaries like banks. Therefore separating both of them may create problems in coordination.
- **Board for Regulation and Supervision of Payment and Settlement Systems is already quite independent** as it has membership of experts too outside the RBI.
- A separate competition law exists presently and enshrining it within PSS Act can lead to **overlapping jurisdictions**.
- **Defining what would constitute "an innovation"** would be difficult for the Payment Regulatory Board.

Way Forward

- A separate regulator for digital payments is the need of the hour and Payment Regulatory Board is a welcome step.

(For Ratan Watal Committee recommendations, refer to the Vision IAS December 2016 Current Affairs module)

3.15. CREDIT ENHANCEMENT GUARANTEE FUND

Why in News?

- Government has chosen India Infrastructure Finance Co. Ltd (IIFCL) as the lead promoter of a **credit enhancement guarantee fund**, announced in the 2016-17 Union budget

About Credit Enhancement Guarantee Fund

- It provides an additional **source of guarantee that the borrower will not default on their loan**.
- It also **helps borrowers raise loans at reduced interest rates**.
- It has a seed capital of Rs. 1500 crores and will be able to provide **guarantees for up to Rs 40000 crores worth of infrastructure projects**.

Need of the proposal

- India is in the **need of about $1 trillion investment** in the next 10 years for infrastructure, to have a sustainable development and growth.

Significance of the proposal

- It will help **enhance the credit rating** of bonds issued by infrastructure firms.
- It will also help **to attract long-term investments** especially from global insurance, pension and sovereign wealth funds.
- It would also help **deepen the bond market** in India.
- Credit enhancement measures can help **reduce interest rate costs** by almost two per cent.

Challenges Involved

- It is a **long term initiative** as large infrastructure projects have long gestation projects and give returns slowly.

Way Forward

- With India being the fastest growing economy in the world, it would need such funding initiatives to sustain this growth. Credit guarantee fund is a welcome step. It would also depend on the diplomatic efforts of India to attract sovereign wealth and pension funds of different countries.

3.16. TRANSIT ORIENTED DEVELOPMENT POLICY

Why in News?

- To address the challenges of urbanization, the Ministry of Urban Development has come out with a Transit Oriented Development (TOD) Policy.

> **Transit Oriented Development**
>
> It enables people to live within walking or cycling distance from transit corridors like the Metros, Monorail and Bus Rapid Transit (BRT) corridors.

Background

- Transit Oriented Development projects are already being taken up in Ahmedabad, Delhi (Kakardooma), Naya Raipur, Nagpur and Navi Mumbai.
- Current progress of Transit Oriented Development is seen in the fact that –
  - o Over **300 km of Metro lines** are operational in seven cities and another 600 km of metro line projects are under construction.
  - o **Bus Rapid Transport Systems in 12 cities** are under different stages of progress.
  - o **Mass Rail Transit System** of 380 km length is being taken up in Delhi.

About the Policy

- The **city densification will be promoted along mass transit corridors** through-
  - o **Vertical building construction** by enhancing Floor Area Ratio.
  - o Promotion of **Non-motorized Transport** for walking and cycling.
  - o **Seamless integration of different transport modes** with first and last mile connectivity through feeder services.

> **Floor Area Ratio**
>
> It is the ratio of a building's total floor area as compared to the size of the land upon which it is built.

- It **seeks to enhance understanding of States and UTs on TOD** as a solution to rising urban challenges like-
  - o Haphazard urban growth and sprawl
  - o Urban mobility problems related to congestion of roads and rapidly rising private vehicles on roads
  - o Uncontrolled pollution
  - o Housing choices
- It is proposed to be financed by **channelizing a part of increases in property values** after investments in transit corridors through **Betterment Levies and Value Capture Financing.**
- It also aims at **inclusive development** by having **mixed neighbourhood development** with a range of housing choices including affordable housing and ensuring spaces for street vendors.

> **Other policies to promote Transit Oriented Development**
>
> - TOD is also being incentivized under **two more initiatives viz., Metro Policy and Green Urban Mobility Scheme**.
> - Under the **new Metro Policy**, TOD has been made mandatory while under **Green Urban Mobility Scheme**, TOD is recommended as an essential reform with priority in central assistance.

- States and UTs will be required to
  - o Incorporate TOD in the Master Plans and Development Plans.
  - o **Identifying 'Influence Zones' from transit corridors** for tapping revenue streams.

Need of the proposal

- There is a need to **integrate land use planning with transportation and infrastructure development**. This is because of the need of **compact development as against the present pattern of unplanned and haphazard urban growth**.

Significance of the proposal

- It would **promote decongestion of roads** of the country by improving the ridership of the mass transit system.
- Increased private sector participation will result in **economic development and employment generation**.
- It may also open **more avenues of better land use** from the land that has been achieved by planning. Eg. Affordable Housing

Challenges Involved

- Transit Oriented development may encounter **funding constraints**.
- It would also require **changes in behaviours of people** to indulging in more cycling and walking.
- It may also involve issues in terms of land acquisition and rights of way.
- The older infrastructure may need to be destroyed and be rebuilt again in a planned manner. This would **require people's consent and political will** on the part of the government.

Way Forward

- National Urban transport Policy focuses on shift from moving vehicles to moving people. The new Transit Oriented Development policy will help to fulfill this aim. It would also help in decongeexpand this into other cities as well.

3.17. APMC: DE-NOTIFICATION OF FEW ITEMS

Why in news

The Finance Minister conveyed in his budget speech that the States would be urged to denotify perishables from APMC.

Positive Impact of the decision

- Gives an opportunity to farmers to sell their produce directly and get **better prices**
- **Less food inflation** - as cascading effect of multiple charges by APMC (mandi tax, multiple fees etc.) and commissions of agents will be reduced
- **Reduce post-harvest loss**
- It will promote **contract farming** in the fruits and vegetable sector which will enable companies to pass on the innovative technologies, good agricultural practises and supply agricultural material to the farmers.

Challenges

- It will lead to promotion of **corporate agriculture** which may become another platform of harassment of farmers
- **Inefficiencies of market**- According to the Shanta Kumar Committee, only 6% farmers get the benefit of MSP and remaining 94% are dependent on the markets. Thus demand by farmers for a hike in MSP along with 50% profit (as recommended by National Commission for Farmers) points towards the inefficiencies in market

> **Present situation**
>
> - Presently, markets in agricultural products are regulated under the Agricultural Produce Market Committee (APMC) Act enacted by respective State Government.
> - This Act notifies agricultural commodities produced in the region such as cereal, pulses, edible oilseed and even chicken, goat etc.
> - The first sale in these commodities can be conducted only under the aegis of APMC through the commission agents licensed by the APMC.
> - The central government had first circulated the model APMC Act in 2003 for the states to adopt it. Yet, close to 50% of the states have not made necessary changes to their respective state agricultural marketing acts.

Way forward

- After persuading the States to drop fruits and vegetables from APMC schedule of regulated commodities, other commodities should also be de-notified
- State governments should also be specifically persuaded to provide policy support for alternative or special markets in private sector
- It should be ensured that farmers get best prices possible for their produce in the market

3.18. REVENUE INSURANCE SCHEME FOR PLANTATION CROPS (RISPC)

Why in news?

- Recently Commerce ministry has approved the **Revenue Insurance Scheme** for **plantation crops.**

About

- Aim of the scheme is to protect farmers against risks like yield loss, pests attacks and income loss caused by fall in international/ domestic prices.

- It will be implemented on **pilot basis for 2 years** in West Bengal, Kerala, Karnataka, Andhra Pradesh, Assam, Tamil Nadu and Sikkim covering various plantation crops **including Tobacco**.
- Depending on the performance, this scheme will be considered for extension to other districts.
- This scheme can be considered as the improved version of **Price stabilization fund scheme** which was discontinued in **2013**.

Price stabilization fund scheme

- This scheme was launched in **2003 (discontinued in 2013)** under Commerce Ministry covering all plantation crops.
- Its objective was to provide the hedge to farmers against fall in prices of commodities.

About Plantation Crops
- They are those crops which are cultivated on an extensive scale in a large contiguous area, owned and managed by an Individual or a company.
- Major plantation crops include tea, coffee, rubber, coconut, oil palm, cashew, arecanut, etc.
- These plantation crops are **high value commercial crops** of greater economic importance and play a significant role in country's economy because they **have high export potential**, **create employment opportunity** and also help in **poverty alleviation** particularly in rural areas.

3.19. TAMRA: PORTAL OF MINISTRY OF MINES

Why in news?

- Ministry of Mines has developed and launched **"TAMRA"**, a web portal and mobile application, to streamline the process of various statutory clearances required for mining operations.
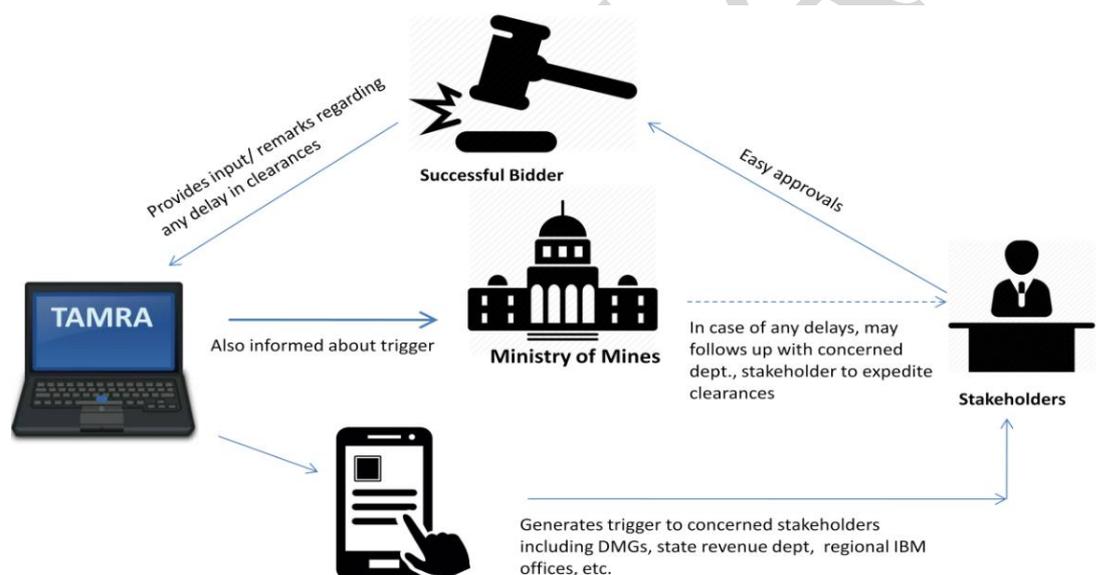
- **TAMRA** stands for **Transparency, Auction Monitoring and Resource Augmentation.**

Features

- It will **display** block-wise, state-wise and mineral-wise information of the blocks to be auctioned.
- It will also host information regarding current status of each of the clearances.

Significance

- Mining sector in India faces a twin challenges of **delay in getting a clearances** and **lack of transparency** in allotment of mine leases. This portal will solve both the problems by creating a hassle free interactive ecosystem thereby facilitating Ease in Doing Business.

3.20. SEBI TO TIGHTEN ALGO TRADING RULES

Why in news?

- The Securities and Exchange Board of India (SEBI) plans to further tighten the regulations for algorithmic trading.

What is Algorithmic Trading?

- An algorithm is a step-by-step procedure to accomplish a task.

- Algorithmic trading is the process of using pre-set computer programmes to execute trades at a speed and frequency that is impossible for a human trader.
- Algo-trading provides the following benefits:
  - ✓ Trades executed at the best possible prices
  - ✓ Reduced transaction costs
  - ✓ Simultaneous automated checks on multiple market conditions
  - ✓ Reduced risk of manual errors in placing the trades
  - ✓ Reduced possibility of mistakes by human traders based on emotional and psychological factors

Rationale Behind this move

- To minimize instances of misuse of such systems that can be used to execute complex trading strategies at a very high speed.
- To create a level-playing field between algo-trading and non-algo-trading users.

Bid to Ensure Fair Play

OVER 80% of the orders placed on most of the exchange-traded products are generated by algorithms

SUCH ORDERS contribute to about 40% of the trades on exchanges

SEBI PLANS TO introduce various measures including minimum resting time for orders, speed bumps to delay order matching, randomisation of orders, frequent batch auctions, maximum order-to-trade ratio requirement, separate queues for co-location and non-co-location orders and review of tick-by-tick data

If Sebi decides to implement some of these measures, it would be the first to rein in algorithmic trading

3.21. 100% FDI IN WHITE LABELLED ATM

Government has allowed Foreign Investment upto 100% in White Label ATM (WLA) operations, subject to the following conditions:

- Any non-bank entity intending to set up WLA should have minimum net worth of Rs. 100 crore as per latest financial years audited balance sheet, which is to be maintained at all times.
- In case the entity is also engaged in any other 18 Non-Banking Finance Company (NBFC) activities, then the foreign investment in the company setting up WLA, shall also comply with the minimum capitalization norms for foreign investment in NBFC activities.

Types of ATM:
- **Bank ATM**- owned and operated by the respective bank.
- **Brown Label ATM**- banks outsource the ATM operations to a third party. They have logo of the bank.
- **White Label ATM**- owned by non-bank entities. Eg- Muthoot Finance ATM, TATA Indicash, etc. There is no bank logo.

4. SECURITY

4.1. INDIA LAUNCHES CYBER SWACHCHTA KENDRA

Why in news

Minister of Electronics and Information Technology launched the Cyber Swachchta Kendra–Botnet Cleaning and Malware Analysis Centre for analysis of malware and botnets that affect networks and systems.

About Cyber Swachchta Kendra

- It is part of Digital India initiative under the Ministry of Electronics and Information Technology (MeitY).
- The systems will be scanned by the Computer Emergency Response Team (CERT-in) for free of all those users who register to the CSK website.
- It will then notify, enable cleaning and secure systems of end-users to prevent further infections
- This centre will work in coordination with the internet service providers (ISPs) and Industry.
- This Kendra will also enhance awareness among citizens regarding botnet and malware infection along with measures to be taken to secure their devices.

Need

- Cybercrime cases in the country registered under the IT Act surged nearly 300 per cent between 2011 and 2014.
- There are half a billion people online and over 250 million smartphones and one billion mobile phones in the country.
- India is promoting Digital India, Go cashless campaign.
- This will also promote start-ups in cyber-attack security

Announcements at the launch of Cyber Swachhta Kendra

- The National Cyber Coordination Centre to be operational by June 2017
- Sectoral CERTs to be created, that would operate under CERT-In. CERTs are to be set up in the state level as well
- 10 more STQC (Standardisation Testing and Quality Certification) Testing Facilities to be set up. Testing fee for any start-up that comes up with a digital technology in the quest of cyber security, to be reduced by 50%.
- Empower designated Forensic Labs to work as the certified authority to establish cyber-crime.

Reasons for increasing cyber attacks

- **Increased Penetration:** Use of internet is increasing rapidly whereas awareness about the security features is inadequate.
- **Moreover,** India uses cheap smartphone which have low security features.
- **Borderless:** The cyber world has no barriers of geography.
- There is **no national security architecture** today that can assess the nature of cyber threats and respond to them effectively.
- There is a lack of IT skilled manpower and also the local police is unaware of various provisions of IT Act, 2000 and also of IPC related to cybercrimes.
- **Lack of coordination** among agencies and departments involved in cyber space like CERT-In, NTRO, etc.

What could be done?

- Measures suggested by National Cyber Security 2013 should be implemented.
- Immediate focus should be on increasing the trained workforce to manage the cyber security issues.

Botnet

A botnet is a network of computers infected with malware without the user's knowledge and controlled by cybercriminals. They're typically used to send spam emails, transmit viruses and engage in other acts of cybercrime.

Malware

"Malware" is short for "malicious software" - computer programs designed to infiltrate and damage computers without the users consent.

Tools provided for free under CSK are:

- **M Kavach**: Special anti-virus tool for smartphones and tablets.
- **USB Pratirodh**: It is a USB protector to help clean various external storage devices like USB(s), memory cards, external hard disks, etc.
- **AppSamvid**: This is a whitelisting tool for the desktop.
- **Browser JSGuard**: It helps to block malicious JavaScript and HTML files while browsing the web.
- **Free Bot Removal Tool**: It's a QuickHeal partner tool.

- R&D should be done in cyber security in order to innovate technologies.
- India should also build its own offensive team like China has built.
- Concept of **air gapping** which isolate the critical infrastructures from the internet should be used
- Institutional measures to be taken such as setting up Indian Cyber Crime Coordination Centre, National Cyber Security Agency that can coordinate with various agencies at national level.
- There should be coordination among all the stake holders vis-a-vis corporates, government, NGOs, etc. Recent **Ground Zero Summit** held to discuss the challenges in cyber security was a good move.
- India should persuade at global forum for depleting the use of cyber weapons similar to that of NSG.
- India can also follow **Tallinn Manual** which is an academic work related to laws that apply to cyber-crimes which developed nations such as USA are following.

Main 2013
Q. Cyber warfare is considered by some defense analysts to be a larger threat than even Al Qaeda or terrorism. What do you understand by Cyber warfare? Outline the cyber threats which India is vulnerable to and bring out the state of the country's preparedness to deal with the same?

4.2. TROPEX 2017

- A month-long naval exercise put to test the combat readiness of the Navy, the IAF and the Army with over 45 ships and 70 aircraft taking part.
- Theatre Readiness Operational Exercise (Tropex) was conducted along the Western seaboard.
- The previous edition of the exercise was conducted in January 2015.
- Tropex, in complete coordination with the Army and the Indian Air Force, took place in phases to test the various facets of war-fighting and joint combat capabilities of the armed forces.
- The 2017 edition of TROPEX included the conduct of large scale 'Out of Area Contingency' in island territory.

4.3. INDIAN COAST GUARD

Why in news?

- Indian Coast Guard recently celebrated its 41st Raising Day

Background

- Nag committee of 1970 recommended the creation of separate marine force (other than Indian Navy) to deal with smuggling activities.
- In 1972, UNCLOS awarded Exclusive Economic Zones to coastal states and India enacted Maritime Zones of India Act 1976 to claim it.
- After discovery of commercial oil assets in 1974 in Arabian Sea, India appointed **Rustamji committee** to suggest measures to combat piracy and smuggling in coastal areas. Committee **recommended the creation of 'Coast Guard'** for superintendence and policing of our seas.
- Finally Coast guard came into existence under the Indian Coast Guard Act 1978.

About Indian Coast Guard

- It is headquartered in Delhi.
- It is headed by Director General Indian Coast Guard and operates under Ministry of Defence.
- For effective command and control, maritime zones of Coast guards are divided into five regions - North-West, West, East, North-East and Andaman & Nicobar.
- Functions of Indian Coast guard are -
  o Safety and protection of Artificial islands and offshore terminals
  o Protection of Fishermen by giving assistance to fishermen in distress at sea.
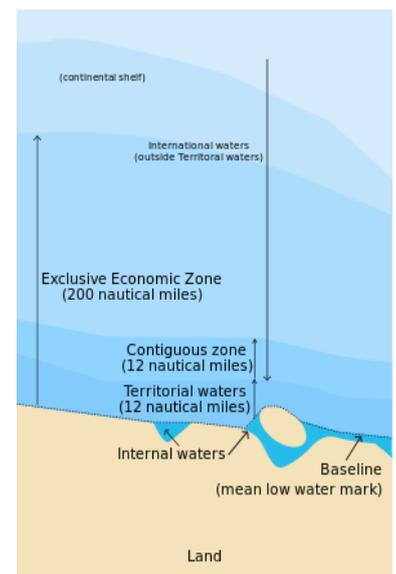
Operation Oliva

- It is a **mission launched by Indian Coast Guard** and Odisha state forest department along the sea waters of **Gahirmatha Marine Sanctuary.**
- It is to **ensure safe mid-sea breeding of Olive Ridley turtles and to intercept intruding fishing vessels** involved in illegal fishing.

- o Prevention and Protection of Marine environment like marine pollution.
- o Assistance to custom officials in prevention of smuggling operations.
- o Coast guard ships are also involved in collection of scientific data.
- o Enforce maritime laws and related international conventions along with the Indian Navy.
- Its jurisdiction of enforcement extends from territorial water to the Exclusive Economic Zone (see diagram).

4.4. OUTER SPACE TREATY

Why in News?

- Outer Space Treaty has just completed 50 years of its establishment.

Background

- Launch of Russian space satellite Sputnik in 1957 and the resultant **Cold War conditions led to a space race**.
- For a stable framework to use space, **UN General Assembly formed a Committee on the Peaceful Uses of Outer Space** (COPUOS) after the launch of Sputnik. This led to the establishment of the treaty in 1967.

About the Treaty

- The treaty draws on several previous United Nations General Assembly resolutions -
  - ✓ **Resolution 1962** regarding the **"Declaration of Legal Principles Governing the State Activities in the Exploration and Use of Outer Space"**.
  - ✓ **Resolution 1884** calling **States to refrain from placing any nuclear weapons** or other weapons of mass destruction in space.
- Some of the **other provisions of the treaty** are –
  - ✓ The exploration and use of outer space is open to all and shall be carried out for the **benefit of all countries and mankind**.
  - ✓ Outer space is **not subject to national claims** on sovereignty, occupation, or other means.
  - ✓ Moon and other celestial bodies shall be used **exclusively for peaceful purposes**.
  - ✓ **States shall be liable** for national space activities and damages **whether carried out by governmental or non-governmental entities.**
- India is also a member of Outer Space Treaty.

> **UN Office for Outer Space Affairs (UNOOSA) (1958)**
> - It promotes international cooperation in peaceful uses of Outer Space.
> - It serves as the secretariat for UNGA's UN committee on Peaceful Uses of Outer Space (COPUOS).
> - It also establishes UN register for Objects launched into Outer space.
> - It manages the UN Platform for Space based Information for Disaster Management and Emergency Response (UN -SPIDER).
> - Issues relating to militarization of space are handled by Conference on

Need of the treaty

- **Space is a Global common** – a resource that lies outside the political reach of any one nation State. **Fair and Equitable access to Space** is therefore necessary for all.
- **Geopolitically, space is becoming a tool of state militarization and sovereignty**. It has to be kept a peaceful and progressive domain by effective standards.
- With rise of commercialization of space like space travel, asteroid mining, experimental sciences etc. a treaty for better regulation can be useful.

Significance of the Treaty

- It is the only treaty to govern the space sector with worldwide representation.
- It has been successful in preventing any major military conflicts in space sector till now.

Challenges faced by the Treaty

- Multiple issues have cropped up that challenge the space sector today such as –
  - ✓ Privatization of space exploration
  - ✓ Dangers of excessive satellite debris
  - ✓ Utilization of satellite technology for unethical breaches of privacy
  - ✓ Emergence of Quantum Physics, Quantum Mechanics and Quantum Computing

Limitations of the treaty

- Vague definition of terms like Weapons of mass destruction, Outer Space etc. makes it liable for misuse.
- Although it **bans the deployment of military technology, it allows it for research purposes only** which is sometimes exploited as a loophole.
- It is a 20th century treaty in a 21st century digital age which has replaced the traditional weapons by cyber-digital weapons. The treaty is still focused in previous lexicon.
- **Lack of a 'Space Police' makes it toothless** to enforce the provisions of the Treaty against any State excess.

> **Four other major treaties dealing with Outer Space**
> 1. **Rescue Agreement:** States to take steps for rescue and assist of astronauts in distress.
> 2. **Liability Convention:** The launching State is liable to pay compensation for damage caused by its space objects on the Earth's surface, airspace and in space.
> 3. **Registration Convention:** An openly accessible register of all launches.
> 4. **Moon Treaty** - An international regime should be established to govern the exploitation of Moon's resources when it becomes feasible.

> **Space Law proposed by India**
> - **India does not have a space law** to protect sovereign, public or commercial interests.
> - Presently space activities in India are guided by –
>   o Some international space agreements like Outer Space Treaty
>   o Constitution and some national laws
>   o Satellite Communications (SatCom) Policy (2000), Revised Remote sensing policy (2011).
> - **Provisions of the proposed law –**
>   o It would include a regulator
>   o Registration and licences for private operators
>   o Insurance and compensation for harm caused by space objects
>   o Miscellaneous issues like Rescue of space tourists, environmental damage and handling of intellectual property issues.
> - **Benefits of the law –** It will help the government to approach commercial use of space, international treaties and state regulatory mechanisms.

Way Forward

- It is time to revisit the treaty to deal with the unique challenges posed by the interconnected postmodern globalized world and maximize the benefits out of the space domain for all. Also, Indian Parliament should pass a dedicated space law on lines of Outer Space Treaty to protect its interests.

4.5. FENCING THE EASTERN BORDER ALONG MYANMAR

Why in News?

- Recent **construction of border fence by Myanmar** has led to resentment among the people along the Indo-Myanmar border.

Background

- Myanmar will construct **the fence in its Naga self-administered zone**, 10 metres from the demarcation border line **for effective border management**.

> **Surgical Strike**
> It is a military attack intended to inflict damage on a **specific target, with little or no collateral damage to surrounding areas**.

- The Northeast insurgents like NSCN-K move seamlessly between the two countries due to porous borders.
- They also find safe havens across the border after carrying out attacks in India.
- In 2015, India carried out surgical strikes against NSCN-K by crossing the border in response to the killing of a troop contingent by the insurgents.
- Supreme Court has also asked the government to fence the eastern border like the western one.

Issues involved

- **Sovereignty v/s National Security –** With recent surgical strike by India, question arises whether National Security of one country can be given precedence over the Sovereignty of the other country. Fencing may be a move to protect sovereignty.
- **National security v/s right to livelihood and trade** - 1,624 km long India-Myanmar border gives tribals a travel access up to 16 km on either side without visa (known as Free Movement Regime). Fencing may disturb these trade activities but may prevent seamless movement of insurgents.

Challenges to the fencing

- Indian intelligence agencies have cautioned that fencing by Myanmar may lead to armed conflicts by locals.

What needs to be done?

- Alternative strategies other than unconditional fencing can be taken up like -
    - ✓ **Selective fencing** and better use of technology to check the militant's movements.
    - ✓ **Regulated flow of cross-border movement**.
- It is essential to have **tripartite talks between both the governments and the locals** before the finalization and implementation of such plans.

Way Forward

- Regulated borders with greater emphasis on developing people-to-people contacts and cross-border trade initiatives are likely to yield greater security benefits as against a closed border that may lead to a disturbed security environment amidst popular discontent.

4.6. NEED OF A CHIEF OF DEFENCE STAFF

Why in News?

- There was a proposal to setup a single point military advisor in one year in the recently held Combined Commanders' conference in Dehradun, chaired by the Prime Minister.

Background

- Both Kargil Review committee and a Group of Ministers in 2000, recommended setting up a Chief of Defence Staff (CDS) to improve synergy in the three armed services.
- In 2011, Naresh Chandra recommended the same for reforms in higher defence management.

Issue involved

- Under the present structure, **Ministry of Defence (MoD) receives military advice in a fragmented way** as each of the service chiefs, advices MOD independent of one another.

Characteristics of Chief of Defence Staff

- **Group of Ministers setup in 2000** recommended the following related to CDS –
    - ✓ It will be a **five star military officer** with the function of being a **single point military advisor** to the government.
    - ✓ It would chair the meetings of Chiefs of Staff Committee (CoSC)
- **Naresh Chandra committee (2011)** recommended a four-star CDS that would act as a permanent chairman of the CoSC.
- It was recommended that CDS will also be in charge of the country's tri-Service Commands –
    - ✓ Strategic Forces Command (SFC) - dealing with India's nuclear forces.
    - ✓ Andaman and Nicobar Command (ANC)

> **Chief of Staff Committee**
> - It consists of Army, Navy and Air Force chiefs.
> - It is headed by the senior-most of the three chiefs in a rotation till the senior-most retires.
> - It is a platform where the three service chiefs discuss important military issues.

Significance

- It will improve **jointness in military command** by **integration of the present tri-service approach** in projects and resource sharing.
- It would also **improve capacity of the armed forces on defence acquisition** by removing time and cost overruns with the bureaucracy.

Challenges

- A five star ranking general **would bypass the civilian bureaucracy** in defence decision-making.
- It may become a ceremonial post without any clear cut roles and responsibilities.

> **Other reforms needed to promote synergy in armed forces**
> - Need to **set up theatre commands to integrate air, land and sea assets** under one operational entity to optimize resource utilization.
> - India should have **specialized commands for special operations like space and cyber domains**.
> - Need to have synergy among research institutions like DRDO with the armed forces and Ministry of Defence.

Way Forward

- Government of India should act steadfastly to have a single point military adviser that is free of bureaucratic hassles and helps provide synergy to the armed forces.

4.7. UAVs TO POWER ARMED FORCES

Why in News?

- Recently there was a wide display of **Unmanned Aerial Vehicles (UAVs) at the Aero India 2017** by domestic and overseas companies to tap India's $3 billion domestic market.

Background

- India is investing heavily in developing unmanned vehicles at ground, sea and air.
- DRDO, National Aeronautics Ltd. And Hindustan Aeronautics Ltd. is working on various drone projects.
- DRDO is also planning to have a policy document for drones by 2020.

Upcoming projects

- The defence PSUs are now focusing on developing **mini-UAVs** which can be used for surveillance and would also have better stealth in combat facilities.
- The Combat Vehicles Research and Development Establishment (CVRDE), a DRDO laboratory, is developing various **unmanned ground vehicles (UGV) under its Muntra project.**
  - **Muntra-N** is designed for nuclear, biological and chemical (NBC) reconnaissance
  - **Muntra-M** is intended for mine detection missions.
- The Naval Science and Technological Laboratory (NSTL), Visakhapatnam, is developing various Autonomous Underwater Vehicles for naval warfare.

> **Aero India 2017**
> - It was held at Air Force Station, Yelahanka, Karnataka.
> - It would bolster business opportunities in International aviation sector.
> - It was held by Ministry of Defence along with Ministry of Civil Aviation

> **Unmanned Aerial Vehicles**
> - It is an **aircraft with no pilot on board**.
> - UAVs can be remote controlled aircraft (e.g. flown by a pilot at a ground control station) or can fly autonomously based on pre-programmed flight plans or more complex dynamic automation systems.
> - Unmanned vehicles can also exist on land and in sea.

> **Draft UAV regulations**
> - All UAVs operated in India will require a Unique Identification Number (UIN) issued from DGCA.
> - All civil UAVs have to obtain operator permit from DGCA.
> - UIN will be granted to an Indian citizen or a company whose chairperson and two-thirds of its directors are Indian citizens.
> - Such UAVs shall not be sold or disposed to any other person or firm without permission from DGCA.
> - It lists out guidelines to train remote pilots above 18 years of age as well as the regulations on controlled airspace.
> - Import of drones will require prior approval from DGCA.
> - UA operations only at or above 200 feet AGL (above ground level) in uncontrolled airspace will require permit from DGCA.
> - International operations of civil UAV and/or over water shall be strictly prohibited.

> **Various Unmanned Aerial Vehicles today in India**
> - **Rustom:** It has been indigenously designed and developed by **Aeronautical Development Establishment (ADE)** of Bangalore under DRDO. Its features are:
>   - It is a medium altitude long endurance (24 hours) UAV.
>   - It is being developed to **carry out Intelligence, Surveillance and Reconnaissance (ISR) roles** for the armed forces.
>   - It can carry different short and long range payloads. It can also carry electronic and communication intelligence.
> - **Nishant:** It has been designed and developed by **ADE**. Its features are
>   - It was designed for **battlefield surveillance and reconnaissance**, tracking of targets and artillery fire correction.
>   - It is capable of catapult launch and recovered by using parachute thus **eliminating need for runway**.
>   - After various crashes **Army has decided to stop any further induction** of them.
> - **Panchi:** It has been designed and developed by **ADE**. Its features are
>   - **It is the wheeled version of UAV Nishant.** It is capable to **land and take off from small airstrips**.
>   - It is **lighter UAV than Nishant**. It also has better stealth features.
> - **Lakshya:** It is a reusable aerial target system. Its features are
>   - It can be remotely operated from ground to provide **aerial target for training of gun and Missile crew and Air**

| | **Defence pilots** for the armed forces. |

- **Daksh:** It is a land based drone used for bomb disposal developed by DRDO.

Significance

- They can be remotely controlled. Therefore it **saves any loss of soldiers** in the case of security threats.
- They can be used **for reconnaissance of difficult terrain** like forests or marshes where access is difficult.
- Such vehicles are also needed for monotonous and technical works like bomb and mine disposal.
- UAV is **capable of remote warfare** to counter threatening state and non-state actors.

Challenges

- UAVs are being increasingly used for both military and non-military purposes. There is an apprehension that **UAVs can be misused to violate privacy**.
- Sufficient digital infrastructure for security is still not there to protect our drones from instances of hacking.

Way Forward

- UAV regulations have been released recently by the government. It should be implemented in an efficient manner.
- India is a large importer of defence equipment. It even imports Unmanned Vehicles especially from Israel. Therefore **indigenous production of UAVs is also needed to improve self-sufficiency**.

4.8. MODERNIZATION OF POLICE FORCE

Why in News?

- Despite a 30% increase in the budget of Home Ministry, projects related to police modernization and police infrastructure are still lagging.

Background

- In 2000, **Modernization of Police Force (MPF) scheme** was launched by Ministry of Home Affairs
  - o To modernize police and **reduce dependence on paramilitary troops**.
  - o To **equip the police with the latest equipment** and infrastructure.
  - o To improve police mobility, weapons, equipment, training infrastructure, computerization and forensic science facilities.
  - o For funding, the states are grouped into two categories –
    - ✓ Category A states: North East States and J&K– Centre and States share funding in the ratio of 90:10.
    - ✓ Category B states- Centre and States share funding in the ratio of 60:40.
- **Budget 2017-18** - Recently **budgetary allocation was increased** (as compared to previous year) for Modernization of the police and Police infrastructure.

Other schemes proposed for Modernizing police

- **Crime and Criminal Tracking Network Systems (CCTNS) scheme** –
  - o It aims to provide the Investigating Officers of the Civil Police with tools, technology and information to facilitate investigation of crime and criminals by connecting the police stations to a centralized database.
  - o It aims to improve Police functioning in various other areas such as Law & Order, Traffic Management etc.
  - o It is far from completion still.
- Police modernization has been included as an **Integrated Mission Mode Project (MMP) under the National e-Governance Plan (NeGP).**
- **Scheme of Mega City Policing (MCP)** has been started where police forces in seven cities – Mumbai. Bangalore, Hyderabad, Chennai, Delhi, Kolkata and Ahmedabad are being modernized.

Significance of Modernization

- Modernization of police force is centered upon two broad issues –
  - o Modernization of physical infrastructure – Eg. Construction of more forensic science laboratories etc.
  - o Modernization of Police Force – Eg. Improving our weaponry and equipments etc.

  To improve law and order and also make the police more transparent and accountable, such reforms are necessary.
- Modernization of police force is a step towards **achieving a 'SMART' police** as stated by the Prime Minister of India.

Challenges

- Law and Order is a State subject. Therefore Centre-State cooperation is necessary.
- **Connectivity and server issues** are a huge problem in some states, where districts are far-flung.
- **CAG report has found challenges in the working of the MPF scheme:**
  - There were **persistent delays in the formation of plans** for up gradation by the State police.
  - There were **considerable delays in procuring new infrastructure** like vehicles.
  - Modernization happened **without adequate increase in the manpower**. Eg. Many District Control rooms were made without any manpower.
  - Basic facilities like Forensic labs and Fingerprint bureaus are still in shortage.
  - **Police training** to use modernized equipments and processes was low.

Way Forward

- A Parliamentary Committee has recommended pursuing police modernization as soon as possible. With the internal security threat expanding from just being physical to even in digital domain, police modernization is the need of the hour to tackle threats from both the state and non-state actors.

SMART Police

In 2014, Prime Minister of India gave an acronym of SMART police which means:
- S – Strict and Sensitive
- M – Modern and Mobile
- A – Alert and Accountable
- R – Reliable and responsive
- T – Tech savvy and Trained

4.9. STRENGTHENING SECURITY ALONG COASTLINE

Why in news?

- The Home Ministry said that a comprehensive Coastal Security Scheme (CSS) to strengthen security infrastructure of Marine Police Force in coastal states/UTs is being implemented.

Background

- Following the 26/11 Mumbai terrorist attack **greater need was felt to strengthen patrolling and surveillance** of coastal areas, particularly shallow areas close to the coast.
- At the apex level **the National Committee for Strengthening Maritime and Coastal Security (NCSMCS)**, coordinates all matters related to Maritime and Coastal Security.
- At present, there is three-tier security for the coastal states of the country.
  - **The police forces** of the respective coastal states and Union territories have jurisdiction of up to 12 nautical miles from the coast.
  - **The Indian Coast Guard and the Indian Navy** have jurisdiction over the entire maritime zone up to 200 nautical miles, including the 12 nautical miles of territorial waters.

About CSS

- CSS seeks to strengthen patrolling and surveillance of coastal areas.
- **Patrolling:**
  - ✓ Under the scheme, coastal states and Union territories have operationalized 183 Coastal Police Stations (CPSs). These CPSs have come up in Tamil Nadu, Gujarat, Andhra Pradesh, Maharashtra, Odisha.
  - ✓ Coastal check posts have also been set up in Tamil Nadu, Maharashtra and Gujarat.
  - ✓ 204 boats and vessels have been deployed across all coastal regions, along with 280 four-wheelers and 546 two-wheelers.
- **Surveillance:**
  - ✓ Modern technical measures have been implemented by way of a chain of 74 Automatic Identification System (AIS) receivers and a chain of overlapping 46 coastal radars, for gapless cover along the entire coast.
  - ✓ **National Command Control Communication and Intelligence Network (NC3I)** collates data about all ships, dhows, fishing boats and all other vessels operating near our coast, from multiple technical sources including AIS and radar chain.
  - ✓ These **inputs are fused and analysed at the Information Management and Analysis Centre (IMAC) at Gurgaon**, whic**h disseminates this compiled Common Operating Picture for Coastal Security to all 51 nodes of the Navy & Coast Guard** spread across the coast of India.
- **Joint operations centres** have been set up by the Indian Navy as **command and control hubs** for coastal security at Mumbai, Visakhapatnam, Kochi and Port Blair.

- Paramilitary forces and the Indian Army have also been manning open riverine spaces in north India to thwart infiltration attempts
- **NCSMCS** periodically reviews coastal security against threats from the sea with all stakeholders.
- Other steps taken include:
  - ✓ Issue of ID cards to all fishermen with a single centralised database.
  - ✓ Registration of over 2 lakh fishing vessels operating off our coast and equipping fishing boats with suitable equipment, to facilitate vessel identification and tracking.

4.10. NATIONAL SECURITY COUNCIL

Why in News?

The government has allocated Rs 333 crore to National Security Council Secretariat in budget 2017-18, a major hike from Rs. 33 crore from last fiscal.

What is National Security Council?

> **NSAB:** to undertake long-term analysis of and provide perspectives on issues of national security.
> **Strategic policy Group**: to make policy recommendations to the NSC.
> **Joint Intelligence Committee**:
> Analyses intelligence data from different intelligence agencies in the country.

- The National Security Council is the apex body of national security management system in India.
- The council is responsible for advising the PM on matters of strategic importance and security issues relating both to domestic and international arenas.
- It is presided over by the National Security Advisor.
- It comprises of **Strategic Policy Group, the National Security Advisory Board and a secretariat from Joint Intelligence Committee.**

4.11. HARBOUR DEFENSE AND SURVEILLANCE SYSTEM

- Indian Navy has installed **Integrated Underwater Harbour Defense and Surveillance (IUHDSS)** at Mumbai naval harbour.
- Designed by **Israeli Aerospace Industry** called **ELTA**, it comprise of **Coastal Surveillance Radars**, **High Power Underwater Sensors** and **Diver Detection Sonars**.
- It is capable of **detecting, identifying, tracking** and **generating warnings** for all types of surface and sub-surface threats to harbour security.
- This integrated system (already installed at **Kochi** and **Visakhapatnam**) will enhance the security of **naval dockyard of Mumbai** by providing the comprehensive real-time images for monitoring and analysis.
- The creation of the **Sagar Prahari Bal**, induction of **Fast Interceptor Crafts** and commissioning of the **IUHDSS** are some of the Navy's measures to strengthen coastal security in a post 26/11 scenario.

4.12. NETRA

- First indigenously developed airborne early warning and control system **(AEW&C)** called **NETRA**, mounted on a **Brazilian Embraer-145 jet** has been inducted into Indian Air Force.
- NETRA has been developed by **Defense Research and Development Organization.**
- India has become only **4th** such nation after **United States**, **Russia** and **Israel** that have developed such technology on their own.
- Currently Indian Air Force using **3 Israeli Phalcon AWACS** (Airborne Warning and Control System) which are mounted on Russian IL-76 heavy-lift planes. These **Phalcon AWACS** has a range of 400 kms and 360-degre coverage.
- Some of the important features of **NETRA** are:
  - ✓ Range of **200 kms** (Capability to detect aerial threats from incoming aircraft and missiles).
  - ✓ **240 degrees** coverage (simultaneously scan the area on both sides of aircraft)
  - ✓ State of the art active **electronically scanned radar**.
  - ✓ Secondary surveillance radar.
  - ✓ Electronic and communication counter measures.
  - ✓ Line of sight and beyond line of sight data link.
  - ✓ Voice communication system and self-protection suit.

4.13. ASHWIN INTERCEPTOR MISSILE

- **Defense Research and Development Organisation (DRDO)** successfully tested its indigenously developed supersonic **Advanced Air Defence (AAD)** interceptor missile called **Ashwin** from Abdul Kalam Island (also known as **Wheeler Island**) of the coast of Odisha.
- **Ashwin Missile**, capable of destroying any incoming enemy ballistic missile at low altitude of 15-30 kms (endo-atmospheric), successfully destroyed the incoming missile at an altitude of 15 km.
- It is **7.5-metre long**, **single stage, solid rock propelled** guided missile equipped with an inertial navigation system, an advanced computer and an electro-mechanical activator.
- Successful trial validates the **reliability** of India's under development Ballistic Missile Defense **(BMD)** System.
- It places India in the exclusive club of **USA, Russia** and **Israel** that have full-fledged multi layered Ballistic Missile Defense system.

About Ballistic Missile Defense (BMD) System
- It provides an effective missile shield against incoming ballistic and nuclear missiles.
- India's **BMD** is a double-layered defense system capable of tracking and destroying hostile missiles both inside **(endo)** and outside **(exo)** the earth's atmosphere.
- It consists of two interceptor missiles namely:
  - ✓ **Prithvi Defence vehicle (PDV)** missile for exo-atmospheric ranges (15-30 km altitude).
  - ✓ **Advanced Area Defence (Ashwin)** missile for endo-atmosphere - (more than 50 km altitude).
- DRDO expects to have the **BMD system**

5. ENVIRONMENT

5.1. WORKSHOP ON PREPARATION OF HEAT WAVE ACTION PLAN

Why in News?

- **National Disaster Management Authority (NDMA)** and Government of Telengana organised a workshop on Preparation of Heat Wave Action Plan in order to mitigate the impact of the impending heat wave in 2017.

What are Heat Waves?

- Heat wave is a period of abnormally high temperatures (more than the normal maximum temperature) during summer months.
- It is predominantly prevalent in North-western parts of India during March-June. In some parts, it extends up to July.
- The **Indian Meteorological Department (IMD)** has underlined the following criteria for heat waves:
  - ✓ Heat wave is not to be considered till the temperature of a station reaches at least 40°C (for plains) and 30°C (for hilly regions).
  - ✓ When normal maximum temperature of a station is less than or equal to 40°C , then a departure of 5 to 6 degrees from the normal is to be considered heat wave while a departure of 7 degrees is to be considered severe heat wave.
  - ✓ When normal maximum temperature of a station is more than 40°C then a departure of 4 to 5 degrees from the normal is to be considered heat wave while a departure of 6 degrees is to be considered severe heat wave.
  - ✓ In case the normal temperature of station is more than 45°C then heat wave is to be declared irrespective.
- Heat waves often lead to dehydration, stress, heat exhaustion and sometimes a fatal heat stroke as well.
- **NDMA** released the **Guidelines for Preparation of Action Plan – Prevention and Management of Heat Wave** in **2016.**
- With better preparedness and mitigation measures under place, casualties due to heat wave can be minimized if not eliminated.

5.2. SOLID WASTE MANAGEMENT-BUFFER ZONE

Why in News?

- **Central Pollution Control Board (CPCB)** has issued draft guidelines proposing to maintain buffer zones around landfills to minimize/prevent the impact of landfill waste disposal.
- The proposed guidelines will apply to all future treatment plants while the existing plants will have to incorporate measures such as planting trees and using odour free technology**.**

Current Status

- The current practice of solid waste management in India includes a host of options such as **composting, vermin-composting, biogas, refuse derived fuel (RDF), pelletization and waste-to-energy measures**.
- Disposal of garbage in landfill sites is the least preferred but a widespread option in India. It encompasses waste disposal/processing facilities.
- It affects the neighbouring environment by fostering air, water, land and noise pollution.
- Close to 62 million tonnes of solid waste is generated every year in the country. Out of this, 43 million tonnes is collected and only 12 million tonnes treated.

> **Buffer Zone**
> - Buffer Zone refers to an area of no construction. Such an area is designated in order to segregate two regions (for environmental protection).
> - The term buffer zone was first specified by the government in **Municipal Solid Waste (Management and Handling Rules), 2000**.
> - The revised rules as under Solid Waste Management (SWM) Rules, 2016 made it a duty of CPCB to issue guidelines regarding buffer zones.
> - According to the SWM Rules, 2016, "a buffer zone of no development shall be maintained around solid waste processing and disposal facility, exceeding five tonnes per day of installed capacity."

- The only guideline for landfills as of now is that they be at least 500 metres ways from habitable zones.

Pros

- The proposed buffer zones will act as a barrier and will provide assistance against flawed handling of waste during storage and transportation.
- It will help protect the surrounding environment against negative impacts of the landfill.
- It will promote responsible land management and conservation practices.

Cons

- The CPCB has in its draft guidelines allowed waste-to energy power plants to come within **20-100 metres** of residential areas.
- This is a far cry from **300-500 metres** specified in the solid waste management manual of the **Swacch Bharat Mission.**
- Unlike previously, the draft guidelines mention **"incineration"** as one of the methods of waste disposal.

Significance

- The proposed buffer zones will act as a barrier and will provide assistance against flawed handling of waste during storage and transportation.
- It will help protect the surrounding environment against negative impacts of the landfill.
- It will promote responsible land management and conservation practices.

5.3. DRAFT ORDER ON BAN ON PESTICIDES

Why in News?

- The Government of India has decided to ban the use of 18 pesticides following the recommendations of the **Anupam Varma Committee**.

More on the Ban

- Complete ban of 12 pesticides would come into effect from January 1, 2018 while the rest 6 would be banned from December 31, 2020.
- The GOI has also sought objections and suggestions on this draft order from all stakeholders before taking a final decision.
- The **Central Insecticide Board and Registration Committee (CIBRC)** approves the use of pesticides in India.

> **Endosulfan**
> - Endosulfan is a hazardous pesticide which is banned in 80 countries.
> - It was used by the **Karnataka Cashew Development Corporation** and **Kerala Government** over cashew plantation to combat tea mosquito after 1970s.
> - It has been found to be responsible for various mental and physical deformities among the population of the two respective states.
> - **In 2011, Supreme Court banned Endosulfan pan-India.**

Anupam Varma Committee

- This committee was constituted in July 2013 to review the use of 66 pesticides which are either banned or restricted in other countries.
- The Committee recommended banning 13 pesticides, phasing out 6 by 2020 and reviewing 27 others in 2018.
- The Committee did not review the use of **Endosulfan** as the matter was pending with the Supreme Court at that time.

Significance of the Ban

- The pesticides proposed to be banned are harmful not just to humans and animals but also leech into the soil and water bodies and harm the aquatic ecosystem.
- Therefore, the ban comes as a welcome step.
- India is likely to improve its reputation in countries (where the concerned pesticides are banned) which imports food related products (both manufactured and raw) from India.

5.4. MEDICINAL PLANT FROM KERELA

Why in News?

- Scientists at the Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI) confirmed the multiple **therapeutic properties of Neurocalyx calycinus**.

About the plant

- It is **used by the Cholanaikkan tribe** to treat inflammations and wounds.
- It is **endemic to Western Ghats and Sri Lanka**.
- In local parlance it is known as 'Pacha Chedi'.
- The **anti-inflammatory activity** of the leaves was found to be similar to the drug diclofenac sodium.
- The **plant also possesses high Vitamin E content** and cytoprotective activity in its cell lines, increasing its prospects as an anti-cancer drug.

> **Cholanaikkan Tribe**
> - It is a **particularly vulnerable group** of Kerala.
> - They live in the **deciduous forests of Karulai and Chungathara ranges** in Nilambur in Malappuram district
> - They are the **only surviving hunter gatherer tribe** in India. They do not engage in farming.
> - They are the only tribal community in Asia that lives in rock-cave shelters.

Significance

- Pre-clinical trials have proved the **plant's efficacy in acting as an analgesic, anti-cancer, anti-oxidant, wound and burn healer, immune system development** etc.
- Patenting its herbal formulations would help in **protecting the traditional knowledge of India**.
- Commercial benefits of the usage of this plant can also **benefit the dwindling Chilanaikkan Tribe**.

5.5. KAZIRANGA NATIONAL PARK

- Kaziranga National Park has consistently increased its **One Horned Rhino** population **(Population in 2015 – 2401)** because of rigorous conservation efforts in past few years.

> **Indian Rhino Vision 2020** (IRV 2020) has been launched in 2014 to achieve a wild population of at least 3,000 **Greater one-horned rhinos** in the Indian state of Assam by year 2020.

Kaziranga National Park (Assam)

- Situated on the bank of river **Brahmaputra** it is one of the oldest wildlife conservancy reserves of India.
- It was declared a **Wildlife Sanctuary in 1950** and later in **1974** was notified as Kaziranga National Park under the **Wildlife (Protection) Act, 1972.**
- It is popularly known as the home of the **"Big Five" -** One Horned Rhinoceroses, Tigers, Asiatic wild buffalos, **Eastern Swamp Deer**, and **Elephant**.
- It hosts **two-thirds** of the world's Great One-horned rhinoceros (68% of worldwide population).
- It has one of the **highest densities** of **Tigers** in the wild in the world and also houses almost entire population of the **Eastern Swamp Deer**.
- In **1985** it was declared as a **World Heritage Site** by **UNESCO** for its unique natural environment and **Tiger reserve** in **2006**.

Different types of Rhinoceros

- **White Rhinoceros** (**square-lipped rhino**): It is a largest rhino species and has **two** subspecies namely:
  - ✓ **Southern white Rhino**: IUCN status - **Near Threatened**. Can be found mostly in South Africa with smaller translocated population in Kenya, Zimbabwe and Namibia.
  - ✓ **Northern white Rhino**: IUCN status - **critically endangered** (only 3 rhinos of its kind alive today).
- **Black Rhino** (**hook-lipped rhino**): It is smallest of the African rhino species and occurs throughout southern and eastern Africa. It has **4 sub species**:
  - ✓ **Southern Central black rhino**: IUCN status - **Critically Endangered.**
  - ✓ **Eastern black rhino**: IUCN status - IUCN status: **Critically Endangered.**
  - ✓ **South Western black rhino**: IUCN status - **Vulnerable.**
  - ✓ **Western black rhino**: **Extinct in 2011.**

- **Javan Rhinoceros (Lesser one-horned rhino):** They are one of the rarest mammals left on earth. They are found only at Ujung Kulon national park, western java, Indonesia. IUCN status- **Critically Endangered**.
- **Sumatran Rhinoceros (Asian two-horned rhino or Hairy Rhino):** Smallest among all species of rhinoceros. They are found in southeastern part of Asia including northeast India. IUCN status- **Critically Endangered**
- **Indian Rhinoceros (Greater one-horned rhino):** They are the second largest species of rhinos. They are found in India and Nepal, and particularly in the foothills of the Himalayas. Status- **Vulnerable.**

UPSC IN PAST: Pre 2013
Q. Consider the following pairs:

National Park		*River flowing through the Park*
1. Corbett	:	Ganga
2. Kaziranga	:	Manas
3. Silent Valley	:	Kaveri

Which of the above pairs is/are correctly matched?
(a) 1 and 2   (b) 3 only   (c) 1 and 3   (d) None

5.6. IRRAWADY DOLPHINS

- As per the 2017 census report by **Odisha** state forest department there are **55 Irrawaddy dolphins** present in water bodies of **Bhitarkanika National Park** and **Gahirmatha Marine Sanctuary**.
- In recent years **Chilika Lake** emerged as primary habitat of these dolphins with record count of 121 this year.
- Worldwide population of **Irrawaddy dolphins** is estimated to be less than **7500**, Bangladesh has 6000.
- Besides Irrawaddy dolphins other dolphin species that were reported are **Humpback, Bottlenose** and **Pantropical spotted dolphin** species.

About Irrawady Dolphins (Also commonly known as Snubfin Dolphins)

- They can be found in rivers, lakes and seas across southern Asia, from the northwest Bay of Bengal, in India, to the south of Indonesia.
- Major threats: incidental mortality in gillnets and other fisheries gear; Habitat loss due to Dams, Deforestation, Mining (ex. Sand, gravel mining, etc); Live captures for display purposes, pollution from agrochemicals, etc.
- IUCN Red list of endangered species status: **Vulnerable Species.**

UPSC IN PAST: Pre 2014
Q. Other than poaching, what are the possible reasons for the decline in the populations of Ganges River Dolphins?
1. Construction of dams and barrages on rivers.
2. Increase in the population of crocodiles in rivers.
3. Getting trapped in fishing nets accidentally.
4. Use of synthetic fertilizers and other agricultural chemicals in crop-fields in the vicinity of rivers.
Select the correct answer using the code given below:
(a) 1 and 2 only   (b) 2 and 3 only   (c) 1, 3 and 4 only   (d) 1, 2, 3 and 4

5.7. NEW CONTINENT: ZEALANDIA

- A study published by the Geological Society of America, found that New Zealand and New Caledonia are part of a huge 4.9 million sq. km single slab of continental crust that is separate from Australia.
- The study conducted using upgraded satellite-based elevation and gravity map technology found that the region is 94 percent submerged, mostly as a result of crustal thinning before the super continental break-up of Gondwanaland about 80 million years ago.
- The study says that Zealandia should be considered a geological continent, rather than the previously-held theory that it was a collection of continental islands and fragments.

- Currently there are 7 continents. In descending order of size they are: Asia > Africa > North America > South America > Antarctica > Europe > Australia.

About Zealandia

- Zealandia is about half the size of Australia, but only 7 percent of it is above sea level. Most of that terrestrial land makes up the two large islands of the country of New Zealand the North Island and the South Island.
- Zealandia is a very tectonically active region. Part of it is on the Australian plate, while the other part is on the Pacific plate.
- Stewart Island, just south of the South Island, and many smaller islets are also a part of Zealandia.
- New Caledonia, a collection of islands governed by France, makes up the northern tip of Zealandia.
- The submerged part of Zealandia is rich in mineral deposits.
- Zealandia's submerged fossils provide valuable clues to life during those time periods.

> **Criteria for continents:**
> - Elevation above surrounding area
> - Distinctive Geology
> - Well defined area
> - Crust much thicker than that found on ocean floor

5.8. FOOD LEGUMES RESEARCH PLATFORM (FLRP)

Why in News?

- On February 15, 2017 Union Cabined approved the setting up of Food Legume and Research Platform in Madhya Pradesh (Amlaha, Sehore) with the **collaboration of** International Center for Agricultural Research in Dry Areas (ICARDA) and India council of agricultural Research (ICAR).

Highlights

- Department of Agricultural Research under the Ministry of Agriculture would be linchpin between ICAR and ICARDA for all the technical modification in Agreement and establishment of FLRP.
- The Food Legumes Research Platform (FLRP) would be provided satellite Hubs in West Bengal (for pulses) and Central Arid Zone Research Institute (CAZRI), Rajasthan (for Natural Resource Management).
- Cabinet gave the In-Principle Approval to ICARDA for setting up of FLRP.

> **International Centre for Agriculture Research in the Dry Areas (ICARDA)**
> ✓ ICARDA is a non-profit agricultural research for development institute, established in 1977.
> ✓ Organisation aims is to improve the livelihoods of the resource-poor across the world's dry areas.

Why Legumes Research Platform is needed?

- Food security is the mammoth task in front of Government. Research in Legumes (Pulses Crop) would play a pivotal role in this aspect.
- Global Climatic pattern is changing which in turn affecting the agriculture output. Thus, research in food Legume is need of the hour.
- India accounts 25% of world food legumes production.

> **Four Dimensional benefits of Pulses (Legume Crop)**
> - **Reducing poverty**
>   - ✓ Pulses give 2-3 times higher market price than other cereal products.
>   - ✓ These are locally produced by community action, especially by women.
>   - ✓ Crop residue provide high protein value to livestock feed thereby cutting the cost of raising
> - **Food Security**
>   - ✓ It provides affordable source of protein.
>   - ✓ Give more food by using less land.
>   - ✓ Involves less risk due to its ability to withstand drought.
>   - ✓ Often grown in rotation as it fulfils the soil nutrients requirement (nitrogen)
> - **Improving nutrients and health**
>   - ✓ Contains 3-4 time higher protein content than cereals crops.
>   - ✓ Rich in nutrients like Calcium, Iron, Zinc and vitamin A.
>   - ✓ Beneficial to women and child who are the risk of anaemia.
> - **Sustainability for Environment**
>   - ✓ Pulses leads to nitrogen fixation, thereby reducing the cost and environmental impact of chemical fertiliser.
>   - ✓ Leafy cover of pulses prevent to soil erosion.

Thereby, making it a good destination for accelerating the production of more varieties and nutritious food legume using genomics techniques.

- This platform will contribute significantly towards reducing poverty, improving food security, improving nutrition and health, and sustaining the natural resource base.

Significant of Research Platform

- Platform would work under the framework of "Research for Development (R4D)" and its impact on farmers.
- The research would carry out for Improving rangeland and pasture productivity.
- The ICARDA research expertise is in dry land area, which in turn, would be utilised in selected water deficient regions of MP and Rajasthan
- The research platform would work on crop-livestock systems, alternative feed resources and water productivity in arid regions.

5.9. INDIA'S ONLY ACTIVE VOLCANO

Why in News?

- Barren Island is the **only active Volcano** along the volcanic chain from Sumatra to Myanmar. Moreover, it is the **only** active volcano in India.
- The Volcano erupted on January 23, 2017. The first Record of Volcanic eruption on significant scale was in 1787. Since 1991, the volcano has been showing sporadic activity and erupted in 2005.

> **Other volcanoes in India**
> - Doshi Hill is an extinct volcano in north-west part of Aravalli range of Mahendergarh (Haryana).
> - Dhinodhar Hills is an extinct volcano in Kutch district of Gujarat.
> - Narcondam Island in Andaman and Nicobar is a volcanic island and classified as dormant volcano by Geological Survey of India. The island is listed under UNESCO World Heritage Sites and famous for its **endemic** Narcondam Hornbill.
> - Baratang Island in Andaman is famous for **Mud volcanoes**.

Barren Volcanic Island

- The Island is situated in Andaman Sea, of the north-eastern part of Port Blair (Andaman and Nicobar Islands).
- It is a **Submarine emergent Volcano**, which lies above the subduction zone of India and Burmese plate.
- The Island is uninhabited and devoid of any significant vegetation and wild life.

5.10. INDIA AND STATE GLOBAL AIR REPORT 2017

Background

- It is the first report on air quality by using the latest global data from 1990 to 2015.
- Report is conducted jointly by the independent research institute; 'Health Effects Institute (US-based non-profit corporation)' and The Institute of Health Metrics and Evaluation (Independent research institution-University of Washington)
- The report provides information under various titles of 'Air Pollution level and Trend', 'Global Burden of Disease' and 'Health burden due to air pollution'.

Highlights of the report

- As per the report, approximately, 90% of the world's population lives in areas with unhealthy air in 2015.
- There is a 7% increase in the concentration of **ground-level ozone,** especially in developing countries.
- Efforts to curb pollution from the burning of coal will not show results soon on the quality of air global scale.
- Exposure to PM2.5 (Particulate Matter) is considered as the fifth (most or highest?) risk factor for death, which is accounting for about 4.2 million deaths across the globe.
- The highest concentrations of PM2.5 in 2015 related to combustion sources are in South and Southeast Asia, China, and Central and Western sub-Saharan Africa.

India and State Global Air Report 2017

- The report highlighted that there is a significant increase in inhalable fine particles of PM 2.5 since 1990.
- Outdoor air pollution has increased the death rate in India, surpassing the most polluted country China.
- India is now competing against China for being the highest air pollution health burdens in the world, with both countries facing some 1.1 million early deaths from air pollution in 2015.
- The report highlights that the underlying reason for increasing pollution in India can be attributed to its growth, which is happening in terms of industries and its consumption of coal as the main source of energy.
- The report takes the cognisance of a new pollutant 'ozone'. Though the casualties in India from ozone are far less than the well-known PM 2.5. However, the rate of increase in ozone-related deaths is alarming.

- The report is significant for India in providing more comprehensive pollution monitoring road map than currently in use Air Quality Index.

5.11. CHENNAI OIL SPILL

Why in news?

- Two vessels collided off the Kamarajar Port at Ennore near Chennai resulting in oil spill in the sea.

Ecological Footprint of Oil Spill

- Damage to fish, turtles, crabs among other marine animals.
- Loss of livelihood to fisherman as venturing out into the sea was not safe.
- Consumers' reluctance to buy sea food added to woes of fisherman.
- Environmental damage to coastal areas.
- Heavy metals released along with oil will poison marine life all the way up the food chain.

Why Oil Spills are difficult to contain?

- When oil hits the sea, its surface is quickly dispersed by the wind, while sea currents spread the lower layers in contact with the water.
- This **twin action** creates a large, ever-expanding film of oil called a "**slick**".
- Along the shore, the oil mixes with sand and debris to form a thick viscous sludge that gradually oxidizes into a toxic brown mass that experts like to call "**chocolate mousse**".

> **A HISTORY OF OIL SPILLS IN INDIA**
>
> - August 2010: Merchant ships MSC Chitra and MV Khalija 3 collided off Mumbai's coast, spilling more than 800 tonnes of oil. All fishing activities were suspended for 15 days near the area after the catastrophic spill.
> - January 2011: ONGC's Mumbai-Uran Trunk pipeline burst 80 km away off Mumbai's coast. The spill had reportedly spread to around 4 square km from the site of the leak.
> - October 2013: Another oil spill was reported from the Mumbai-Uran Trunk after a rupture in the pipeline. ONGC said a few days later the leak was fixed.
> - August 2013: Officials had reported an oil spill in the coastal areas of Gulf of Khambhat in Gujarat. The leak was from an ONGC pipeline near Bhadbhut village of the district.

Measures at National and International Levels to Contain Harmful Impacts of Oil Spills

- **The National Oil Spill-Disaster Contingency Plan (NOS-DCP),** which was adopted in 1996, has routinely been updated and revised to reflect the latest in international safety and regulatory standards. But, **it completely failed in taking action on the ground.**
- A **state contingency plan has not been prepared** even after Coast Guard demanding states to formulate a local plan to fight such disasters for over 20 years now.
- The **International Convention on Civil Liability for Oil Pollution**, 1969, of which India is a signatory, provides for adequate compensation for the damages involving oil tankers and has strict liability for ship owners.
- But, the **domestic liability regime** for environmental damage has been weak and underdeveloped.
  - ✓ There's an **absence of clear definitions of environmental damage**. Several jurisdictions in Europe include ecological and economic losses in environmental damages while most others limit to compensate only economic harm.
  - ✓ Such an **exclusion** of ecological damage leads to **most long-term damage** to marine environment, bio-diversity and natural resources **go uncompensated**.

> **Bioremediation techniques:**
> **Oilzapper**
> - It is essentially a cocktail of five different bacterial strains that are immobilized and mixed with a carrier material (powdered orncob).
> - It feeds on hydrocarbon compounds present in crude oil and oily sludge and converts them into harmless CO_2 and water.
>
> **Oilivorous-S**
> - It is a tad different from Oilzapper is an additional bacterial strain that makes the former more effective against sludge and crude oil with high-sulphur content.
> - Both Oilzapper and Oilivorous-S can be used in situ, thereby eliminating the need to transfer large quantities of contaminated waste from the site, a process that poses more threats to the environment.

Way Forward

- There is a need for **a comprehensive legal mechanism** to address issues of fault and no-fault based liability for environmental harms and introduce civil penalties for the same.
- **Responsibility for any negligence** on the part of any actor **should be fixed**.
- A detailed report should be prepared **to learn from the mistakes or lapses and rectify them.**

5.12. WORLD'S FIRST TRANSIT RATING SYSTEM

Why in news?

The DMRC, along with the US Green Building Council (USGBC) and the Green Business Certification Inc. (GBCI), announced the world's first LEED for transit rating system.

About LEED (Leadership in Energy and Environmental Design**)**

- It is an international certification run by USGBC, which provides a framework to building owners and operators for identifying and implementing practical green building solutions.
- It concentrates its efforts on improving performance across **five key areas** of environmental and human health: **energy efficiency, indoor environmental quality, materials selection, sustainable site development and water savings**.

The LEED Transit Rating System

- Developed with inputs from the DMRC, the **new LEED transit rating system** will assess the functioning of metro stations based on five categories - energy, water, waste, transportation, and human experience.
- It will allow operational transit facilities to benchmark efficiencies and demonstrate continual improvement.
- DMRC will be the first metro network in the world to pursue the pilot transit rating for its station.
- The transit rating system will help advance sustainable development agenda and to minimize carbon footprint.

5.13. WORLD WETLANDS DAY

Why in news?

- World Wetlands Day was celebrated at **Bhoj Wetlands** on February 2 to mark the Day the Convention on Wetlands was adopted in the Iranian City of Ramsar in 1971.
- The theme of World Wetlands Day for 2017 was '**Wetlands for Disaster Risk Reduction**'.

> **Bhoj wetlands** is situated in Madhya Pradesh and is **one of the 26 sites that India has designated under the Ramasar Convention**.

About Wetlands

- Wetlands are **areas of land where the water level remains near or above the surface of the ground** for most of the year.
- There are several kinds of wetlands such as marshes, swamps, lagoons, bogs, fens and mangroves.

Importance of Wetlands: Wetland directly and indirectly support lakhs of people, providing goods and services:

- They help stabilize water supplies, cleanse polluted waters, protect shorelines and recharge groundwater aquifers and provide food, timber, drinking water, medicines.
- They help check floods, prevent coastal erosion and mitigate the effects of natural disasters like cyclones and tidal waves.
- Wetlands can act as sponges, storing peak rainfall and releasing water gradually during lean season.
- The extensive food chain and biological diversity in wetlands make them 'biological supermarkets'.

Wetlands in India and Their Conservation

According to the Directory of Asian Wetlands (1989), wetlands occupy 18.4% of the India's area.

Ramsar Convention on Wetland

The Convention on Wetlands, signed in Ramsar, Iran, in 1971, is an **intergovernmental treaty which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources**.

Major obligations of countries which are party to the Convention are:

- Designate wetlands for inclusion in the List of Wetlands of International Importance.
- Promote, as far as possible, the wise use of wetlands in their territory.
- Promote international cooperation especially with regard to transboundary wetlands, shared water systems, and shared species.
- Create wetland reserves.

National Wetland Conservation Programme (NWCP)

Under the programme, which was started in 1985-86, 115 wetlands have been identified till now by the Ministry of Environment and Forest and Climate Change **which requires urgent conservation and management initiatives**

Aim of the Scheme: Conservation and wise use of wetlands in the country so as to prevent their further degradation.

Objectives of the Scheme:-

- To lay down policy guidelines for conservation and management of wetlands in the country;
- To undertake intensive conservation measures in priority wetlands;
- To monitor implementation of the programme;
- To prepare an inventory of Indian wetlands.

Other Suggested Measures for Wetland Conservation

- Assessment of wetland ecosystem health should be made a part **of District level disaster planning processes**.
- Wetland management, conservation and restoration plans should have an **in-built component of disaster risk reduction** to address the likely impacts of disasters on ecosystem health.
- States should **constitute Wetland Authorities as nodal agencies for integrated policy, planning and regulation of wetlands**.
- **Representation of Disaster Management Authorities** should be ensured within the State Wetland Authorities.
- **Mass awareness campaigns** should be undertaken to educate stakeholders from all walks of society, particularly local communities on the value of wetland ecosystems.

5.14. RIP TIDES

Why in News?

- **ISRO** in collaboration with a private lifeguard agency appointed by the Goa government has conducted a study (Ripex 2017) on rip tides along the beaches of Goa.

What are Rip Tides?

- Rip tides (also known as ebb jet or tidal jet) are powerful currents running perpendicular to the shore.
- They pull the water out into the ocean.
- The term rip tide is a misnomer as tides occur due to moon's gravitational pull while rip currents are caused due to shape of the shoreline or due to formation of sandbar.
- These currents may extend 200 to 2,500 feet lengthwise and less than 30 feet in width.
- Rip tides are dangerous because they catch swimmers unaware and pull them deep into the ocean.
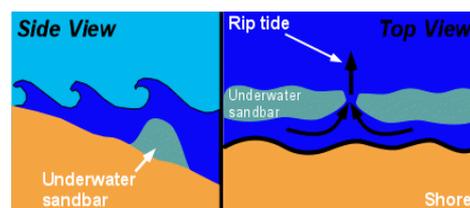
6. SCIENCE AND TECHNOLOGY

6.1. LIDAR TECHNOLOGY

- Recently Google has accused Uber of stealing its **LIDAR designs** in developing its own autonomous vehicles.
- Autonomous vehicles use LIDAR for obstacle detection and avoidance to navigate safely through environment.
- LIDAR is highly sought after technology used by companies like Google and Uber.

Light Detection and Ranging (LIDAR)

What is it?

- It is a **remote sensing method** that uses **narrow beam of light instead** of radiowaves in the form of a pulsed laser to build a 3-D image of surrounding landscape. The narrow beam of laser makes it possible to map objects with high degree of resolution.
- It **measures** and **analyses** the distance from the sensor to the object by determining the time between the release of laser pulse to receiving of the reflected pulse.
- For terrestrial mapping LIDAR uses near **infrared wavelength laser** (900–1064 nanometers) and water penetration like **sea bed mapping** it uses **green light** (532 nanometers).
- A typical **LIDAR instrument** principally consists of a **laser**, a **scanner**, and a **specialized GPS receiver.**
- There are three ways to collect **LIDAR data** – airborne, satellite and ground. **Airborne LIDAR data** are the most commonly available LIDAR data.

Utilities of LIDAR

LIDAR data has multiple applications. Like:

- **Urban planning:** Helps in creation of large area models in short time. It is also used to create digital elevation models and surface models of surrounding buildings.
- **Coastline management:** Producing accurate shoreline maps, detecting coastal erosion.
- **Archeology:** Help in creation of high resolution digital elevation models to reveal micro-topography.
- **Oil and Gas exploration:** It is used to trace amount of gases above the hydrocarbon region. This tracking helps to find exact area which has Oil and Gas deposits. Thus saves both time and money.
- **Quarries and Minerals:**
  - ✓ Helps in quick surveying the mining area to check its suitability.
  - ✓ Give an accurate indication of environment impact.
- **Cellular network planning:** Can be used to provide analysis for determining line of sight for proposed cellular antenna.
- **Forestry management and planning:** It provides the height of canopy, its density and ground elevation. It is also increasingly used for managing forest fire by mapping possible fire area.
- **Flood modeling:**
  - ✓ Helps in creation of accurate flood prediction models.
  - ✓ Can be incorporated into relief, rescue and flood simulation software to provide advanced topographical information.
- **Pollution modeling:**
  - ✓ Helps in detection of pollutants like carbon dioxide, sulphur dioxide and methane.
  - ✓ Detection of noise and light pollution.
- **Mapping and Cartography:**
  - ✓ Assist in mapping of roads, buildings and vegetations.
  - ✓ Useful in developing high-resolution contour maps.
- **Transport planning:** Help in mapping transport corridor facilitating seamless navigation.
- **Agriculture:**
  - ✓ Helps in crop mapping and indicate which areas to need fertilizers for maximum crop yield.
  - ✓ Helps in creating a topographical map of the fields and reveals the slope and sun exposure of the farm land.
- **Spaceflight and Astronomy:**
  - ✓ It may be used in mapping the surface of any celestial body.
  - ✓ It is used for atmospheric studies from space.
- **Atmospheric remote sensing:** It is used to determine cloud profiles, measuring winds, studying aerosols and quantifying various atmospheric components.


6.2. GRAPHENE FROM SOYBEAN

Why in news?

Scientists have used a soybean to make the world's strongest material graphene commercially more viable.

About Graphene

Graphene form of carbon allotrope consisting of planar sheets (2D structure) which are one atom thick, with the atoms arranged in a honeycomb-shaped lattice. It is composed of carbon atoms linked in a hexagonal lattice.
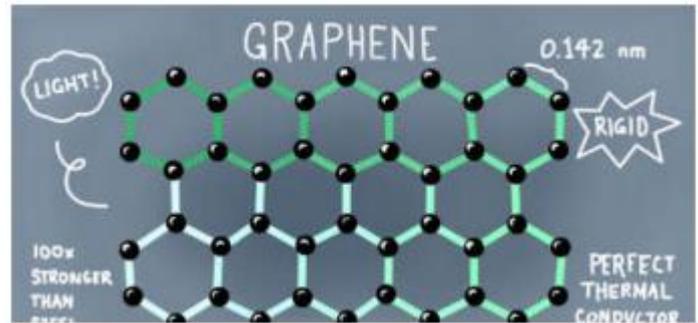
Properties of Graphene

- Stronger than the steel.
- Good conductor of heat and electricity.
- About 200 times stronger than steel
- Better conductor compared to Copper
- Nearly transparent.

Applications of Grpahene includes Paints and coatings, lubricants, oils and functional fluids, capacitors and batteries, thermal management applications, display materials and packaging, solar cells, inks and 3D-printers' materials and films.

6.3. CLOUD SEEDING

Why in news?

- Maharashtra government has decided to conduct **cloud seeding experiment** next three year to tackle the problem of frequent droughts in Vidarbha region.
- This programme will be coordinated by the **Indian Institute of Tropical Meteorology** and is part of larger experiment of **Earth Science Ministry** to understand how clouds and aerosols interact and influence climate.

Cloud seeding

- **Cloud seeding** also known as **weather modification** Technique, is an artificial way to induce moisture in the clouds so as to cause a rainfall. In this process either **silver iodide, potassium iodide** or **dry ice (solid carbon dioxide)** is dumped onto the clouds causing rainfall.

> **Indian Institute of Tropical Meteorology, Pune**
> - It was formed in 1962 and is under administrative control of **Ministry of Earth Sciences.**
> - It is a **premiere research Institute** to generate scientific knowledge in the field of meteorology and atmospheric sciences.
> - It functions as a **national centre** for basic and applied research in monsoon meteorology.

Application of cloud seeding

- This method can be used to cause significant amount of rainfall over a specified area especially in location where rain is badly needed.
- It can be developed as an effective tool to safeguard from the effect of vagaries of monsoon on agriculture as it is timely rain, rather than a lot of it, which is more important for crops.
- Timely and ambient rain results in maximum farm yield. Thus it helps in boosting local economy and feeding people.

Concerns

- Several experiments have been conducted across India to protect drought affected areas. However they were not very effective and gave mixed results.

- It is not fool proof as different type of clouds may exist over a region and same type of seeding may not be effective for all.
- Moreover seeded clouds may actually travel to another location and do not cause precipitation on the intended location questioning its effectiveness.
- There are environmental consequences like spreading of harmful chemicals in atmosphere.
- If not controlled properly, cloud seeding may result in undesirable weather conditions like flooding, storms, hail, etc.
- Lastly it is very expensive.

UPSC IN PAST

Q. Drought has been recognized as a disaster in view of its party expense, temporal duration, slow onset and lasting effect on various vulnerable sections. With a focus on the September 2010 guidelines from the National disaster management authority, discuss the mechanism for preparedness to deal with the El Nino and La Nina fallouts in India. (200 words) (MAINS 2014)

6.4. BLAZARS

Why in news?

NASA's Fermi Gamma-ray space telescope has identified the farthest gamma-ray blazars.

What are blazars?

- A blazar is a **galaxy** which, like a quasar, has an **intensely bright central nucleus** containing a supermassive black hole.
- In a blazar, however, the emitted light sometimes includes **extremely high energy gamma rays**, sometimes over a hundred million times more energetic than the highest energy X-rays.
- The overall emission has several other unique properties as well, including that its intensity can vary dramatically with time.

6.5. SWITCH TO DIGITAL TERRESTRIAL TRANSMISSION BY 2023

Why in news?

- The broadcast regulator, Telecom Regulatory Authority of India (TRAI), has recommended introduction of digital terrestrial transmission for broadcast services in a **phased manner** and complete shutdown of analog transmission by end of 2023.
- TRAI has recommended that DTT should be deployed in **metros by December 2019 in phase 1**, cities having more than 10 lakh population as per Census 2011 should be covered by December 2021 and **rest of India by December 2023.**

Background

- At present, **terrestrial TV broadcasting** in India is under the **exclusive domain of Doordarshan** (Prasar Bharati), the Public Service Broadcaster and it is predominantly analog.
- The existing terrestrial TV platform **provides only a few channels** which do not offer a value proposition to the viewers.

Basic facts about DTT

Terrestrial transmission is a type of broadcasting in which signals are transmitted by radio wave from a terrestrial transmitter. It is of two type:

- **Analog terrestrial transmission(ATT)**
  In analogue terrestrial television broadcasting **only one signal** is transmitted on a given frequency channel.
- **Digital terrestrial transmission (DTT)** Digital Terrestrial Transmission (DTT) broadcasting allows the transmission of about **10 or more digital services in a single frequency channel**, depending on the technical parameters used and the quality of services desired.

Consumer advantages of DTT

- Crystal clear pictures and high quality audio through digital reception
- Better overall reception, particularly if signal is weak

- Access to new free and Pay TV channels
- Lower power requirements hence signals can be used by mobile devices.
- Can provide a rich bouquet of SDTV, HDTV, UHTV, mobile TV channels, radio service and other value added services**.**

Government advantages of DTT

- Possibility to cost-effectively implement social programs in fields such as health and education
- Gives access to additional frequencies that may be used for essential services
- The spectrum used to transmit data over the air is scarce. To ensure optimum utilization of this valuable resource, over 156 countries signed an **ITU agreement** in 2006, to switch from analogue to digital transmission. By adopting digital transmission India can join the league of countries having DTT such as Luxembourg.
- Adoption of DTT will add to **DIGITAL INDIA program** and enable digital access in rural areas
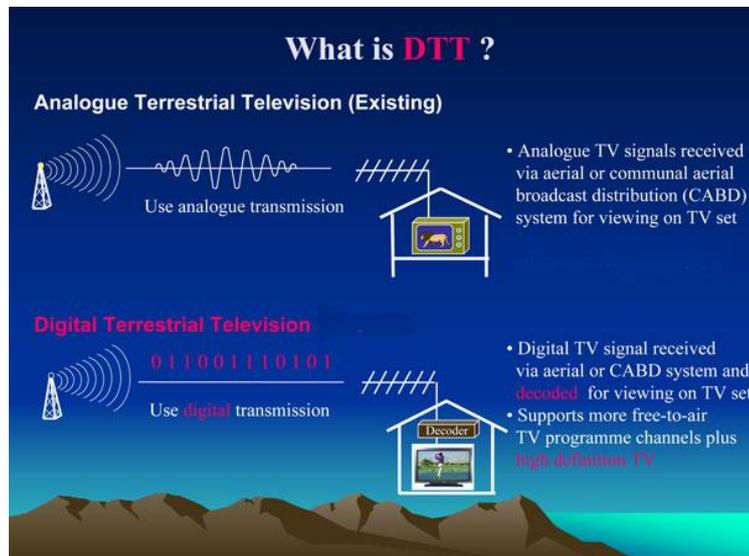
6.6. PRADHAN MANTRI GRAMIN DIGITAL SAKSHARTA ABHIYAN

Why in news?

The Union Cabinet has approved 'Pradhan Mantri Gramin Digital Saksharta Abhiyan' (PMGDISHA)**.**

Background

- **As per the 71st NSSO Survey on Education 2014, only 6% of rural households have a computer.**
- This highlights that more than 15 crore rural households (@ 94% of 16.85 crore households) do not have computers
- Thus a significant number of these households are likely to be digitally illiterate.

About PMGDISHA

- PMGDISHA is expected to be one of the **largest digital literacy programmes in the world**.
- Under the scheme, 25 lakh candidates will be trained in the FY 2016-17; 275 lakh in the FY 2017-18; and 300 lakh in the FY 2018-19.
- To ensure **equitable geographical reach**, each of the 250,000 Gram Panchayats would be expected to register an average of 200-300 candidates.
- The implementation of the Scheme would be carried out under the overall supervision of Ministry of Electronics and IT in active collaboration with States/UTs through their designated State Implementing Agencies, District e-Governance Society (DeGS), etc.
- The PMGDISHA being initiated under Digital India Programme would cover 6 crore households in rural areas to make them digitally literate.
- This would empower the citizens by providing them **access to information, knowledge and skills for operating computers / digital access devices.**

Concerns / Challenges

- According to **World Economic Forum's Annual Network Readiness Index** which assess the information and the communication capability of 140 nations, in 2013 India was at 68th position but in **2016 India has slipped to 91st.**
- People need to be trained on how to protect their financial information when the use computers or other devices for various transaction.
- The **BHARATNET project** has not been able to provide broadband connectivity to rural panchayats. Thus success of PMGDISHA will depend on infrastructure availability.

6.7. FLU GAS TECHNOLOGY

Why in news?

- Ministry of Environment Forest and Climate Change **(MoEFCC)** has decided to use **Flu-Gas Desulfurization** to reduce emissions from thermal power plants following new environmental notification.

About

- As per new notification by **MoEFC** emissions of pollutants namely Particulate matters need to be reduced by 65%; Oxides of nitrogen (NOx) by 70% and Sulphur dioxide by 85%.

Flu-Gas Desulfurization (FGD) technology

- Flue gas desulfurization (FGD) is a **set of technologies** used to remove **sulfur dioxide (SO2)** from exhaust flue gases of fossil-fuel power plants, as well as from the emissions of other sulfur oxide emitting processes.
- Common methods used to remove SO2 are: Wet scrubbing method, Spray-dry scrubbing method, Wet and Dry lime scrubbing method, SNOX method, Dry sorbent injection method, etc.
- For a typical coal-fired power station, **flue-gas desulfurization (FGD)** may remove 90 percent or more of the SO2 in the flue gases.
- Sulfur dioxide emissions are a primary contributor to **acid rain** and have been regulated by every industrialized nation in the world.

Centre for Science and Environment	Flue Gases
• It is a public interest research and advocacy organisation based in New Delhi. • It researches into, lobbies for and communicates the urgency of development that is both sustainable and equitable. **Electrostatic Precipitators:** It is a filtration device that removes fine particles like particulate matter using electrostatic force by ionizing the passing gas. **Retrofit Boiler**	• It is a **mixture of gases** which is by produce by combustion of fuel and other materials in power stations and various industrial plants and released in the atmosphere via flu (ducts). • It largely contains **oxides of nitrogen** derived from combustion of air, **carbon dioxide**, **carbon monoxide**, **water vapour**, **excess oxygen, sulphur oxides, particulate matter** like soot.

6.8. INDIA'S NATIONAL VACCINE REGULATORY AUTHORITY

Why in news?

- WHO recently declared **Indian National Regulatory Authority** functional and awarded it highest rating 4 which means 100% compliance with the WHO benchmarking , good result with sustained improvement trend and stringent regulator of vaccine as per developed countries and European Union.

What is NRA?

- As Specified by WHO, NRAs are national regulatory agencies responsible for ensuring international standards of quality and safety in vaccine production either for export or for public distribution.
- It comprise of Central drugs standard control organization, State Drug Regulatory Authorities, Pharmaco-vigilance Programme of India (PvPI) and Adverse Events Following Immunization (AEFI) structures at the Central and States levels

Significance for India

- It means that India has been classified as a stringent regulator of vaccines alongside developed countries such as the US, Japan and EU member states.
- It will boost Indian pharmaceutical companies to enter international markets and compete as drugs will be of international standards.
- It will also boost Make in India campaign by influx of investment and technology after improved global confidence in Indian medicinal product.
- India is major supplier of vaccine to UNICEF, the WHO and Pan American Health Organisation which in turn supplies it to more than 100 countries therefore it will open up opportunities to hitherto untapped markets and generate steady forex income.

6.9. LATEST DEVELOPMENTS AT ISRO

6.9.1. LAUNCH OF 104 SATELLITES IN A SINGLE FLIGHT BY PSLV-C37

- PSLV-C37, ISRO's Polar Satellite Launch Vehicle has successfully launched the 714 kg Cartosat-2 Series Satellite along with 103 co-passenger satellites.
- The total weight of all the 104 satellites carried on-board PSLV-C37 was 1378 kg.
- This was the thirty eighth consecutively successful mission of PSLV.
- International customer satellites from USA (96) and one each from The Netherlands, Switzerland, Israel, Kazakhstan and UAE were also carried among co-passenger satellites.

> **PSLV**
>
> The PSLV is one of world's most reliable launch vehicles consisting of four stages.
>
> It has been in service for over twenty years and has launched historic missions like Chandrayaan-1, Mars Orbiter Mission, IRNSS etc.
>
> It can take up to 1,750 kg of payload to Sun-Synchronous Polar Orbits of 600 km altitude and payload of 1,425 kg to Geosynchronous and Geostationary orbits.

6.9.2. ISRO ROVER ON LUNAR SURFACE

- ISRO is planning to deploy a rover on the lunar surface in the Chandrayaan-2 mission.
- After reaching the 100 km lunar orbit, the Lander, containing the Rover, will separate from the Orbiter.
- The Lander then will soft land on the lunar surface at a specified site and deploy a Rover.
- The six-wheeled Rover will move around the landing site in **semi-autonomous mode** as decided by the ground commands.
- The instruments on the rover will observe the lunar surface and send back data useful for **analysis of the lunar soil**.
- **Collection of soil and rock sediments is not planned** in this mission.

> **Chandrayaan 2**, India's second mission to the Moon, is an advanced version of the previous Chandrayaan-1 mission.
>
> It consists of an Orbiter, Lander and Rover configuration.
>
> It is expected to be launched during the first quarter of 2018.

6.9.3. TELEMETRY AND TELECOMMAND PROCESSOR (TTCP)

- TTCP is used in Integrated Spacecraft Testing of Low Earth Orbit, Geostationary Orbit and Interplanetary Spacecraft.
- The Low earth orbit spacecrafts typically use ISRO formats for telemetry and telecommand, for which indigenous equipments are being used.
- However, the interplanetary spacecraft use an international standard known as CCSDS (Consultative Committee for Space Data Systems).The equipments are being imported for this purpose.
- As part of 'Make in India' campaign, indigenous development of TTCP was taken up by ISRO.
- This system now is able to meet the requirements of both CCSDS and ISRO standards.

6.10. DNA-TAGGING OF CONVICTS

Why in news?

Andhra Pradesh is drafting a legislation that will enable collection and storage of genetic fingerprints in a centralized database to track offenders.

What is DNA fingerprinting?

- DNA fingerprinting is a laboratory technique used to establish a link between biological evidence and a suspect in a criminal investigation.
- DNA fingerprinting is also used to establish paternity, seed stock identification, the authenticity of consumer products, and medical diagnosis.

Benefits of DNA Fingerprinting

- **Accuracy**- in majority of cases where DNA of more than one person are found, DNA fingerprinting can identify the criminals from other people.

- **Reliability-** is more reliable than Narco analysis which is subjective and also DNA fingerprinting cannot be faked.

Challenges

- DNA testing as evidence is not provided under Indian Evidence Act 1872 and Criminal Procedure Code 1973.
- The Union had created similar draft in 2012 which ran into controversy due to concerns around violation of privacy rights.
- **Unscientific investigation:** In India, instead of forensic investigators and scientists, an untrained constable goes to crime scene first, who does not know how to scientifically collect evidences and in the process destroys vital DNA evidence.

6.11. SUPERBUGS

Why in news?

- **World Health Organization (WHO)** has recently provided a list of twelve **"Superbugs"** which pose an enormous threat to human health.
- **WHO** further urged medical experts and pharmaceutical researchers to focus first on fighting the most dangerous among these pathogens.

Superbugs

- They are a **strain of bacteria** that has become resistant to battery of antibiotic drugs after their prolonged exposure to antibiotics.
- Hence, the medicines become **ineffective** and infections persist in the body, increasing the risk of spread to others.
- **Overuse** (consuming more antibiotic than prescribed) and **Misuse** (taking prescribed antibiotic incorrectly or taking antibiotic to treat viral infection) of antibiotics are the major reason for formation of Superbugs. **Human consumption** of **antibiotic-treated chicken** and **livestock** further increasing resistance.

Species	Type of Antibiotic Resistance
Critical*	
Acinetobacter baumannii	Carbapenem resistant
Pseudomonas aeruginosa	Carbapenem resistant
Enterobacteriaceae†	Carbapenem resistant
	Third-generation cephalosporin resistant
High	
Enterococcus faecium	Vancomycin resistant
Staphylococcus aureus	Methicillin resistant
	Vancomycin intermediate and resistant
Helicobacter pylori	Clarithromycin resistant
Campylobacter	Fluoroquinolone resistant
Salmonella spp	Fluoroquinolone resistant
Neisseria gonorrhoeae	Fluoroquinolone resistant
	Third-generation cephalosporin resistant
Medium	
Streptococcus pneumoniae	Penicillin nonsusceptible
Haemophilus influenzae	Ampicillin resistant
Shigella spp	Fluoroquinolone resistant

- Few prominent superbugs highlighted by WHO are **MRSA** (methicillin-resistant Staphylococcus aureus), **Neisseria gonorrhoeae**, **Klebsiella**, **E. coli.**
- **Klebsiella Bacteria** has recently developed resistance to a powerful class of antibiotics called **carbapenems.**

6.12. "VAMPIRE" STAR

- India's first dedicated space observatory, ASTROSAT, has captured rare phenomenon of a small, 6-billion-year-old "vampire" star **"preying"** on a bigger celestial body.
- The smaller star sucks mass and energy out of the bigger companion star and it becomes bigger, hotter & bluer and hence is called a vampire star.

ASTROSAT is India's first dedicated multi wavelength space observatory.

ASTROSAT observes universe in the optical, UV, low and high energy X-ray regions of the electromagnetic spectrum, whereas most such satellites are capable of observing only a narrow range of wavelength

6.13. WHY DOESN'T EARTH'S INNER CORE MELT?

Why the crystallized iron core of the Earth remains solid, despite being hotter than the surface of the Sun?

- Spinning within Earth's molten core is a crystal ball, almost pure crystallized iron, nearly the size of the moon. Scientists have been trying to know the atomic structure of these crystals for years.
- The iron atoms are packed differently at room temperature and at high temperature.
- However, researchers have found that this packing of iron atoms remains the same at Earth's core.
- Due to high pressure, on the edge of the inner core, pieces of crystals' structure continuously melt and diffuse only to be reinserted in the original configuration like "shuffling deck of cards".
- This energy distribution cycle keeps the crystal stable and the core solid.

6.14. BHARAT QR CODE

Bharat QR code has been developed jointly by National Payments Corporation of India (NPCI), Visa, MasterCard and American Express under instructions from Reserve Bank of India (RBI).

It works as common interface for the MasterCard/Visa/RuPay platforms and also facilitate acceptance of Aadhaar-enabled payments and Unified Payments Interface (UPI).

Advantages

- It eliminates the need of using card swiping machines for digital payments.
- Interoperability-Using BharatQR code, the merchants will be required to display only one QR code instead of multiple ones.
- It will also eliminate the uncertainty of entering a wrong amount as all a customer would have to do is scan and authenticate

> **QR code (Quick Response code)** is a two-dimensional (matrix) machine-readable bar code made up of black and white square. This code can be read by the camera of a smartphone.
> - It is capable of 360 degrees (omni-directional), high speed reading.
> - QR Code can store up to 7089 digits as compared to conventional bar codes which can store max 20 digits.
> - It carries information both horizontally and vertically. It has error correction capability and data stored in it can be restored even if it is partially damaged or dirty.

7. SOCIAL

7.1. DRAFT PUBLIC HEALTH BILL 2017

Why in news?

The draft **Public Health (Prevention, Control and Management of Epidemics, Bio-Terrorism and Disasters) Bill**, 2017 has been released by the Ministry of Health and Family Welfare.

Objectives: The Bill aims to provide for the prevention, control and management of:

- epidemics;
- public health consequences of disasters, and
- Acts of bio terrorism or threats.

Need for the bill

- The draft Bill seeks to repeal the **Epidemic Diseases Act, 1897**.
- Over the years, the Act has accumulated quite a number of flaws which can be attributed to the changing priorities in public health emergency management. For instance,
  o Epidemic Act 1897 is silent on the definition of dangerous epidemic disease.
  o Moreover, it being a century old act, the territorial boundaries of the act needs a relook.

Key Features of the draft bill

- The draft Bill defines '**public health emergency**' as any sudden state of danger to public health including:
  o extension or spread of any infectious or contagious disease or pests affecting humans, animals or plant,
  o occurrence of or threat of dangerous epidemic disease, and
  o Disaster or bio-terrorism or potential public health emergency requiring immediate action for its prevention, control and management.
- The proposed bill lists 33 epidemic-prone diseases which include Anthrax, bird flu, dengue, HIV/AIDS, yellow fever, rabies, plague, measles, kala-azar, among others.
- The draft also lists potential bioterrorism agents including bacteria of typhoid fever, cholera, plague among others, and viruses including ebola, dengue, Japanese Encephalitis and others.
- The bill also outlines the powers of central, state and local authorities to take appropriate actions to tackle public health emergencies like epidemics and bioterrorism.

7.2. MAHILA SHAKTI KENDRA

Why in news?

- Budget 2017-18 speech mentioned that Mahila Shakti Kendra will be set-up at village level in 14 lakh ICDS Anganwadi Centres.

About Mahila Shakti Kendra

- It will provide one stop convergent support services for empowering rural women with opportunities for skill development, employment, digital literacy, health and nutrition.
- It will increase access of essential services for women.

Challenges

- **Allocation insufficient:** If Rs 500 crore is allocated to 14 lakh anganwadis, it amounts to just Rs 3,571 for setting up each women's empowerment centre.
- **Further undermine ICDS**: Government has been slashing funds towards ICDS from last 2 years which has affected the regular functioning of anganwadis. Thus, adding one more scheme will further undermine ICDS
- **Overburdened workers**: Using anganwadi to implement one more scheme will make anganwadi worker overburdened. That too with their earnings often being even less than minimum wage.
- **Difficult to provide all support services**: Envisaged as centres where women can get support for everything ranging from employment and skill development to health and digital literacy, it is beyond capacity of an anganwadi worker. It could have been done better under **mahila samkhya programme** (which has been stopped last year).

7.3. CORONARY STENT PRICE CAPPED

Why in news?

- National Pharmaceutical Pricing Authority (NPPA) capped coronary stents prices up to 40 per cent lower than their existing market rates.
- It is valid for all stents sold within India – whether domestic or imported.

Background

- In 2016, Coronary stents were included in the National List of Essential Medicines (2015).
- Later the Department of Pharmaceuticals incorporated coronary stents in Schedule I of the Drug Prices Control Order, 2013 making it a 'scheduled formulation'.

Need of price cap

- Presently nearly **two-thirds of the high out-of-pocket expenditure on health incurred by Indians went towards drugs.**
- Lancent research has shown a rise in **irrational use of medical technologies**, including cardiac stents and knee implants.
- Indian stent market is about $500 million. It is expected to grow further due to rise in incidence of hypertension and diabetes.
- Coronary artery disease is becoming a major health problem in India. Therefore it has become the first medical device to be brought under price control.

Significance of the order

- This order would **reduce the 'unethical markups' in the prices** of the medical devices like stents making healthcare more affordable.
- NPPA report had found out that there **was a 'vulgar profiteering'** by raising the medical device prices in an irrational manner. This order would curb this practice.
- **Quality levels of the stent** may drop if the monitoring is not adequate.

Way Forward

- There is a need of two pronged strategy to make medicines and medical devices affordable:
  - Government should **monitor expenditures** jointly in partnership with the community,
  - Government should also use regulation where needed, and raise public spending on health.
  - Promote generic medicines.
- Also district hospitals should expand the coverage of cardiac treatments pan India so that the order can benefit maximum population.

> **What is a Stent?**
> - It is a tube-shaped device which is inserted into a blocked blood vessel.
> - It helps clear the blockage in arteries, sometimes through physical means (Bare Metal stents) and often through the drugs it gives out at a slow rate (Drug eluting stents).
> - Thinner the stent, more sophisticated and expensive it is supposed to be.

> **National List of Essential Medicines (NLEM)**
> - As per the WHO, Essential Medicines are those that **satisfy the priority health care needs of the population.**
> - **NLEM 2015** contains 376 medicines.
> - Criteria for inclusion into this list includes public health emergency, cost effective medicine etc.
> - Core Committee formed by the Ministry of Health reviews and revises the medicines in the NLEM.

> **National Pharmaceutical Pricing Policy 2012**
> - The criteria to fix the price ceiling of any commodity is calculated as the **simple average of all brands of that particular product that have a market share of at least 1 per cent.**

> **National Pharmaceutical Pricing Authority**
> - It is an independent body under Department of Pharmaceuticals under Ministry of Chemicals and Fertilizers.
> - Its functions are:
>   - To fix/ revise the controlled bulk drugs prices and formulations.
>   - To enforce prices and availability of the medicines under the **Drugs (Prices Control) Order, 1995/2013**.
>   - To **recover amounts overcharged by manufacturers** for the controlled drugs from the consumers.
>   - To **monitor the prices of decontrolled drugs** in order to keep them at reasonable levels.

7.4. REGULATING ONLINE SALE OF MEDICINES

Why in News?

- A sub-committee constituted by Drugs Consultative Committee to examine online drugs sale has recently submitted its report.

Background

- Rise of e-commerce has boosted the sale of online drug.

Issues involved

- Drugs and Cosmetics Act 1940 **lacks any guidelines for e-commerce players in the pharmaceutical industry**. However, 'scheduled' drugs should be sold only by licensed pharmacies against a doctor's prescription.

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Drugs Consultative Committee

- It is a statutory body under the Drugs and Cosmetics Act 1940 constituted by the Central government.
- It is advises central, state governments on uniformity of this act throughout India.
- It has representatives from central and state governments.
- It meets when required by the central government.
- It has the power to regulate its own procedure.

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- **Easy access to online medicines may promote antimicrobial resistance.**
- Online pharmacies cannot be quality assured presently leading to drugs of dubious quality in the market.

Recommendations of the sub-committee

- Create a **National Portal** as a nodal platform to transact and monitor online drug sale.
- Evolve a mechanism to register e-pharmacies.
- There needs to be geographical restriction in the operation of e-pharmacies.
- Retail drug sale licenses can also be registered on National Portal to carry online drug sale.
- Certain drugs prone to misuse like Narcotics and Psychotropic drugs, tranquilizers etc. should be excluded from online sale.
- Offline and Online drugs sale will continue to be regulated with Drugs and Cosmetics rules 1945.

Limitations of online pharmacy

- Unregulated selling of prescription drugs online promotes self-medication.
- Government revenue is also hit as e-commerce players escape the taxes equivalent to retail pharmacies.

Way Forward

- Government has been promoting accessible and affordable generic medicine to prevent self-medication through online mode. It should also frame guidelines regarding the online sale of medicines.
- It should come up with an independent health regulator that has online sales also in its purview. It should also have punitive powers for those breaking the law.

7.5. ENSURING QUALITY OF DRUGS IN GOVERNMENT SUPPLY CHAIN

Why in News?

- According to a drug survey report published by the **Ministry of Health and Family Welfare**, more than 10 percent drugs in the government supply chain are **not of standard quality (NSQ).**

More on the Survey

- Survey of the **'Extent of Problems of Spurious and Not of Standard Quality Drugs'** was conducted by **National Institute of Biologicals (NIB), Noida.**
- The design of the survey included 224 drug molecules belonging to 15 different therapeutic categories of National List of Essential Medicines (2011).
- More than 47,000 drug samples were drawn from 36 states and UTs from retail outlets, government sources, airports and seaports.
- The survey found a total of 3.16% NSQ drugs while 0.0245% was found to be spurious in nature.
- The NSQ drugs were found to be higher percentage in drugs drawn from government sources than in retail outlets.

Way Forward

- Stringent guidelines need to be put in place by the government procurement agencies for qualifying manufacturers.
- Each consignment must be checked from (National Accreditation Board for Testing and Calibration Laboratories) accredited laboratories.
- Government warehouses, medical store depots and pharmacies should have adequate storage facilities such as maintenance of required temperature, humidity, air conditioned spaces and refrigerators.
- Strict laws must be put in place to make manufacturers adhere to standard quality.

7.6. NORMS FOR BRAIN DEATH

Why in News?

- The National Organ and Tissue Transplant Organization (NOTTO) have begun to frame uniform guidelines on brain death certification all over the country.

Need of the norms

- **Transplantation of Human Organs and Tissues Act (THOTA), 1994** lays out rules for brain death certification but they are essentially clinical parameters.
- New guidelines would solve **medico-legal problems**.
- **Lack of understanding of brain death** is one factor responsible for low organ donations in India. SOPs would help remove this.

National Organ and Tissue Transplant Organization

- NOTTO is the **nodal agency that frames policy guidelines and protocols** involved in organ donation and transplantation.
- It has been set up under Directorate General of Health Services, Ministry of Health and Family Welfare.
- It **has following two divisions**:
  o National Human Organ and Tissue Removal and Storage Network
  o National Biomaterial Centre

Brain death and organ donation

- After being declared brain dead, a patient's heart usually stops beating within some time.
- This leaves only a small time to harvest organs.
- It is at this time that the consent of the family is obtained.

Significance of the norms

- **Standard Operating Protocol (SOP) for brain death certification** will help remove grey areas and also empower intensive care personnel.
- In India, deceased organ donation in private hospitals lags behind the government sector. If SOPs are evolved this gap may be filled.

Challenges Involved

- States like Tamil Nadu, Kerala, Karnataka, Chandigarh and Maharashtra have had a common protocol in private and government hospitals. New SOP **would create overlap and confusion**.

Way Forward

- India still does not follow the 'Presumed Consent Method' where if not explicitly stated, the organs are harvested without consent of kin. This can be a solution to solving the problem of low organ donation in India.
- Apart from this, there is a need of greater awareness mechanisms to draw in more voluntary organ donors.

7.7. UGC'S FUNDING POWERS

Why in news?

The Centre has decided to divest the higher education watchdog of its financial powers and delegate them to the Human Resource Development (HRD) Ministry.

Implications

- This is a step towards educational reforms where the University Grants Commission (UGC) will not have any financial powers and will eventually function only as a certification body.
- For this purpose, the HRD Ministry last week signed a deal with Canara Bank to set up a **Higher Education Financing Agency (HEFA)** that would **eventually take over UGC's financial powers**.
- The HEFA will start funding higher educational institutions, including IITs and IIMs, by the start of the next academic session.

Why Reforms

- The UGC's **mishandling of issues** related to Deemed Universities and its **failure to revamp the higher education** curriculum for years.
- Also, a **special committee** set up by the Centre to examine various issues between the UGC and the HRD Ministry has **recommended for removing financial powers** of the UGC.

Way Forward

Comprehensive reforms should be taken to improve outcome in education sector in India based on recommendations of T S R Subramanian committee report and other such recommendations.

7.8. KADIYAM SRIHARI COMMITTEE

Why in news?

- Recently sub-committee of **Central Board of Advisory Education (CABE)** under the chairmanship of **Kadiyan Srihari** has been constituted by Union Human Resource Development Ministry to look into the matter of girls' education.

Central Board of Advisory Education

- It is highest advisory body to advise the Central and State Governments in the field of education.
- It is headed by **Union HRD minister** and consists of nominated members representing various interests in addition to elected members from **Lok Sabha** and **Rajya Sabha**
- Major **functions** of CABE are to review the progress of education from time to time, to assess the extent and manner in which education policy has been implemented by central and state governments and other concerned agencies and to give appropriate advice in the matter.

7.9. ASHOK KUMAR ROOPANWAL COMMITTEE REPORT

Why in News?

- The one-man commission constituted by the HRD ministry was set up to look into the Rohith Vemula's death at the Hyderabad Central University and suggest measures to prevent such.

Recommendations of the report

- **Counselling Centers** with professionally counselors should be set up.
- The university should evolve an **appellate mechanism** for students to appeal of excesses in the university.
- **Monitoring Committee needs to be** constituted to provide guidance on the matters related to the subjects studied by the students. Immediately report to Vice Chancellor on serious issues.

> **Issues Involved**
> - **Alleged caste discrimination prevalent in academic institutions** needs to be eliminated to fulfill the ideals of Constitution and promote ideas of peace and tolerance.
> - **As per Fundamental Duty 51A,** it is the duty of every citizen to promote harmony and spirit of common brotherhood amongst India's diversity.
> - **Article 38 of the Indian Constitution** makes it the duty of the state to secure and protect social order.

- **Equal opportunity cell** headed by the **Anti-discrimination Officer** as per the **UGC (Promotion of Equity in Higher Educational Institutions) Regulations 2012** should be made functional.
- **Grievance Redressal Committee headed by the Ombudsman** as per the UGC (Grievance Redressal) Regulations 2012 should be made effective and should dispense grievances weekly.
- **A strong induction programme**, a **local guardian system** for outstation students and suitable student volunteers to act as mentors and help freshers are needed for better acclimatization.
- Remedial teaching for academically weak students.
- **Strict compliance of Hostel Admission Rules** and Regulations in allotting hostel accommodation and supervision.

7.10. TEJASWINI PROJECT

Why in news?

- Recently World Bank has signed an agreement with India to provide **$63 million loan** for **Project Tejaswini** to empower adolescent girls and young women in state of Jharkhand.

About Tejaswini

- It aims to empower adolescent girls and young women (between 14-24 years) with basic **life skills** and further provide opportunity to complete their secondary education and acquire market driven skills. This program was approved by World Bank in 2016.
- Project will be implemented in **17 districts of Jharkhand** and estimated 6.8 lakh adolescent girls and young women are expected to benefit from this programme.
- This is the **first World Bank project** in India that is solely focused on the welfare of **adolescent girls** and **young women.**

More about Tejaswini Project

Highlights of the Project

- It has **3 main components** namely:
  - ✓ Expanding social, educational and economic opportunities.
  - ✓ Intensive Service Delivery.
  - ✓ State capacity-building and implementation support.
- The project will operate at **two** levels:
  - ✓ **Community level:** In this community based platforms like **clubs/centers** will hold regular counseling sessions, educate in **life skills**, provide livelihood support services and disperse information about training and courses for adolescent girls and young women.
  - ✓ **Institutional level:** Partnered institutions will provide vocational training, business skill training and non-formal education will be provided to target groups.
- **Life skills education** has **four core** modules:
  - ✓ **Resilience and soft skills**: It includes communication and problem-solving skills, goal-setting, and techniques to maintain psychological wellbeing through during difficult times.
  - ✓ **Rights and protections**: It is related to early marriage, child labor, safe migration, gender-based violence, and accessing services and entitlements.
  - ✓ **Health and nutrition**: It includes sanitation and hygiene, nutritional habits for self and children, and sexual and reproductive health.
  - ✓ **Financial literacy**: This module would help teach numeracy, saving, budgeting, and accessing credit and financial institutions.
- Non-Governmental Organizations will play an important role in conducting meetings/sessions and sensitizing common people in general and adolescent girls and young women in particular about the scheme and resulting benefits.

7.11. NATIONAL CHILD LABOUR PROJECT (NCLP)

Why in news?

Kailash Satyarthi expressed disappointment over an increment of just 8% for the **National Child Labour Project** in the Budget.

National Child Labour Project (NCLP)

A project of Ministry of Labour, its basic objective is to suitably rehabilitate the children withdrawn from employment thereby reducing the incidence of child labour in areas of known concentration of child labour.

The NCLP Scheme seeks:

- To eliminate **all forms of child labour through**
  - ✓ Identification and withdrawal of all children in the Project Area from child labour,
  - ✓ Preparing children withdrawn from work for mainstream education along with vocational training
  - ✓ Ensuring convergence of services provided by different government departments/agencies for the benefit of child and their family
- To contribute to the **withdrawal of all adolescent workers** from Hazardous Occupations and their **Skilling and integration** in appropriate occupations through facilitating vocational training opportunities through existing scheme of skill developments
- **Raising awareness** amongst stakeholders and target communities, and orientation of NCLP and other functionaries on the issues of 'Child Labour' and 'employment of adolescent workers in hazardous occupations/processes'
- Creation of a **Child Labour Monitoring, Tracking and Reporting System**.

Target Group

- All child workers below the age of 14 years in the identified target area.
- Adolescent workers below the age of 18 years in the target area engaged in hazardous occupations.
- Families of Child workers in the identified target area.

Strategy

- To create an enabling environment in the target area, where children are motivated and empowered through various measures to enroll in schools and refrain from working
- Households will be provided with alternatives to improve their income levels.
- It will be implemented in close coordination with State, District administration and civil society.
- Elimination of Child Labour is joint responsibility of the Ministry of Labour and Employment and the State Governments.

Expected Outcomes

- Contribute to the identification and eradication of all forms of child labour.
- Contribute to the identification and withdrawal of adolescents from hazardous occupations and processes in the target area.
- Successful mainstreaming into regular schools of all children who have been withdrawn from child labour and rehabilitated through the NCLPS.
- Adolescents withdrawn from hazardous occupations to have benefited from skills training wherever required and linked to legally permissible occupations.
- Better informed communities, specific target groups and the public at large as a result of the Social Mobilization Programme and Awareness about the ill effects of child labour.
- Enhanced capacities to address the issue of child labour through training of NCLP staff and other functionaries.

7.12. HAMARI DHAROHAR SCHEME

Why in News?

- The first sitting of the **Committee on Cultural Harmony Conclave** under the **"Hamari Dharohar"** scheme took place recently.
- This Committee has been formulated to organise events that will help spread awareness about minority culture and heritage in India.

Hamari Dharohar

- It is a **central sector scheme launched in 2014 by the Ministry of Minority Affairs** in order to preserve the rich heritage of minority communities under the overall concept of Indian culture.
- Implementation of the scheme is expected to improve general awareness about the culture and heritage of the minority communities and also strengthen the social fabric of the country.
- **Exhibitions, preservation of literature/documents, promotion of calligraphy and R&D** are some of the activities to be carried out.
- The six minority communities notified under the **National Commission for Minorities Act, 1992** are to be covered. They are: **Muslims, Christians, Sikhs, Buddhists, Parsis and Jains.**
- Two other schemes formulated for the benefit of minorities are: **Padho Pradesh and Nayi Roshni.**

7.13. BRAILLE ATLAS

- **Ministry of Science and Technology** has recently launched first-of-its-kind **Braille Atlas** to let visually impaired people especially students study maps.
- The atlas has been developed both in Hindi and English by the **National Atlas and Thematic Mapping Organisation** by using indigenously developed **silk-screen painting technology**.
- Atlas consists of **20 maps** on different themes of physical, socio-economic and cultural aspects like river system, crops pattern, natural vegetation, crops, roads and railways, etc.
- It consists of raised maps embossed with simple lines and point symbols to facilitate its users to find out any location and area coverage, easily distinguishable in terms of shapes and textures.

- Each Map has a legend and reference in **Braille script** to help in navigating the map.
- In India first Braille map was made in 1997.

National Atlas and Thematic Mapping Organisation (NATMO), Kolkata

- It was founded in **1954** as **National Atlas Organisation** to compile national atlas of India.
- It is a premier agency under the **Ministry of Science and Technology** and is primarily engaged in preparing different **thematic maps** and **atlases** and other documents on national, state, district, block level and many other **monograms.**

7.14. PISA

Why in News?

- The **HRD Ministry** has decided to take part in **PISA (Programme for International Student Assessment)** again from 2021.

What is PISA?

- It is a global evaluation system launched by **OECD (Organisation for Economic Cooperation Development)** in 2000.
- It tests the learning levels of teenage students (15 year olds) in **reading, mathematics and science.**
- The test is carried out every three years.
- India boycotted the test after 2009 due it's to poor performance.
- PISA's data can be used to improve India's school system and bring them at par with the global standards.
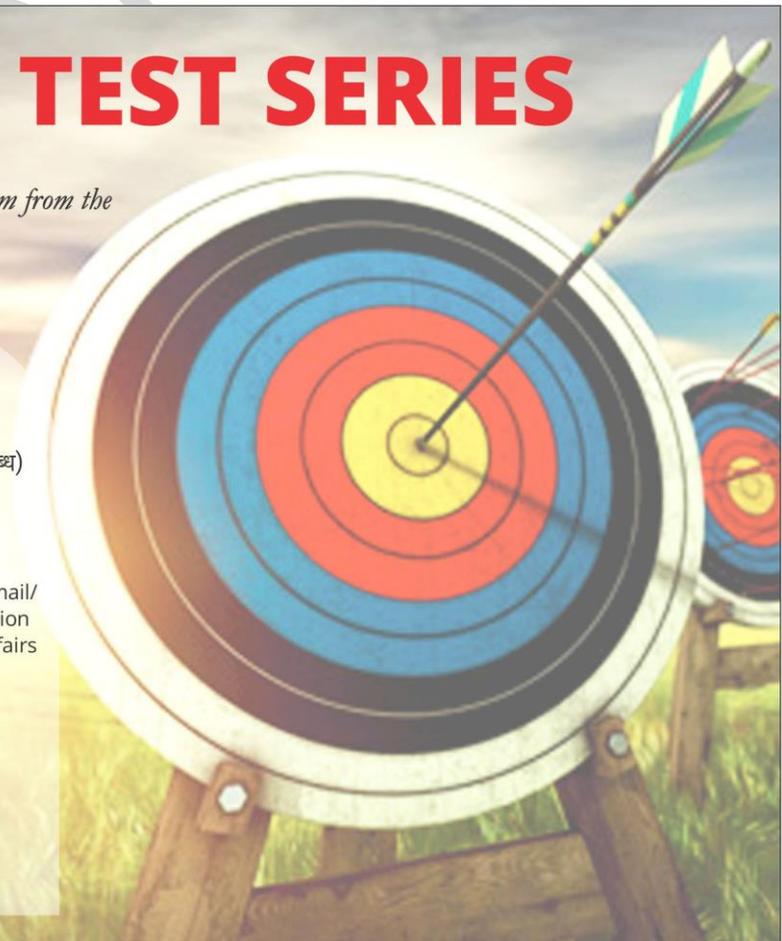
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8. CULTURE

8.1. NATIONAL MISSION ON MONUMENTS AND ANTIQUITIES

Why in News?

- Poor implementation of National Mission on Monuments and Antiques is being said to be one of the reasons of idol theft seen in recent times.

Background

- The Antiquities and Art Treasures Act of 1972, mandates compulsory registration of antiquities.
- Ministry of Culture launched the National Mission on Monuments and Antiquities (2007) (NMMA) to document antiques in India (public or private).
- It was initially approved for 5 years from 2017-2012 (XI plan). It was also proposed to be extended in the XII plan as a Central scheme.
- Performance audit by CAG on **Preservation and Conservation of Monuments and Antiquities in 2013** observed India's poor acquisition, documentation and conservation systems.
- In recent times CBI and ED have apprehended large scale antique thefts by Subhash Kapoor. One of the reasons of this is **poor documentation of the idols and lack of specialized force for it**.
- **Despite our fundamental duty to preserve heritage**, several monuments are the victims of abuse and disrespect. E.g. Taj Mahal affected by pollution.

About NMMA

- It offers advice on heritage matters, **framing guidelines on conservation of heritage** monuments and sites and **suggesting appropriate amendments to the heritage laws.**
- It **documents and creates a suitable database on built heritage and sites** to disseminate information to planners, researchers, governments etc. and to help in their better management.
- It also promotes awareness and sensitizes people on preservation of the cultural aspects of built heritage, sites and antiquities.
- It also trains and builds capacity of the concerned State Departments, Local bodies, NGOs, Universities, Museums, Local communities etc. in management of heritage.

> **Other missions under Culture Ministry**
> 1. **National Mission on Manuscripts** – It was started in 2003. It aims to identify, document, conserve and make manuscript heritage of India accessible.
> 2. **National Mission on Libraries** –
>   - ✓ It aims to create a National Virtual Library of India.
>   - ✓ It also aims to set model libraries and build capacity of library professionals.
>   - ✓ Raja Ram Mohan Roy Library Foundation is its nodal agency.

- It is also involved in Publication and Research in relation to monuments and antiques.
- It will also draw up a national thematic atlas of built heritage, sites and antiquities.
- Documentation will be done both by Archeological Survey of India and also by outsourced agencies.

Suggestions

- Apart from fulfilling the objectives of the NMMA, there should be a creation of a dedicated **idol theft wing at the national level** based on Italian model. Presently CBI investigates into such cases.
- **Greater budgetary and alternative funding** is the need of the hour to preserve the heritage and also fulfill its documentation.
- NMMA should **be linked to major schemes like Digital India and Skill India** to have a better focus on implementing it.

Way Forward

- Monuments and Antiquities form the aesthetic aspect of our cultural heritage. Therefore it should be documented and maintained. Government should also amend the 1972 Act on Antiquities and Art Treasures to make it relevant to the present times.

8.2. REPUBLIC DAY TABLEAU

Why in News?

Tableaux from 17 states and UTs and six ministries showcased the varied historical, art and cultural heritage of the country at the 68th Republic Day.

8.2.1. ODISHA-DOLA JATRA

- Dola Yatra or Dola Melana or Dola Festival is a festival of get together of Lord Krishna's idols.
- It is believed that all year devotees visit the deities but in the month of Falguna, the deities visit the devotees.
- The festival is celebrated from 10th day of bright fortnight up to full moon day of Falguna.
- Deities from different villages and different Sahi Bhagabat Ghara come to the Melana Padia (field) by Dola, a specially designed temple like structure made of wood.
- The get together is celebrated in different villages/cities across Odisha. Odissi and gotipua dancers also perform in front of the Bimana/Dola.

8.2.2. YAK DANCE-ARUNACHAL PRADESH

- The Yak dance is one of the famous mask dances of the Buddhist tribes (Mahayana sect) of Arunachal Pradesh
- It is performed during the Losar festival.
- Individuals put on Yak costumes and masks and perform the Yak dance in order to honour the Yak.
- The masked dancers represent the members of the family who are said to have discovered the Yak with the help of a magical bird hundreds of years ago.
- The Yak is believed to be the symbol of wealth and prosperity.

8.2.3. LAI HAROBA-MANIPUR

- Lai Haroba meaning "festivities of Gods" is a native festival of the Meities, the largest ethnic group of Manipur.
- The festival of Lai Haroba celebrates the creation of universe. The festival has twelve events which displays different phases of creation.
- The festival is characterised by song and dance performance and is celebrated in the month of April and May.

8.2.4. FOLK DANCES OF KARNATAKA

- **Dollu Kunitha**
  - ✓ Dollu Kunitha is one of the variations of the Kunitha dance. The other being Suggi.
  - ✓ The dance is widely performed during the harvest season.
  - ✓ Mainly performed by the shepherd community (known as Kuruba), it involves dancing to the drum beats.
- **Bayalata Dance**
  - ✓ It is a folk dance of Southern Karnataka which marks the end of harvest season.
  - ✓ It is a religious dance fused with drama and dialogues.
- **Yakshagana Dance**
  - ✓ Yakshagana is a fusion of dance and drama.
  - ✓ Stories depicted from the epics of Ramayana, Mahabharata and Purana are performed on stage.
  - ✓ A narrator narrates the story along with musicians playing traditional instruments while actors enact the story.
- **Nagamandala Dance**
  - ✓ It is a night long ritual performed in the regions of Southern Karnataka.

- ✓ It involves ritualistic appeasement of the serpent which is considered to be a symbol of fertility.
- ✓ This dance form is performed by male dancers (called Vaidyas) who dress as female serpents (nagakannikas).
- ✓ The dancers perform around a design painted on a sacred ground which represents the serpent spirit.

8.2.5. CHAMBA RUMAL-HIMACHAL PRADESH

- Chamba Rumal is a form of embroidery done on cotton or muslin cloth with help of silk threads.
- It originated from Chamba village near Ravi river in Himachal Pradesh.

8.2.6. KARAKATTAM-TAMIL NADU

- Also known as Karagam, this popular folk dance originated from Thanjavur and spread to the neighbouring areas.
- It is a ritualistic dance involving acrobatics feats performed during the month of August. It is dedicated to the goddess of health and rain Mariamman.
- It is performed by an individual or two persons.

8.2.7. HOJAGIRI-TRIPURA

- It is a folk dance performed by the Reang clan of the Tripuri people.
- It is performed during Hojagiri Festival (laxmi puja). Laxmi Puja is held on the following full moon night of Durga Puja.
- The dance is performed only by women while the male members sing and play musical instruments.
- The dancers use props like BALING, a wide circular rice cleaning article made of cane, a pitcher or kalash, a bottle, a household traditional lamp, a plain dish and a handkerchief.

8.3. 350TH ANNIVERSARY OF GURU GOBIND SINGH

Why in News?

- Recently 350th anniversary of Guru Gobind Singh was celebrated.

About Guru Gobind Singh

- He was the 10th Sikh guru born in Bihar.
- He forwarded the teachings of preceding Sikh Gurus by promoting **social institutions like langar (community kitchen), sangat and kirtan (mass prayer)** that acted as unifying agencies.
- He was a poet and philosopher credited with **writing 'Dasm granth'** which had a collection of hymns, philosophical writings, autobiography etc.
- **He is also credited with compiling the Guru Granth Sahib/Adi Granth** that became the last and the eternal guru of Sikhism.
- He mastered languages like Sanskrit, Persian, Braj etc.
- He was the **founder of a warrior community called Khalsa** (saint soldiers) to fight injustice. Eg. Fight social exclusion, Fight religious oppression from tyrants like Aurangzeb.
- He appraised Mughals of the misdeeds towards Sikhs in his letter to Aurangzeb called Zafarnama. He also fought him in Battle of Muktsar in 1705.

> **About Khalsa:** The Khalsa were obligated to **wear the Five K's** –
> - o Kesha (longhair) – Not cut hair to show acceptance to the form that God intended humans to be
> - o Kangha (comb) – A symobol of cleanliness
> - o Kara (steel bracelet) – To remind Khalsa of self-restraint
> - o Kaccha (Knee shorts) – For being always ready to go into battle.
> - o Kirpan (sword) – To defend oneself and the weaker section.

Current relevance of ideas of Guru Gobind Singh

- Religious bigotry stands no ground in a multicultural land like India. He laid emphasis on **social equality, universal brotherhood, altruism and social service.**
- He synthesized Bhakti or Devotion to God with Shakti or moral and physical strength to stand for righteousness.
- **Caste was a taboo in Khalsa** and Guru Gobind Singh considered '**all mankind of one caste alone**'.

8.4. RIN MUTINY

Why in news?

70th anniversary of the Royal Indian Navy Mutiny was celebrated on February 18th, 2017.

About RIN Mutiny

- It started on February 18th, 1946 and is often called the 'forgotten mutiny'. The mutiny started in response to racial discrimination, but **factors leading to this mutiny** were at play for quite some time
- They declared the RIN renamed as the 'Indian National Navy'.
- They also decided that their struggle would be a non-violent one and henceforth they would take orders 'only from the national leaders'.
- The mutiny soon spread to Kochi, Vizag, Chennai, Karachi and Kolkata.
- The Gurkhas in Karachi refused to fire on the mutineers.
- Local people extended support to the ratings by offering free food and organizing protests in support of mutiny.
- Though it started as a food riot but very soon a formal list of demands were presented which consisted:
  - ✓ Release of all Indian political prisoners including INA POWs and naval detainees.
  - ✓ Withdrawal of Indian troops from Indonesia and Egypt,
  - ✓ Equal status of pay and allowances
  - ✓ It also formally asked the British to quit India.
- The ratings agreed to surrender after interference of Sardar Patel and Mohammad Ali Jinnah.

8.5. DARA SHIKOH

Why in news?

Dalhousie Road in Delhi was renamed to Dara Shikoh Road.

About Dara Shikoh

- He was the eldest son of Shah Jahan who favoured him as successor. He lost war of succession to Aurangzeb.
- He developed an early interest in the esoteric aspects of Islam and mysticism and in Hindu philosophy.
- He was a philosopher, tolerant and pluralist, who tried to find common threads in Islam and Hinduism.
- His **Majma' al-Bahrain** (Mingling of the Two Oceans), is one of the earliest works to explore both the diversity of religions and a unity of Islam and Hinduism and other religions.
- With the help of pandits, he also translated 52 volumes of the Upanishads from Sanskrit to Persian into a tome called **Sirr-e-Akbar** (The Greatest Secret).
- He had served as governor of Lahore, Allahabad, Malwa, Gujrat, Multan, Kabul and Bihar.

8.6. BET DWARKA DARSHAN CIRCUIT

Why in News?

- **Ministry of Urban Development** has approved the development of 6 km long **Bet Dwarka Darshan Circuit in Gujarat** under the central scheme **HRIDAY.**

Bet Dwarka Darshan Circuit

- The Circuit would connect famous **Dwarkadish Haveli and Hanuman Dandi.**
- There are two important water bodies along the stretch: **Ranchod Talav and Shankhudhar Lake.**
- Developmental works to be taken up under the project include: development of streets, plantation, provision of benches, resting spaces and so on.

National Heritage City Development and Augmentation Yojana (HRIDAY)

- It is a central scheme launched by **the Ministry of Urban Development in 2015** with the focus on holistic development of heritage cities.
- The scheme has been implemented in 12 identified cities viz. **Ajmer, Amravati, Amritsar, Badami, Dwarka, Gaya, Kanchipuram, Mathura, Puri, Varanasi, Velankanni and Warrangal**.

8.7. PREHISTORIC ROCK ART SITE DISCOVERED

Why in News?

- Archaeologists have spotted a prehistoric rock art site at the foothills of **Ambukuthi hills** in a village located in **Sulthan Bathery taluk of Kerala's Wayanad district**.

More on the Site

- The site is characterised by petrpgylphs and petrographs similar to those found in Edakkal caves and Thovari hillocks.
- Petroglyphs and petrographs are usually found in rock shelters but in Ambukuthi, they are found on six small granite blocks independently located on a lakeside.
- Their style, motif and workmanship are strikingly similar to Thovari. They do not have humans or animals in motion which are present at Edakkal Caves.

> **Petroglyph:** These are images created by carving out a portion of the rock.
>
> **Petrograph:** These are paintings or drawings done on a rock face.
>
> **Edakkal Caves**
> - The Edakkal Caves were discovered by Fred Fawcett, an erstwhile police official of the Malabar State in 1895.
> - They are present in Sulthan Bathery takul of Wayanad district in Kerala.
> - These caves are formed naturally out of a strange disposition of three huge boulders.
> - Edakkal Caves are known for **Neolithic petroglyphs.**
>
> **Thovari Hillocks**
> - The petroglyphs at Thovari Hillocks were discovered in 1984.

8.8. MADHWA NAVAMI FESTIVAL

Why in news?

- Recently **Madhwa Navami festival** was celebrated in Udupi district of Karnataka.
- This annual festival is celebrated to commemorate the **journey** of great Indian philosopher **Sri Madhwacharya** to badrinath where he went to meet his Guru Veda Vyasa but never returned.

Sri Madhwacharya

- He was an Indian philosopher and chief exponent of **Dvaita (Dualism) philosophy**.
- He was born in 1238 AD in Udupi district of Karnataka and also known as **Anandatirtha** or **Purnaprajna.**
- His followers known as **Madhvas** consider him as incarnation of wind God VAYU.
- He differed significantly from traditional Hindu belief of **Universal Salvation** which states that all souls will eventually obtain Moksha, even though it may be after millions of rebirths.
- He divided the souls into 3 categories of **Mukti Yogyas** (souls qualify for liberation), **Nitya Samsarins** (souls subjected to eternal rebirth) and **Tamo Yogyas** (souls that will eventually condemned to hell).
- He also outlawed **Devadasi system** in all place of worship under his follower's control.

Dvaita Philosophy (Dualism)

- It is an outshoot of the Vedanta Philosophy of ancient India.
- It proclaims that God and Souls are different entities and that souls are not **created** by God but depend on Him for their existence.
- This is opposite to **Advaita Philosophy** of **Shankaracharya** which believes in **Monism (Non-dualism).**

8.9. NILAMBUR TEAK: GI TAG

- Kerala's **Nilambur Teak** is soon to get a **Geographical Indication (GI) Tag.**
- Nilambur is located in Malappuram district of Kerala and has **oldest** teak plantation in the world. It also hosts world's first **Teak Museum.**
- Other Kerala products with **GI Tag** includes **Pokkali rice**, **Vazhakulam Pineapple**, **Wayanadan rice** varities **Jeerakasala** and **Gandhakasala**, **Tirur Betel vine**, **Central Travancore Jaggery**, **Chengalikodan Nendran banana** etc.

About Geographical Indication (GI) Tag

- It is a **sign** that identifies a product as originating from a particular location which gives that product a special quality or reputation or other characteristic.
- In India **Geographical Indication registration** is governed by **Geographical Indications of Goods (Registration and Protection) Act, 1999** which came in to force in 2003.
- Once Geographical Indication tag is granted it is valid for next 10 years.

8.10. INDIAN COUNCIL FOR CULTURAL RELATIONS

Why in news?

Indian Council for Cultural Relations (ICCR) sponsored Pakistan's **Karachi Literature Festival, 2017** despite recent turbulence in Indo-Pak Ties.

About Indian Council for Cultural Relations

- It is an autonomous organization founded in **1950** by **Maulana Abdul Kalam Azad**, **first** education minister of **Independent India**.
- Its mains **objectives** are:
  - ✓ To foster and strengthen cultural relations and mutual understanding between India and other countries.
  - ✓ To promote cultural exchanges with other countries and people.
  - ✓ To establish and develop relations with national and international organizations in the field of culture.

9. ETHICS

9.1. GOOD SAMARITAN LAW

Why in News?

- Recently a story was published about a young man who lay bleeding on a road in Koppal, Karnataka while onlookers took pictures of him and made a video.

Issues Involved

- **Despite Karnataka having a Good Samaritan Law** that protects bystanders from any harassment or victimization at the hands of police, hospital staff etc., and incidents like Koppal still occur.
- **Decreasing values and care for others in a consumeristic society. Eg.** Rather than saving the life of the victim, the bystanders of Koppal were more interested in posting the video of the incident online.

Ethical Questions Involved	What ought to be done?
1. **Can a law, rule or regulation on Good Samaritan only, help** in saving lives due to the rising road accidents?	• Apart from enacting a law, there **ought to be a change in attitude** in the people to help others in need. • Also, Law ought to be **enforced strictly** to increase people's belief in it.
2. **Sometimes, Social influence** discourages any individual initiative that may want to help.	• **If the goal is to save life**, an individual ought to help, without fixation on fear from social influence.

What needs to be done?

- Any law that attempts to change people's perception of a state agency demands a parallel change in the behaviour of the agency itself. In this case, police investigation and enforcement should be reformed.
- There is need to **publicize the names of Good Samaritans to incentivize** them to help others.
- A strict enforcement of the guidelines of Supreme Court on Good Samaritan Law by the police administration and also the hospital staff is also the need of the hour.
- Educating the younger generation and the people by **practical examples and curriculum changes** is also a step towards becoming a Good Samaritan.
- **Responsible use of social media** has to be taught to all to avoid publicizing unfortunate incidents on it.

(For Good Samaritan guidelines, please refer to the Vision IAS PT 365 Social module of 2015-16)

9.2. WHISTLE BLOWING

Why in News?

- Recently a whistleblower alleged that the pharmaceutical giant Pfizer is –
  - Illegally importing and misbranding kidney cancer drug Torisel in India.
  - Selling a steroid called Medrol with an extended expiry date.
  - Not testing its pneumococcal vaccine Prevenar as per norms.
- After the whistleblower allegations made to Karnataka State Human Rights Commissions, the application has been given to NHRC.

Issues involved

- **With recent laws like RTI and Whistleblower Protection Act**, many whistleblowers have come up to expose internal problems in an organization.
- **Centre State coordination** - Central Drug Standard Control Organization (CDSCO) is only concerned with policy matters. Day-to-day operational activities on drug regulation are taken by State drug regulatory officials.

Ethical Questions involved	What ought to be done?
1. Is whistle blowing right? Is it a type of freedom of expression?	✓ Whistle blowing is an **alternative to the poor internal complaints mechanism of the organization**. ✓ If whistle blowing is done **for the larger public interest** then it is considered to be ethical. ✓ If it is pursued for private interests then it ought not to be done. Eg. Whistle blowing should not harm company's interest like **leaking of their trade secrets**.

2.	Accountability of companies towards the consumers they are serving.	✓ Companies have the **moral responsibility to protect and to be truthful** to both the shareholders and the stakeholders they are serving. ✓ In India**, Law is supreme**. Therefore individuals and even companies are obligated to follow it.

Impact of Whistle Blowing

* It **exposes any corruption or misuse of power** occurring in an organization. Eg. NHAI engineer Satyendra Dubey who exposed irregularities in Golden Quadrilateral project.
* It helps to reveal the truth to the larger public and **improves transparency in the organizational operations**.

What needs to be done?

* There should be a strict law that protects the **identity of whistleblowers** and also incentivize a whistleblower to reveal the malfeasance in an organization.
* The Supreme decision to put up an administrative mechanism to protect whistleblowers should be implemented by the Centre.
* The stakeholders at large should be involved to a greater scrutiny by employing social audits.
* The government departments should immediately be made to put up **legible and easily understandable Citizen Charters**.
* There should also be a severe penalty after an independent enquiry, if the whistleblower is involved in leaking official secrets of government or trade secrets of a company.

Way Forward

* Recently inaugurated Citizens Whistleblower Forum is a right step towards protecting them. Apart from that the government should also pass the pending bills related to whistle blowing. There should also be an improvement in the transparency and accountability of the company so that reliance on whistle blowing is reduced to a minimum.

10. ALSO IN NEWS

10.1. SUPREME COURT GETS FIVE JUDGES

- Five more judges were sworn in to the Supreme Court taking the total strength to 28.
- The SC judges and the Chief Justice of India are appointed by the President under **clause (2) of Article 124** of the constitution.

Strength of the Supreme Court

- At present, the maximum strength of the Supreme Court can be 31 (one Chief justice and thirty other judges).
- The number of SC judges was increased from 26 to 31 in 2009 following the **Supreme Court (Number of Judges) Amendment Act, 2008.**
- The number was originally 8 but it has been increased five times since.

10.2. INTER-DEPARTMENTAL TASK FORCE FOR BENAMI FIRMS

Why in news?

- A task force comprising members of various regulatory Ministries and enforcement agencies has been set up for a major crackdown on shell companies.

Background

- The move comes days after the government, during a small sample analysis of shell companies, found that RS.1, 238 crore in cash was deposited in these entities during the November-December period, after demonetisation.
- The Serious Fraud Investigation Office filed criminal prosecutions for cheating the national exchequer after a probe against the entry operators running a group of 49 shell companies and other proprietorship concerns
- There are about 15 lakh registered companies in India and only 6 lakh of them file their annual returns, raising suspicion that a large number of these companies are indulging in financial irregularities

About the task force

- The task force has been constituted under the co-chairmanship of the Revenue Secretary and the Corporate Affairs Secretary to monitor the actions taken by various agencies.
- The agencies will invoke the stringent Benami Transactions (Prohibition) Amendment Act against the shell companies, freeze their accounts and strike off the names of dormant companies.
- Disciplinary action will be initiated against professionals abetting the companies and entry operators, who are used to launder unaccounted-for incomes into the banking system for projecting them as white money.

10.3. CITIZENS' FORUM FOR WHISTLEBLOWER COMPLAINTS

Why in News?

- A group of eminent citizens will set up a **Citizens Whistleblower Forum (CWF)** to hear complaints of corruption from whistleblowers.
- Whistleblower Protection Act was passed in 2011 by the Parliament. But the **government has still not notified the Act**.

About the initiative

- The founding members of the initiative are Justice (retd.) A.P. Shah (Chairperson), Prashant Bhushan, former CIC Wajahat Habibullah, social activist Aruna Roy etc.
- After scrutinizing the complaints, the forum will decide course of action on a case by case basis. The actions may include –
  o Taking the matter up with the concerned authorities.
  o Putting PIL in courts.
  o Making the matter public.

10.4. PROMOTING DIGITAL TRANSACTIONS

Why in News?

- The responsibility to promote digital transactions in India has been shifted from NITI Aayog to the Ministry of IT and Electronics (MEITY).

Significance

- By shifting the responsibility to promote digital transaction to MEITY, the government is trying to **utilize the core competence of specific ministries**.
- NITI Aayog would have a **role to monitor and recommend ways to improve government schemes** and growth of IT-enabled services.

10.5. EAST COAST ECONOMIC CORRIDOR

- India and ADB signed USD 375 million pact for loans and grants to develop 800-km Visakhapatnam-Chennai Industrial Corridor, which is the first phase of a planned 2,500-km East Coast Economic Corridor. **About East Coast Economic Corridor**
- It is India's first coastal economic corridor stretching from Kolkata in West Bengal to Tuticorin in Tamil Nadu.

(Please refer September 2016 Current affairs for more info)

10.6. SUPREME COURT MAKES LEGAL SERVICES AFFORDABLE

- The Supreme Court introduced **'Middle Income Group Scheme'** to provide affordable legal services where fees would be charged as per the schedule attached to the scheme.
- The scheme will be administered through a society named '**Supreme Court Middle Income Group (MIG) Legal Aid Society**' registered for this purpose. The Patron-in-Chief of the society is Chief Justice of India and the Attorney General is its ex-officio Vice President.
- Its **beneficiaries** will be litigants in the SC whose gross income is less than Rs. 60,000 per month or Rs. 7.5 lakh per annum.

Relevant Constitutional Provisions

- Right to free legal aid or free legal service is an essential fundamental right guaranteed by the Constitution and forms the basis of **reasonable, fair and just liberty under Article 21** of the Constitution of India.
- **Article 39-A** says that the State shall "ensure that opportunities for securing justice are not denied to any citizen by reason of economic or other disabilities."

10.7. CITY WEALTH INDEX

- As per City Wealth Index, 2017 released by international property consultant Knight and Frank, Mumbai ranks 21st ahead of Toronto, Washington DC and Moscow.
- This shows that contrary to popular belief, Mumbai is still ahead of Delhi in all financial aspects including becoming the corporate hub in post-liberalised India.
- The index tracks the growing super-rich population in 125 cities across 89 countries and provides perspective on the issues that are influencing ultrahigh net worth individuals (UHNWI) investment and lifestyle decisions.

10.8. MOBILE WORKERS MORE PRODUCTIVE: ILO REPORT

- The International Labour Organization (ILO) in its report titled "*Working anytime, anywhere: The effects on the world of work*" says that the uncoupling of paid work from traditional office spaces is increasing in India.
- Nearly 19% of all Indians employed in the formal sector are **mobile workers**.

Advantages of mobile workers

- Reduction in commuting time
- Greater working time autonomy leading to more flexibility in terms of working time organization and better

- overall work-life balance and productivity.
- It can promote **inclusive labour markets and societies**, as it increases the labour market participation of certain groups, such as older workers, young women with children etc.

Future challenges

- Both companies and government policies in India are yet to start a debate on the matter. There is a need to help all stakeholders adapt to this rapidly changing nature of work.
- Managers may resist teleworking because of their inability to control or monitor physically dispersed subordinates
- 80 per cent of overtime done by teleworkers remains unpaid, compared with 60 per cent of overtime done by office workers.

10.9. E-LAABH

Why in news?

- To pay subsidies in cash like in LPG to the targeted beneficiaries, the Animal Husbandry and Dairy Development and Fisheries Dept. launched e-laabh software.

Sunandini Scheme

- This is a two year program under Rashtriya Krishi Vikas Yojana in which dairy farmer is entitled for subsidized feed, healthcare and insurance coverage for two female calves.
- The feed to be supplied for two years to the farmers.

Advantages

- Earlier farmer had to visit department at least three times for every feed requirement and now only one time for the verification of documents.
- It would be step towards eliminating corruption in the process of procurement by dept. through bidding and disbursement of feed to farmers.
- Farmers now have the choice in buying the quality of feed.
- In the long run it may increase the yield and will promote the health of calves.
- Department would also save the cost on tender process, procurement, storage and distribution.
- Concept if successful would become precursor to Universal Basic Scheme by bringing all cash components equal to subsidies of all schemes so that beneficiary can utilize it judiciously based on her requirements.

10.10. INDIA RESPONSIBLE BUSINESS INDEX

- It is a measure started in 2015 to see how **socially inclusive** the company is.
- It is a collaborative effort of non-profits-Oxfam India, Corporate Responsibility Watch, Praxis and Partners in Change.
- The index recognizes the role of businesses in creating an environment in which the rights of workers and other stakeholders throughout the supply chain are respected.
- It ranks the top 100 BSE-listed companies on their performance on five parameters:
  - Inclusiveness in supply chain
  - community as business stakeholders
  - community development
  - respecting employee dignity and human rights
  - non-discrimination at the workplace
- The 2016 index notes marginal improvement in almost all above elements.

10.11. SPECIAL ARM UNDER COMMERCE MINISTRY

Why in news?

"Special arm under commerce ministry" is suggested for future trade policy by a Govt. commissioned report submitted by a global consultancy firm for future trade policy. Currently, it is pioneered by PMO and Ministry of External Affairs.

What does the Report say?

- India's future trade (policy) model should have the Commerce Department at the helm, supported by External Affairs and Finance ministry.
- Directorate General of Foreign Trade (DGFT) should be created at apex for all trade promotion activities for the country.
- Makes a strong case for a higher profile for the Indian Trade Service (ITS) in matters of trade policies & systems.
- At present, the officials belonging to the IAS, IRS and IFS have a relatively superior role over ITS cadre regarding decisions on crucial trade policy matters.
- Implementation of work should be done by using digital platform extensively.
- Recruitment of professional with specific expertise in trade policy formulation.

What is the role of DGFT?

- Providing services such as trade representation in foreign countries, research & development, market intelligence, business matchmaking services as well as public relations, advertising and marketing services.

Suggested Role of Transformed DGFT (DGFT 3.0 - pre- and post-liberalization being the earlier two versions**)**

- Provide (foreign trade) monitoring and training services.
- Hold export promotion campaign.
- Industrial trade fair.
- Greater focus on small and medium firms

Significance

- It will improve India's ease of doing business (currently ranked 130/190)
- Deploying digital technology will transform the Trading across the border and ease of doing business.
- Revive the goods export from contraction happened since December 2014 and current demonetization.
- It fits in appropriately as small yet efficient in the policy of Government being a facilitator and enabler for doing the business.

10.12. DEFENCE INNOVATION FUND

- The Defence Minister announced a **Defence Innovation Fund** to be set up soon to promote start-ups in the defence sector.
- Bharat Electronics Ltd and Hindustan Aeronautics Ltd will contribute initially to set up the 100 crore Fund.
- The Fund will support innovation and technology development in identified areas and will be open to both Indian and foreign firms.

10.13. NATIONAL WOMEN'S PARLIAMENT

Why in News?

- A three-day National Women's Parliament (NWP), was organized by Andhra Pradesh Legislative Assembly and a government school in Amravati recently.

About the National Women's Parliament

- This is the first such initiative that will connect over 10,000 higher secondary girls with eminent women personalities.
- The theme of the National Women's Parliament was '**Empowering Women — Strengthening Democracy**'.
- It brought people from diverse backgrounds (governments, NGOs, etc.) to share ideas and knowledge on women's Parliament. 7 plenary sessions were held with discussions on subjects like –
  - o Socio-political challenges in women empowerment.
  - o Women's status and decision-making.
  - o Building own identity and vision for the future.

10.14. RASHTRIYA KISHORE SWASTHYA KARYAKRAM

Why in news?

- Ministry of Health and Family Welfare has recently launched **"Saathiya Resource Kit"** and **"Saathiya Salah"** mobile app for adolescents as part of **Rashtriya Kishore Swasthya Karyakram (RKSK).**

About the Apps

- The kit has been launched to help Peer Educators, the most important component of RKSK**,** to communicate with adolescents and answer all their questions concerned with health at the grass root/village level.
- Peer Educators (1.6 lakhs) will be recognized as **"Saathiya"** (a good friend of adolescents) and will be trained in phase manner.
- The Resource Kit comprises of Activity book, Bhranti-Kranti game, Question-Answer book and education diary.
- Any adolescent who is unable to interact with Peer Educators out of any reasons like shyness, family members can access useful information through **Saathiya- Salah mobile app** or toll free **Saathiya helpline.**

About Rashtriya Kishor Swasthya Karyakram (National Adolescent Health Programme)

- It was launched in 2014 by **Ministry of Health and Family Welfare** to comprehensively address the health needs of adolescents under the **National Rural Health mission**.

10.15. RASHTRIYA YUVA SASHAKTIKARAN KARYAKARAM

Why in News?

- The **Ministry of Youth Affairs and Sports** has integrated 8 of its schemes under one umbrella scheme known as **Rashtriya Yuva Sashaktikaran Karyakaram (RYSK).**

About the Scheme

- This scheme will act as the flagship scheme of the Ministry of Youth Affairs and Sports.
- The schemes that have been integrated under RYSK are as follows:
  - ✓ Nehru Yuva Kendra Sangathan (NYKS)
  - ✓ National Youth Corps (NYC)
  - ✓ National Programme for Youth and Adolescent Development (NPYAD)
  - ✓ Youth Hostels (YH)
  - ✓ Assistance to Scoring and Guiding Organisations
  - ✓ National Discipline Scheme (NDS)
  - ✓ National Young Leaders Programme
- The scheme will benefit youth in the age group of 15-29 years as per the definition of "youth" in National Youth Policy, 2014.
- Two schemes under the ministry have been kept out of this umbrella scheme. They are National Service Scheme (NSS) and Rajiv Gandhi National Institute of Youth Development (RGNIYD).
- The integration of the schemes will help achieve better implementation and improve the effectiveness of the various schemes by utilizing the existing field-administrative setup.

10.16. KHELO INDIA SCHEME

Why in News?

- Khelo India National Level Competitions under the Ministry of Youth Affairs and Sports took place in January.
- The Ministry of Youth Affairs and Sports is set to start off rural games as **"Grameen Khel Mahakumbh"** under Khelo India Scheme.

Khelo India Scheme

- It is a national programme which aims to develop grassroots level talent by providing them with a national level platform.

- Khelo India Scheme is based on Gujarat's model of "Khel Mahakumbh" in which schools and colleges from across the country participate in 27 different disciplines.
- The GOI of India merged the **Rajiv Gandhi Khel Abhiyan** with **Khelo India in 2016.**
- Two other schemes that were brought under the umbrella of Khelo India are: **Urban Sports Infrastructure Scheme (USIS) and National Sports Talent Search Scheme (NSTSS).**

10.17. IMPROVISED EXPLOSIVE DEVICES

- According to a report prepared by the National Bomb Data Centre (NBDC) of the **National Security Guard**, the year 2016 witnessed a 26% increase in IED blast incidents as compared to 2015.

About IEDs

- It can be called a **homemade bomb** with **Five Basic Parts**:
  - ✓ A **power supply**, often provided by car batteries or alkaline flashlight batteries
  - ✓ A **trigger** or some other **direct or indirect means of setting the device off**, such as a radio signal, trip wire, timer or firing button that someone presses. A common form of **remote trigger** is a cell phone.
  - ✓ A **detonator**, a small explosive charge that sets off the main charge. These are usually electrical, like those used for explosions in construction.
  - ✓ A **main charge**, the primary explosive that's behind the blast, like unexploded landmines.
  - ✓ A **container to hold everything together**. It may be designed to force the blast in a specific direction.

10.18. ISRO AIDED BY INDIA'S ENTRY INTO MTCR

- MTCR has facilitated **access to high-end testing technology for its solid rocket booster propulsion system**, which fires up the first stage of the Polar Satellite Launch Vehicle (PSLV).
- Earlier, testing this system was a slow process due limited technology access.
- Many **key components to upgrade the technology were in controlled items lists** under MTCR due to their **dual military use**.
- Access to MTCR's controlled items has led to **major efforts in making India a bigger player** in the $300-billion satellite launch market.

10.19. TRAPPIST-1

- Recently NASA has discovered a **new Exoplanet system** having seven **earth sized planets** orbiting a cool dwarf-star known as **TRAPPIST-1**, which is 39 light years from Earth.
- **TRAPPIST-1** (The Transiting Planets and Planetesimals Small Telescope) is named after a robotic telescope in the Atacama Desert of Chile used to study the star.
- It is a **small star** with **8 per cent** the mass of the sun and only slightly bigger than the **planet Jupiter,** lying in the constellation Aquarius. It is an **"ultracool dwarf planet"** with surface temperature much less than sun.
- Six of the planets of the system lie in the **habitable** or **goldilocks** zone with ambient surface temperature to support life.
- Out of these six planets at least three planets classified as **TRAPPIST-1 e**, **1 f** and **1 g** have an ocean.
- All **seven** planets' planetary orbits are closer to their host star, than **Mercury** is to our sun.
- This is the first time so many habitable-zone planets found around a single star outside our solar system.

10.20. THOR EXPERIMENT

- The THOR experiment aims to investigate electrical activity from thunderstorms.
- The interaction between charged particles, at the height of 10 to 100 Kms in the atmosphere, produces a variety of dazzling electric phenomena from blue jets to red sprites.
- The Thor experiment will look at them with a thundercloud imaging system from the vantage point of the International Space Station.
- It will help to understand how these discharges influence water vapour levels, cloud formation, and eventually changes in climate.
- The experiment is called 'Thor' after the god of thunder, lightning and storms in Nordic mythology.

10.21. URANIUM RESERVES FOUND IN MEGHALAYA

- Uranium mineralization in Meghalaya has been found over a large area around Domiasiat, Wahkyn, Lostoin etc.
- Uranium Corporation of India Ltd. (UCIL) under Department of Atomic Energy (DAE) has already made a plan to develop the mineral resources at Domiasiat.
- The project has the potential to generate substantial nuclear fuel for the atomic power plants of the country.

10.22. PREDATOR FOUND FOR DENGUE CAUSING MOSQUITO

- Dengue affects more than 390 million people each year. In 2016, more than 1 lakh confirmed cases of dengue were reported in India (WHO Estimate).
- Researchers at the Calcutta University recently found that the **Lutzia fuscana larvae** demonstrated a preference for feeding on Aedes aegypti larvae (the dengue-causing mosquito)
- "Lutzia fuscana" mosquito is a natural predator of Aedes aegypti.
- Thus, Lutzia larvae, being a potential biological control method, can be the better solution than using dangerous chemicals to kill Dengue mosquito.
- Since 1928 India has been using **Gambusia afinis** or mosquito fish as a biological control agent against mosquito larvae. It is an exotic species and has been distributed throughout the warmer and some temperate parts of the world.

10.23. ARCTIC VAULT RECEIVES NEW SEED DEPOSITS

Why in news?

Some 50,000 new samples from seed collections around the world, including India, have been deposited in the Svalbard Global Seed Vault

About Svalbard Global Seed Vault

- It is owned and administered by the Ministry of Agriculture and Food on behalf of the Kingdom of Norway.
- It is a gene bank built underground on the isolated island in a permafrost zone some 1,000 kilometers from the North Pole.
- It was opened in 2008 as a master backup to the world's other seed banks, in case their deposits are lost.
- It is the world's largest repository built to safeguard against wars or natural disasters wiping out global food crops.

10.24. VX NERVE AGENT

Why in news?

A preliminary report from Malaysian authorities has found that Kim Jong-nam, the half-brother of North Korean dictator Kim Jong-un, was killed by the banned nerve agent VX.

About VX nerve agent

- It acts on the nervous system (hence the name nerve agents), typically the nerves that control breathing.
- It inhibits the enzyme acetylcholinesterase, which breaks down the neurotransmitter acetylcholine

The Chemical Weapons Convention (CWC) is an arms control treaty which outlaws the production, stockpiling, and use of chemical weapons and their precursors.

It is administered by the Organisation for the Prohibition of Chemical Weapons (OPCW), an intergovernmental organization based in The Hague, Netherlands. The treaty entered into force in 1997.

India ratified the Chemical Weapons Convention (CWC) in 1996.

secreted by the cholinergic nerves. This results in more acetylcholine, which overstimulates the tissues, resulting in respiratory paralysis and death.
- The VX nerve agent is banned under international law because it's a chemical weapon as defined in the Chemical Weapons Conventions.