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Shankar IAS Academy™

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1. SOCIETY

Given the rapid increase of feminisation in agriculture, discuss the problems faced by women farmers in India and suggest measures to address those problems.

KEY POINTS

- The 'feminisation of agriculture' is picking up pace in India.
- According to Oxfam India, women are responsible for about 60-80% of food production and 90% of dairy production.
- The Agriculture Census (2010-11) shows that out of an estimated 118.7 million cultivators, around 30% were females.
- Similarly, out of around 144 million agricultural labourers, nearly 42% were females.

Problems and Solutions

- **Credits** – Women farmers are unable to approach banks for institutional loans as banks usually consider land as collateral.
- Provision of credit under the micro-finance initiative of the NABARD without collateral should be encouraged.
- **Land ownership** – The biggest challenge is the powerlessness of women in terms of claiming ownership of the land they have been cultivating.
- The foremost task for sustenance of women's presence in farming is to assign property rights in land.
- Also, the possibility of collective farming can be encouraged to make women self-reliant.
- **Pay** – Women receive differential prices for the products they sell in markets and in terms of daily wages, they are often paid less than their male counterparts for the same work, which needs redressal.
- **Machinery** – Most farm machinery is difficult for women to operate.
- It is thus important to have gender-friendly tools and machinery for various farm operations. Manufacturers should be incentivised to come up with better solutions.
- **Training** – The agricultural extension workers are predominantly male in Indian agriculture and given the importance of such services, it is necessary to make it gender-neutral.
- **Resources** – When compared to men, women generally have less access to resources and modern inputs (seeds, fertilizers, pesticides).



- Equalising access to productive resources could increase agricultural output in developing countries by as much as 2.5% to 4%.

Road to future

- Women with access to secure land, formal credit and access to market have greater propensity in making investments.
- This helps in improving harvest, increasing productivity, and improving household food security and nutrition, across the world.
- Therefore, the paradox “high participation but limited benefits to women farmers” first needs to be acknowledged and then consciously addressed by re-framing policies and developmental interventions in a way that gives women an equal chance within this sector.

2. GEOGRAPHY

There exists a strong demand for a separate time zone by northeast populace for a very long period. Should India have to follow two time zones? Justify your stand.

KEY POINTS

- India has a single time zone, defined by mean longitude at 82.5°E of the GMT, passing through Mirzapur in UP.
- This results in almost a 2hr difference in sunrise from east to west.
- The people, legislators and industrialists from northeast part of the country have been demanding a separate time zone for a long time.
- It is time for India to follow two time zones to address their genuine concerns with the existing Indian Standard Time (IST).

Problems with the existing IST

- **Day light wastage** – The Sun rises and sets much earlier than the official working hours.
- Early sunrise leads to loss of many daylight hours. In winter, this problem gets even more severe and more consumption of electricity is required to keep life active.
- **Wasting productive hours** – If the human circadian rhythm is not synchronous to light–dark (sunrise/sunset) cycle, the working efficiency of the people will be compromised.
- The existing IST fails in this case and the productive hours’ of people gets wasted.

Advantages of having two time zones

- **Energy savings** – The country could potentially save 20 million kWh energy a year if it follows two time zones.



- Also, the peak energy demands might be currently being met through costly, and sometimes polluting, methods of energy production.
- A reduction in this is likely to have several positive effects.
- **Promote physical activity** – It may encourage greater sports and recreation participation.
- **Mainstream north-east region** – It should help the north-eastern states to better align economic activities with the rest of the country.
- **Meeting other social policy objectives** – Longer daylight during evenings is likely to contribute towards **reducing road accidents and improving women's safety.**
- Having 2 time zones will synchronize human circadian rhythm with light–dark cycle.
- It is intimately tied to health, wellbeing and efficiency at work, which in turn, is intimately related to the overall socio-economic development of the region.

Road to future

- India's time keeper – CSIR's National Physical Laboratory (NPL) has recently proposed an implementable solution which locates the second time zone in the "chicken neck", connecting northeast to the rest of India.
- In this line, the border between the two time zones has a very narrow spatial-width with minimum number of train stations.
- So, it will reduce the probability of rail accidents – a major reason for opposition of two time zones in India.

3. MODERN INDIAN HISTORY

Discuss the contributions made by Sardar Vallabhbhai Patel in promoting the unity and integrity of the nation, post-Independence.

KEY POINTS

- Patel was a statesman with a strong sense of realpolitik, a realist to the core and an earthy politician whose sole aim was to build a strong and united India.

Force behind unification

- After Independence, the princely rulers had the option to either accede to India or Pakistan or remain independent.
- Yet, Patel's sagacity, foresight, patriotism, tact, persuasive powers and abiding commitment to fair play enabled him to untangle a highly complex political and social problem of an unprecedented scale, without triggering any kind of revolt or civil unrest.

- Sardar Patel's foresight and tactful navigation of the most turbulent period in post-Independence, and the resolve he demonstrated in integrating the more than 500 disparate princely States into the Dominion of India is an unparalleled accomplishment in modern history.

Architect of the steel frame

- The Iron Man of India was the chief architect of India's steel frame — the civil services.
- Thus, the All India Services were seen as an important cementing force in promoting the unity and integrity of the nation.

Selfless leader

- Another aspect of the Sardar that needs to be highlighted is his graciousness and magnanimity in readily abiding by Mahatma Gandhi's advice to withdraw his candidacy for the post of Congress President in favour of Pandit Nehru in 1946, although a majority of State Congress committees supported his candidature.
- It was apparent that the Congress President would become the first Prime Minister of India.
- It once again proved his noble intention of placing the country's interests above self.

Climate Change

The world is on the cusp of a shipping revolution as a consequence of climate change. Analyse.

KEY POINTS

Consequences of Climate Change

- Climate change is resulting in parts of the Arctic warming up to 100% faster than elsewhere.
- The extent of sea ice covering the Arctic Ocean has declined in every decade since the 1980s.
- There is evidence that ancient, thick ice is disappearing as well.

Shipping revolution

- Resultantly, as sea ice reduce decade on decade, it will open up vast swathes of the Arctic Ocean.
- The ships may, by the middle of this century, be able to pass directly over the North Pole.
- The current route is via the Malacca Strait, Indian Ocean, Gulf of Aden and Suez Canal.
- The Northern Sea Route could potentially cut the travel distance between East Asia and Western Europe.
- It could considerably bring down the distance and the journey time.
- As voyage times fall significantly, **shipping could become more attractive** in north than the southern routes.



- Shipping activity in the region is thus likely to increase significantly over the next decade.

Challenges

- Costs will be a major consideration towards the above transformation.
- Arctic ice conditions will still vary greatly from year to year.
- The passage is only feasible for around three months a year.
- This could discourage shippers for whom keeping to schedules is important.
- Increased insurance costs and safety considerations are other deterrents.

4. POLITY

Defamation laws are meant to strike a balance between the freedom of expression and the right to reputation. Does the Indian criminal defamation law balance those two? Analyse

KEY POINTS

- There must exist a balance between one's freedom of expression and other's right to reputation.
- Defamation law is the tool that is used to strike the balance.
- But, the Indian criminal defamation law (sec.499 of IPC), in the guise of protecting reputation, often silenced the freedom of speech and expression.

Concerns with the Indian defamation law

- **Conviction** – Unlike many other countries, defamation in India is a criminal offence (and not just a civil wrong).
- So it is a conviction that entails both social stigma and potential jail time.
- **Process** – There is a very low threshold for a prima facie case of defamation to be established by a complainant.
- S/he must only show that an “imputation” has been made that could reasonably be interpreted as harming reputation.
- On the other hand, an accused has multiple defences open, but they are effectively available **only after the trial commences**.
- So an accused individual would have to undergo the long-drawn-out trial process, where the procedure in itself is punishment.
- **Disproportionality** – Even the defences open to an accused are insufficient to protect free speech.

- In a civil defamation case, a defendant need to only show that her statement was true in order to escape liability.
- But in a criminal defamation proceeding, an accused must show that her statement was true and **in the public interest**.
- This is paradoxical as the legal system is more advantageous towards those at the receiving end of civil defamation proceedings.
- On the other hand, it is harsher towards those who have to go through the criminal process.

Road to future

- It is now imperative to address the above concerns especially, at the time where defamation law is effectively used against the #me too campaign.
- The courts can thus choose to revisit the constitutionality of criminal defamation, but even without that, there are enough ways to judicially interpret Sec 499.
- This is to ensure that it no longer remains the tool of the powerful to blackmail, harass, and silence inconvenient speech.

The jurisprudence of the “sealed cover” threatens the constitutional values of open justice and the culture of justification. Discuss this in the light of the increased use of sealed cover by judiciary in the recent times.

KEY POINTS

- There has been a rapid increase in cases where the judges asking for material in a sealed cover in India.
- For example, in the ongoing case of Rafale controversy and the updation of National Register of Citizens (NRC) in Assam, the courts use the sealed cover jurisprudence.
- The “sealed cover” was also at play in the recent hearings involving the Judge Loya investigation, as well as the challenge against the Bhima-Koregaon arrests.
- The growth of the jurisprudence of the “sealed cover” — which effectively involves the court in a secret dialogue with (in most cases) the State — is a disturbing trend.

Concerns with the “Sealed cover”

- The rationale behind such sealed cover is based on the presumption that certain information is too “sensitive” for public scrutiny, and that therefore, it is only the court that is entitled to see it, and to decide.
- But, it contradicts with the constitutional values of open justice and the culture of justification.
- **Open justice** – The dealing of justice must, at all times, be transparent and subject to public scrutiny.

- Once the Court admits a case — thereby acknowledging that it is beyond the domain of “reasons of State” and subject to judicial scrutiny — openness must be the universal norm.
- **Culture of justification** – Every exercise of public power must be justified to its citizens.
- Among the three wings of State, the judiciary alone is bound by the requirement that for every judgment or order that it passes, it must give reasons — reasons that are open to public scrutiny.
- When a court decides on a case based on materials provided in a sealed cover, it degrades the court’s openness and obstructs the people’s right to know the reason for such a decision.
- Also, not only it violates the principles of open justice and culture of justification, but also infantilises the public.

5. UNION & STATE

States failure in constituting State Finance Commissions (SFCs) has affected the empowerment and finances of local bodies. In what ways the 15th Finance Commission can address those problems?

Discuss

KEY POINTS

- As per A-243 (I) of the Constitution, State governments have to constitute SFCs and obtain their recommendations, so that these can be suitably factored in by the Central FC while recommending on the overall devolution from the central pool of divisible resources to the States.
- But, many States have not been setting up their SFCs every five years.
- Also, there are cases where the recommendations of an SFC have neither been formally accepted by the State government, nor were the SFC report laid before the State legislature.
- There are also instances where the State government, despite having accepted its SFC’s recommendations fully or partially, has de-facto not implemented them and dealt with the recommendations in a perfunctory manner.
- These developments have affected empowerment and finances of local bodies.

Suggestions

- **Incentivise** – The 15th Finance Commission must incentivize the States to constitute their SFCs and empower their local bodies.
- A portion of the earmarked funds for PRIs and ULBs could be distributed as **incentive** to States which constitute their SFCs as per the constitutional norm.
- This should empower them to raise tax and non-tax revenue in areas specified by 15th FC and SFCs.

- Local bodies of States performing better, will gain, which should induce the other State governments to be more conscious of their responsibilities
- **Institutionalize** – 15th FC must **institutionalize** the devolution process to PRIs and ULBs so that, the recommended funds flow to them in a time-bound manner.
- As per the existing system, all funds devolved to States on recommendations of Central finance commissions are directly transferred to State governments' treasuries.
- The 15th Finance Commission should recommend that the funds earmarked for PRIs and ULBs, should be managed through **Public Financial Management System (PFMS)**.
- PFMS would track flow of funds on a real-time basis and will eliminate delays in transfers to local bodies.

6. STATUTORY BODIES

What are the core issues that are plaguing National Human Rights Commission (NHRC)? Examine if the Protection of Human Rights (Amendment) Bill, 2018 addresses those issues.

KEY POINTS

Core issues

- **Selection Committee** – Tasked with appointing the chairperson and the members, the committee is dominated by the ruling party.
- There is thus a need to diversify the selection committee.
- **Process** – The selection process is ambiguous as the criteria to assess candidates are not specified.
- **Investigation** – Police officials investigating for the NHRC are sent on deputation by their forces.
- Their allegiance lies with their home cadre to which they return after their tenure at the Commission is over. This conflict of interest restricts the scope of their work.
- **Funds** – Besides these, there is long pendency of the Commission's requests for additional funds.

The PHR (Amendment) Bill, 2018

- The Bill propose to include one member of the National Commission for Protection of Child Rights within its fold as a deemed member as well as a woman member.
- It proposes to enlarge the scope of eligibility and selection of the Chairperson of the NHRC as well as of SHRC.
- Further, it proposes to amend the term of office of the Chairperson and members of the NHRC and the SHRC.
- Though it proposes to make the institution more inclusive, widen its eligibility, it falls short in addressing the core issues of NHRC.

Road to future

- The government must take steps to ensure **greater transparency** in the selection process.
- The much-needed diversification could be realised through the inclusion of **civil society members**. Academicians with proven track record can also be roped in.
- Also, the NHRC urgently requires **officers of its own** to carry out independent investigations. The government should provide resources for this.

7. GOVERNANCE

Legislation and policies in India are often passed with inadequate scrutiny and assessment. In this context, discuss the significance of the idea of legislative impact assessments in India.

KEY POINTS

- Legislations seek to create a framework that helps coordinate certain governance processes or to resolve certain identified problems.
- However, Legislation and policies in India are often passed with inadequate scrutiny and assessment.
- The rush towards such laws results in policies and legal frameworks that are mostly **reactive** and seek to offer quick-fix solutions to complex problems.
- As a result, both law-makers and citizens are frequently blindsided by the unanticipated impact of these moves and the laws often run aground on issues of implementation.
- Also, the time and effort it takes to undo and resolve the issues caused by such hasty law-making compounds the problem that the law was intended to resolve, making the entire exercise of 'fixing' the issue futile.
- This creates the need for legislative impact assessments, which is slowly getting traction around the world.

Policy and Legislative Impact Assessment (P&LIA)

- A PLIA is a fundamentally iterative process that seeks to methodically apply a framework that assesses policies and laws at a granular level before they are put into place.

Significance of P&LIA

- It will pre-empt possible conflicts by identifying and planning for the mitigation of all negative effects of taking an action.
- It benchmarks the said legislation against the available alternatives.
- It thus ensures that preferred options are those that are economically feasible, operationally viable, and socially acceptable.
- It would allow the common people to identify optimal law and policy changes.

- Costs and benefits of proposed legislation and policies should also be identified since laws have persistently sought to undervalue ecosystem services as well as indigenous peoples' rights.
- Above all, such a framework would promote transparent and democratic law-making in the country.

Road to future

- Countries like Kenya and Finland have mechanisms in place for the assessment of regulatory and legislative proposals as an essential part of their legislative process.
- India should also emulate such an assessment to minimise the negative effects, or at the very least, to identify them.

8. GOVERNMENT POLICIES & INTERVENTIONS

Discuss the steps taken by the government to make India into a sports superpower.

KEY POINTS

- India is a country of 1.3 billion, which will be the youngest country in the world by 2020.
- To effectively use such a potential, India should create an ecosystem that nurtures sporting talent right from the early years, right through their careers.

Steps taken

- **Khelo India Scheme** – It aims to revive sports culture in India at the **grass-root level**.
- It identifies sporting talent at as young as eight years old and train them for the future.
- Each potential candidate will be provided annual financial assistance of Rs. 5 lakh for 8 years
- **Khelo India School Games (KISG)** – It is the national level multidisciplinary grassroots games in India held annually for the under-17 year school kids.
- It is for the first time that school games have been organised at such a massive scale, thus giving school children a chance to compete and win at the national level.
- **Target Olympic Podium Scheme (TOPS)** – Its objective is to identify and support potential medal prospects for 2016 and 2020 Olympic Games.
- They will be provided customized training at institutes which will have world class facilities and other necessary support to improve performance and higher position in medals tally for the country.
- As an incentive, TOPS athletes are also being given an out of pocket allowance of Rs 50,000 per month, which is over and above all the training, coaching, training, travel expenses that is borne by the government.
- **Mission Olympics 2024** – NITI Aayog has also devised a short-term and medium-to-long term action plan to help India achieve 50 medals in 2024 summer Olympics.



- **Sports university** – India has also committed itself to set up the country's first national sports university in Imphal, Manipur.
- It will be the first-of-its-kind to promote sports education in the areas of sports sciences, sports technology, sports management and sports coaching.
- In the past one year, India has also created **several national academies** where young athletes are training under foreign coaches.
- **Attracting best teachers** – India has also increased the remuneration of top Indian coaches from Rs 1 lakh to Rs 2 lakh a month just so that we can attract better teachers.
- To attract the best international talent, India has not kept a cap on remuneration for foreign coaches.

Enumerate the advantages of Polymer substrate based banknotes against the cotton substrate based banknotes. Also, examine the challenges before India in replacing the existing conventional currency notes with those of plastic currency notes.

KEY POINTS

- Polymer substrate bank notes are made from polymers such as bi-axially oriented polypropylene (BOPP).
- Polymer notes, with their inherent advantages, can be a game changer in the Indian money market, in due course.

Advantages

- **Counterfeiting is very difficult** when compared to cotton notes.
- Polymer banknotes are expected to **lasts much longer** than cotton substrate-based banknotes.
- In the long run, polymer notes are expected to **reduce expenses** incurred on printing currency, as they last longer.
- Cotton notes have high wear and tear and cannot be recycled. Destroying them has also incurred huge expenditure annually.
- But, polymer notes cannot be torn, do not wear out and can be recycled at minimal cost.
- Cotton substrate currency notes can carry dozens of micro-organisms that can cause diseases like tuberculosis, ulcers, dysentery etc.
- Polymer notes are relatively cleaner compared to paper notes.

Challenges

- **Upgrading Infrastructure** – ATMs need to be recalibrated to accommodate new currency notes.



- **Extreme of Climates** – More ground work has to be done to check the ability of the plastic notes to withstand the extreme climates of India.
- Sourcing adequate supply of **raw materials** and the **know-how** to introduce polymer currency notes is the next major challenge.

Road to future

- It may be worthwhile to consult countries such as Australia, the UK and Canada that by now have adequate experience in using polymer bank notes.
- As a first step, India has decided in 2017 to conduct field trials with plastic banknotes at five locations in the country.

Corruption cannot just be legislated away. Discuss in the light of the recent amendments to the Prevention of Corruption Act (PCA).

KEY POINTS

Amendments to PCA

- It enhances the maximum punishment for bribery from 3 yrs to 7 yrs and the minimum punishment for such an offence from 6 months to 3 years.
- Bribe giving has been equated with bribe taking, unless the giver can prove that he was acting under duress and reports the bribe given by him to the authorities within seven days.
- By amending the definition of “undue advantage”, the new law criminalises all receipts other than legal remuneration.
- Delays in trials are sought to be tackled by mandating that they should be concluded within 2 years
- If that is not possible, a judge can for reasons to be recorded in writing, extend this limit for 6 months at a time, but in no case beyond 4 years.
- These amendments, however, hardly go to the root of the problem: **Corruption – a cultural phenomenon.**
- In the face of entrenched vested interests, corruption cannot just be legislated away.
- Anthropologists and political scientists have for long been pointing out that it is a cultural phenomenon.
- In many contemporary societies a belief exists that corruption is acceptable as a way of life.

Road to future

- Apart from legislative measures, the government must focus more on
 1. Reducing discretionary controls
 2. Curbing opportunities for abuse of power



3. Simplifying processes
 4. Promoting transparency
 5. Improving the ease of doing business
- Also, most importantly, organisations, both public as well as private, must demand much greater accountability from their boards, audit committees and auditors.

The proposed changes in the Electricity Act 2003, leaves the poor behind and shifts the power from states to centre. Discuss

KEY POINTS

Concerns with the amendments

- **Separation of content & carriage** – It separates the **infrastructure builder** for power distribution to consumers and the licensee to supply electricity.
- This would entail more than one electricity supplier in an area and consumer will have options to choose their preferred electricity supplier.
- But, it may provide opportunities for private suppliers to cherry pick profitable locations and consumers.
- The state owned incumbent supplier will be left with the obligation to serve low-paying consumers.
- **Eliminating Cross-subsidy** – It is proposed to reduce cross-subsidy to 20% immediately and progressively eliminate it within three years.
- This would lead to a huge increase in tariffs all across the country immediately.
- **Direct benefit transfer (DBT)** – Breaking the cycle of subsidy and losses incurred by the discoms, it has introduced DBT in electricity.
- However, identifying and targeting beneficiaries remains a major challenge.
- Moreover, with these changes, the mechanism of support for poorer customers will shift from the electricity customer to the taxpayer.
- **Power shift** – Presently, two of the three members of the electricity regulatory commissions are state government's choice.
- The amendment proposes a six-member selection committee with only one state government nominee, four Central government nominees and one sitting Supreme Court judge.
- In effect, the Central government will decide the constitution of all State Electricity Regulatory Commissions (SERCs).

- The centre will also gain more oversight on capacity addition, through the requirement of detailed project report submission to the Central Electricity Authority.
- Though the draft Electricity Amendment bill, 2018 proposes a slew of measures to bring transparency in power generation market and penalise faulty distributors, it leave the poor behind and shifts the power from states to centre.

The Antiquities and Art Treasures Act, 1972 has long outlived the purpose for which it was drafted.

Discuss

KEY POINTS

Concerns with the act

- **Understanding** – Importance is ascribed by virtue of religious sentiment, age or provenance to every significant and insignificant work of art.
- This hampers the purposes of scholarship or understanding of what constitutes a beautiful work of art or a national treasure.
- Every object in a private collection is now seen as the result of temple desecration and robbery.
- The view that once-sacred objects today only belong to temples is a myopic view. It thus denies the process of regeneration of these living cultural sites.
- **Ownership** – The laws that govern the ownership of historical objects, their purchase and sale have been a disincentive for the average collector.
- Registering antiquities with the Archaeological Survey of India (ASI) is a cumbersome and difficult procedure for most collectors.
- Cultural vigilantism, the presumption of guilt without trial, public shaming and the resultant media trial have led to a dangerous state of affairs.
- **Limitations** – The rule is that every object over 100 years is an antique.
- With every passing year, the number of objects that shift from 99th year to a 100 year status will increase.
- This would soon result in the transfer of vast numbers of objects to a status of national antiquity.
- But is the state geared to handle and maintain this vast emerging enterprise remains uncertain.
- The state is also not equipped to handle the needs of a growing populace of collectors.

Road to future

- It is well within the rights of every citizen to acquire and collect objects of their past.
- Nevertheless, this acquisition should definitely be governed by a legal process of buying.



- With changing ideas, the role of private connoisseurship, individual collectors, trusts and foundations should also be considered.
- Their proactive agency has safeguarded the ancient Indian art from being channelled abroad or being destroyed.
- An urgent amendment to existing laws is essential to save the material culture from being examined purely from the prism of religious sentiment.
- It should foster the creation of secular spaces where everyone can enjoy and appreciate the past.

What is Mariculture? Discuss the salient features of the recently released draft national policy on mariculture and its shortfalls if any.

KEY POINTS

Mariculture

- It is a specialised branch of aquaculture involving the cultivation of economically important marine plants and animals in the sea or any other water body having tidal influence.
- It also includes onshore facilities like hatcheries, nursery rearing and grow out systems using seawater.
- The centre recently released a draft policy on mariculture.

Salient features

- It has mooted mariculture zones by demarcating special areas in the sea for activities such as cage farming, bivalve farming, pen culture, seaweed culture, hatcheries and nurseries based on scientific criteria.
- Satellite remote sensing data and GIS will be used to identify potential zones for mariculture on the basis of scientific evaluation of environmental parameters suitable for various types of farming.
- This will avoid conflict with other users and protecting the livelihoods of local fishing communities.
- In a bid to support fish breeding, culture, packaging and trade, the policy proposes encouraging the establishment of off-shore technology parks and coastal embankment systems.
- The policy advises the government to formulate financial assistance programmes, including prioritised lending schemes, subsidised credit and investment subsidies, to promote mariculture.
- The policy has also made provisions for leasing the water bodies and regulating the activities in the open sea waters to ensure security of the mariculture enterprises.
- Efficient market logistics would be promoted to minimize post-harvest losses and preserving the nutritional quality and value of fish.



- Institutional support will be extended for development of domestic market infrastructure for hygienic handling, processing and cold storage.

Limitations

- However, traditional fishermen fear that installing cages in the sea and protecting them would need **huge investment**.
- It would lead to the **entry of big players** into the field, leading to **loss of livelihood**.
- Till now there are no restrictions on fishermen in catching fish from the open sea.
- Introduction of such demarcated mariculture zones will restrict their movement and lead to **conflict in the sea**.

Decentralised sludge management systems are vital, if India is to achieve Goal number 6 of the Sustainable Development Goals (SDG). Discuss

KEY POINTS

- Goal number 6 of SDG mandates to ensure availability and sustainable management of water and sanitation for all.
- In spite of working in mission mode to expand sanitation, 87% of faecal sludge expelled from toilets in urban areas is untreated.
- At the national scale, a United Nations report of 2015 estimates that 65,000 tonnes of untreated faeces is introduced into the environment in India annually.
- Though, Swachh Bharat Abhiyan promised a major shift, it has focussed more on the basic requirement of household and community toilets in rural and urban areas.
- State support for improved housing and planned development has never been strong, and the National Urban Sanitation Policy of 2008 has not changed that significantly.
- So, it is now time for a change in strategy towards decentralised sludge management systems.
- It entails large sewage treatment plants for riverside cities and towns, accessibility to treatment plants, etc.
- Immediate investments in decentralised sludge management systems would bring twin benefits: of improving the environment and reducing the disease burden imposed by insanitary conditions.

Suggestions

- Create an inter-departmental task force to identify land to build small treatment systems for sludge, and to provide easily accessible solutions to houses that are currently discharging waste into open drains.
- The business of emptying faecal material using tanker trucks needs to be professionalised and de-stigmatised.

- Decentralised sludge management systems are vital, if India is to achieve Goal number 6 of the Sustainable Development Goals (SDG).

Examine if the recently approved National Digital Communications Policy 2018 addresses the sector's core issues.

KEY POINTS

Core Issues plaguing Telecom sector

- **Financial crisis** – The industry is going through a financial crisis as a result of which as many as five operators have shut shop.
- Overall debt burden of the remaining players has burgeoned to alarming levels due to expensive spectrum auctions and huge reduction in cash flows.
- **Quality of services** – Call drops, unwanted telemarketing calls, patchy data networks and unfair practices to get users pay more are rampant.
- **Grievance redressal** – Consumers do not have access to a reliable and neutral complaint redressal mechanism.
- **Public sector companies** in this sector continue to languish under high manpower costs and red tape.
- There is a big worry over the **huge imports of telecom equipment** and devices at a time when India's trade deficit is ballooning.

National Digital Communication Policy (NDCP)

- The Union Cabinet has recently approved the National Digital Communications Policy (NDCP) 2018.
- The new policy acknowledges the above problems, but almost all the solutions offered find mention in earlier regulations and vision statements.
- Some of the major targets listed in the 2012 policy are still to be achieved.
- Instead of delving into why these targets were missed and how things can be improved, the National Digital Communications Policy 2018 lists out more and new targets.
- For instance, on the issue of reducing financial burden on the telecom operators, the policy merely restates that the plan is to rationalise government taxes and levies, apart from giving critical infrastructure status to the industry.
- The reality is that these proposals have been pushed by the Department of Telecom for several years only to be blocked by the Finance Ministry, which has so far seen the sector only as a non-tax revenue generator for the exchequer.



What is the recent proposal of NITI Aayog with respect to Pradhan Mantri Fasal Bima Yojana (PMFBY)? Examine the concerns associated with such move.

KEY POINTS

- NITI Aayog has recently proposed that 75% of the premium paid by farmers under the PMFBY will be returned to them, if they don't file claims for crop damages for 4-6 consecutive agricultural seasons.
- The government thus reckon that such a move would attract more farmers into the insurance fold.

Concerns

- **Delay in State's share** – The problem with the scheme lies is not high premiums that farmers pay but in the delay on part of the states in paying their share of the premium.
- Farmers are receiving the due payments against their claim with a significant lag. Such lags erode farmers' trust in the scheme.
- **Rising claims** – Incurred Claim Ratio (the overall value of every claim a company has paid divided by the total sum of premium collected during the same period) has been rising and set to increase further in the coming years.
- The government will have to spend more with the increase in higher coverage, once the proposed amendment is worked out.
- Even then, higher coverage is not an end-in-itself unless farmers get their dues paid back quicker.
- **Financial Sustainability** – For this, the Centre has taken steps to improve compliance by insurers and the state governments.
- Farmers need to be paid 12% interest by both the insurance companies and State governments for any delay in settlement of claims beyond 2 months and 3 months respectively.
- However, these steps will not be financially sustainable for either the insurance companies or state governments.
- **Risk Sharing** – The insurance companies can't take more hits on their margins, since 65% of the net sown area in India constitutes rain-fed crops, demonstrating the over-reliance on monsoons for crop growth.
- The recent Economic Survey has also noted that non-irrigated areas are twice as dependent on rainfall as irrigated land areas are.
- Hence, the proposed change is likely to not find favour among insurers, since agriculture is a high-risk activity and it will increasingly get worse with climate change impact worsening.

9. SOCIAL JUSTICE

Does the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 ensure effective mechanism for the safety of women at the workplace? Critically analyse

KEY POINTS

- Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act was passed in 2013.
- It broadens the Vishaka guidelines, which were already in place.

Key provisions

- **Definition** – The Act covers the rights of all women **working or visiting** any workplace, in any capacity.
- It clearly **defines sexual harassment** as any one or more of “unwelcome acts or behaviour”, committed directly or by implication.
- **ICC** – Every employer **must constitute** an Internal Complaints Committee (ICC) at each office or branch with 10 or more employees.
- It has similar powers to those of a civil court in respect of certain matters.
- The identity of the woman, respondent, witness, any information on the inquiry, recommendation and action taken **should not be made public**.
- **Time-frame** – The complaint has to be made “within 3 months from the date of the incident”.
- However, this time-frame is not rigid as the ICC can “extend the time limit”, if it is satisfied that the circumstances were such which prevented the woman from filing a complaint in that period.
- **Relief** – While the inquiry is on, the woman can make a written request to the ICC regarding work and it may recommend her transfer, leave for 3 months, or any other relief as may be prescribed.
- **Actions** – If the allegations are proved, the ICC recommends that the employer take action for sexual harassment.
- This would be in accordance with the provisions of the service rules, which vary from company to company.

Shortfalls

- **Past incidents** – The Act offers no clues to how organisations should proceed when an existing employee stands accused of past transgressions by women with no immediate link to the existing company.
- **Implementation** – For ordinary women in the unorganised sector, especially in politics, redressal mechanisms are non-existent.
- The laws stipulate setting up local complaints committees in every district for organisations with 10 or fewer employees.



- But currently, their existence and functioning is not to any noteworthy levels.
- There are also no penalties for districts that lack such complaints committees.
- **Unresponsiveness** – A crucial reason why women have resorted to public naming and shaming is the unresponsiveness in the formal channels.
- **Leaders** across workplaces must thus ensure that the formal system is sensitive and responsive enough for female employees.
- This is essential for them to confidently come forward and register a complaint.

Road to future

- Although, the Act does provide for a redressal mechanism within the workplace, it is not short of loopholes.
- It is important that proper implementation of the Act is done, awareness regarding the Act is created and the employers undertake prevention mechanism as provided under the Act in order to ensure gender equality and provide safe working environment for both women and men.

In India, where marital rape is not recognised as a crime, section 377 emerges as an alternative tool for married women. Explain the statement and discuss the impact of the recent apex court judgment in this regard.

KEY POINTS

- An exemption to Indian rape law (IPC: Sec 375) says, “sexual intercourse or sexual acts by a man with his own wife, the wife not being under fifteen years of age, is **not rape**. Thus, it doesn't recognise marital rape as crime.

Sec 377 – an alternative

- Unlike Section 375, Section 377 (which criminalizes sexual activities **against the order of nature**) contains **no marital exception**.
- As a result, it has been possible to innovatively invoke it to proceed against husbands who subject their wives to penetrative non-consensual sexual acts which, it could be argued, are unnatural.
- Section 377 thus, in some circumstances, can accord relief to wives whose husbands rape them.
- In a legal context in which marital rape is not recognised, Section 377 emerges as a tool for married women to highlight the “**unnatural**” **abuse** they face.

Impact of SC judgment

- A recent judgment by the SC decriminalised homosexuality and read down Section 377 to apply only to minors and in cases of bestiality.



- From the judgment, it is unclear whether abused married women will be able to use the law in quite the same way as they did before.

Road to future

- If physically abused by their husbands, wives should be able to register a case without having to use the **circuitous paths**.
- A far more effective and progressive strategy would be for the state to **criminalise marital rape**.
- This could be done by passing a new law or merely removing the exemption in Section 375.

Health

What are the major sources of anti-microbial resistance in India? Evaluate the steps taken by India in order to curb antibiotic misuse.

KEY POINTS

- Given its burden of infectious disease, India stands to lose the most from anti-microbial resistance (AMR).

Sources of AMR

1. Overuse of antibiotics by human beings
2. Overuse in the veterinary sector
3. Environmental antibiotic contamination due to pharmaceutical and hospital discharge.

Steps taken

- To tackle the first source, India classified important antibiotics under Schedule H1 of the Drugs and Cosmetics Rules 1945.
- Under the Rules, drugs specified under Schedule H and X are required to be sold by retail on the prescription of a Registered Medical Practitioner only.
- Even then, Schedule H1 drugs are freely available in pharmacies, with state drug-controllers unable to enforce the law widely.
- To tackle the second source, India's 2017 National Action Plan on Antimicrobial Resistance did talk about restricting antibiotic use as growth promoters.
- But the lack of progress on this front allows companies to sell last-resort drugs to farmers over the counter.
- To tackle the third source, the same national action plan spoke about regulating antibiotics levels in discharge from pharmaceutical firms.

- For instance, Hyderabad’s pharmaceutical industry has been pumping massive amounts of antibiotics into local lakes, rivers and sewers.
- This has led to an explosion in resistance genes in these waterbodies.
- Still, India is yet to introduce standards for antibiotics in waste water, which means antibiotic discharge in sewage is not even being monitored regularly.

10. BILATERAL/INTERNATIONAL RELATIONS

Indo-Japan bilateral ties are a mile wide but an inch deep. Comment

KEY POINTS

- Indo-Japan ties displays an exceptional warmth in the recent times ranging from development assistance to maritime cooperation, both countries view each other as “special strategic and global partners.”
- Though, it covers a large set of areas for cooperation, it did so on a very shallow level.
- **Trade** – In 2011, India and Japan began implementing the Comprehensive Economic Partnership Agreement; yet seven years later, bilateral trade has yet to hit even the \$20 billion mark.
- **Third country cooperation** – Since early 2010, Japan and India have discussed joint infrastructure projects in third countries, including announcing an Asia-Africa Growth Corridor.
- But not a single project has taken off, including in Myanmar and the Mekong countries where the two share complementary interests.
- **Defence** – The framework of Indo-Japanese defence ties has grown considerably, including the joint declaration on security cooperation, the action plan to advance such cooperation, a defence equipment transfer agreement, a classified military information security protection agreement, and the ongoing logistical support cooperation talks.
- Yet, 10 years later, the two sides have failed to realise the sale of a single defence article and there exists no conventional threat-specific contingency scenario in which the two militaries can practicably cooperate.
- India and Japan must grapple with the gulf that separates their guiding strategic precepts if they are to transcend the hollow institutionalisation that infects strategic ties.

Examine how hostility between India and Pakistan has adversely affected its bilateral trade and trade within the region.

KEY POINTS

- According to World Bank report – A Glass Half Full, trade in South Asian region has the potential to increase three times from its present levels.
- Trade between India and Pakistan has the potential to increase from its current value of \$2 billion to \$37 billion.

- But, intra regional trade in South Asia is still the lowest among all regions in the world.
- It is mainly because of the persistent conflict between its two major economies: India and Pakistan.

Conflict and its spill over effects

- While actual conflict endangers trade transactions between India & Pakistan, expectation of conflict further raises risks of trading within the conflict-prone region.
- This increases the trade/ transaction costs through, increased possibilities of currency instability, breach of contract, low institutional credibility, and increased government restrictions.
- These pave the way for increased tariff, para tariff and non-tariff barriers between the governments, thus greatly reducing the scope for profitable trade.
- Studies have shown that both actual and anticipated conflict, reduces trade by over 65% in general and by 75% in South Asia.
- Also, when countries make an attempt to establish trading arrangements in spite of unresolved and enduring conflict, the outcome of these is close to null.
- Both SAPTA, the SAARC Preferential Trading Arrangement, and SAFTA, the South Asian Free Trade Area Agreement, were rendered ineffective on account of the persistent conflict between India and Pakistan.

Road to future

- Thus, it may be wiser to focus on alternative formulations like sub-regional such as the BBIN or inter sub-regional initiatives such as the BIMSTEC.
- With India in the lead, these arrangements can take forward the interested partners from South Asia on a more feasible and profitable path of economic integration and trade enhancement.

The proposed US withdrawal from the Intermediate Range Nuclear Forces (INF) Treaty with Russia presents both a challenge and opportunity for India. Discuss

KEY POINTS

Intermediate Range Nuclear Forces (INF) treaty

- It was concluded in 1987 and has been hailed as one of the most important arms control agreements between Washington and Moscow.
- Under the treaty, the US and Soviet Union agreed not to develop, produce, possess or deploy any ground-based ballistic and cruise missiles that have a range between 500 and 5,500 km.
- It helped address the fears of an imminent nuclear war in Europe.
- It also built some trust between Washington and Moscow and contributed to the end of the Cold War.

U.S withdrawal

- Recently, the US has announced about its plan to withdraw from the INF treaty, citing violations by Russia.
- The treaty left the other nuclear weapon powers free to develop ground-based intermediate range forces. It is also a reason which led U.S to such a decision.
- India has to seriously examine the implications of the next steps by the major powers.

Challenges

- If the US deploys a new INF in Asia, to enhance its capacity to deter China, Beijing is bound to react.
- The focus of a potential new arms race appears to be less on traditional nuclear armed missiles, but precise hypersonic missiles (which travel at least five times the speed of sound) equipped with conventional warheads.
- Moscow and Beijing have already invested in the development of hypersonic systems.
- India too has an effort underway on hypersonic missiles part indigenous and part in collaboration with Russia to build on the supersonic Brahmos missiles that travel more than twice as fast as sound.
- As the US conflict with Russia deepens, Delhi's partnership with Moscow on advanced military systems will come under increasing scrutiny and pressure.
- The recent controversy over the acquisition of S-400 from Russia is just the beginning of a trend.
- Russia's tightening military embrace with China also casts a shadow over defence ties between Delhi and Moscow.

Opportunities

- Delhi will have to think long and hard about its missile programme by focusing on the urgent need to ramp up the domestic effort as well as diversify its international collaboration on hypersonic weapons.
- India needs a significant force of hypersonic missiles to better control escalation to the nuclear level if there is another Doklam-like military confrontation with China.
- Delhi will also have to cope with the inevitable proliferation of hypersonic systems in its neighbourhood.

To maintain strong bilateral ties, India should balance its strategic interests with Bhutan's aspirations. Discuss

KEY POINTS

- Bhutan has always been India's most trusted ally in South Asia and has often put India's security at the forefront.
- Many years earlier, Bhutan had cooperated with India to drive out members of militant groups such as the United Liberation Front of Asom.

- In 2017, India has stepped in to defend Bhutan's territorial claims which had resulted in a military standoff with China at Doklam.
- This strategic region is located close to the "chicken's neck" or the tiny sliver of land that connects the Indian mainland to the north-eastern states.
- Both these two episodes reflect how closely Bhutan is linked to the **security of India's north-eastern states**.
- Bhutan was also the only South Asian country besides India not to attend China's Belt and Road Initiative forum in May 2017.
- Indeed, considering the changing geopolitical climate in South Asia, where anti-India sentiment seems to have increased sharply in recent times, Bhutan has stood steadfast in its dedication to the big neighbour and its geopolitical concerns.
- The development aid that India gives to Bhutan is tangible, but the strategic benefit given by Bhutan, as a buffer along the northern border cannot be put in figures.
- But, India still has not invested in Bhutan that modicum of trust which is critical in building genuine goodwill.
- Bhutan has undergone massive changes since it slowly began opening up after introducing democratic reforms more than a decade ago.
- There is a growing debate within the country on the position it should adopt vis-à-vis its two powerful neighbours, India and China.
- Also, the Doklam standoff led some in Bhutan to call for the country to adopt an independent foreign policy which is not too closely aligned with India, so that it could resolve its dragging border dispute with China.
- As India takes steps connected to its legitimate security concerns in the region, it must ensure that it is not perceived as an overbearing presence, but one that has the best interests of the Bhutanese people at heart.
- This means not only increasing people-to-people contact but also being sensitive to Bhutan's desire for a wider engagement beyond India's borders.
- This means respecting Bhutan as an equal, sovereign nation state.

11. ECONOMY

Recently, an Inter-ministerial committee on payments & settlement system has recommended creating a separate regulator for the payments systems in India instead of the present in charge, RBI. Discuss how far such suggestions are valid?

KEY POINTS

Rationale behind the decision

- The aim is to foster competition and consumer protection, systemic stability and resilience in the payments sector.
- **Technology** – Payments and settlement system is a new sector where technology is bringing about rapid changes.
- So, it requires a team of **subject experts** working independently of RBI.
- Because, working under the established RBI framework could inhibit innovation and competition.
- **Overburden** – RBI is already burdened with a wide array of regulatory work.
- There were concerns about the ability of RBI to provide the light as well as quick regulatory touch that a new and evolving sector such as payment services deserves.

Concerns with the new regulator

- There is a definite overlapping of the current regulatory powers of the RBI and the proposed regulations for the payments industry.
- Payment systems are a sub-set of currency, which is regulated by the RBI.
- Similarly, all payment systems have an underlying bank account, which again is regulated by the banking regulator, i.e. the RBI.
- In this scenario, taking regulation away from the RBI could create confusion.
- Also, it would be odd to have two different entities regulating what is essentially **one continuous function**.
- A similar problem will arise for card-based payments, which are issued by banks but can come under dual regulation.
- Also, there is an overarching impact of monetary policy on payment and settlement systems and vice-versa.
- This adds validity to the idea that regulation of payment systems remain with the monetary authority i.e. the RBI.
- Further, there is a risk that a brand new regulator may be unable to match the expertise of the RBI in carrying out regulatory duties.
- Keeping the RBI out of the loop would also defy established international practice.

Road to future

- The key to resolving such problem lies in the understanding that, Payments systems need integrated regulation not coordinated regulation.
- Meanwhile, RBI has also shown its willingness to changes, provided the overall leadership stays with it.

- A unified regulator can thus help lower the regulatory compliance costs and enable the seamless implementation of rules.

Imposition of Prompt Corrective Action (PCA) framework has starved the Indian economy of fresh credit. In this context, do you agree with the view that PCA should be diluted? Comment

KEY POINTS

Prompt Corrective Action (PCA)

- PCA is primarily to take appropriate corrective action on weak and troubled banks.
- It prohibits them from undertaking fresh business activities such as opening branches, recruiting talent or lending to risky companies.
- It is argued that putting banks under the PCA is affecting the flow of credit in the economy.
- Though, it may be true to some extent, it may not be right to dilute PCA.

Purpose of PCA

- Putting banks under the PCA framework is part of a broader action plan to bring the ailing banking system back on track.
- This is to prevent further capital erosion and stabilize the bank.
- The basic idea is “to intervene early and take corrective measures in a timely manner”, so as to restore the financial health of banks.
- The core principles of such structured intervention and resolution are in sync with global practices.
- It will help clean up bank books and safeguard overall financial stability.
- Also, diluting the PCA norms could worsen the problem.
- It is likely that weak banks will end up accumulating more bad loans, which will erode their capital further.
- This will lead to demands on taxpayer money for **recapitalization of PSBs**.
- Besides, having too many weak banks will increase risks to financial stability.
- Contraction in lending by banks under PCA is being compensated by higher credit growth at healthier banks.
- But, any dilution in the PCA framework or other measures that have been taken to clean up the banking system will only increase the cost in the long run.

Tax evasion and avoidance is widespread among the high-income groups and big corporates in India. Examine the loopholes in Indian tax laws that led to such situation and suggest reform measures to deepen the tax base among those groups.



KEY POINTS

Loopholes & Reform measures

- **Individuals** – The present tax law does not require filing of returns if the income is below the taxable threshold (Rs. 2.5 lakh).
- This means that many professionals who can easily manipulate their accounts never appear on the radar of the taxman.
- The law should mandate filing of returns by all professionals and proprietorship businesses regardless of their profit.
- This will increase compliance by enabling the taxman to scrutinise suspicious cases.
- There is also a re-introduction of the wealth tax since the wealth level is harder to manipulate and the tax is harder to evade compared to income.
- **Companies** – The tax law allows offsetting of past losses against future profits for companies and the definition of admissible expenditures in the law are susceptible to easy manipulation.
- These provisions are widely misused by corporates by claiming bogus expenses, to artificially reduce their profit and hence their tax liability.
- A large number of companies showing negligible or no profit points to a continued prevalence of shell companies and other dubious structures which require systematic investigation.
- Moreover, the numerous tax exemptions also come in handy for tax avoidance and big corporates benefit more from these exemptions.
- Consequently, smaller companies face a higher effective tax rate compared to larger corporates which makes the tax regime regressive.
- **Administration** – There is also a need to enhance the deterrence power of the law, which depends on the likelihood of punishing tax evaders along with imposing a fine.
- At present, the Income Tax Department has a very poor win rate before the appellate tribunal and the higher judiciary and the law does not bite enough to hurt the tax offender.
- The odds of punishing the offenders can be increased by integrating the GST, the income tax and the Ministry of Corporate Affairs' databases.
- These measures will go a long way in deepening the tax base among high-income groups and professionals.

In the light of the recent IL&FS crisis, what changes India can bring in its credit rating system to avoid further crisis.

KEY POINTS

IL&FS crisis

- IL&FS group of companies has a total consolidated debt of Rs 900 billion and it started to miss deadlines on its debt obligations.
- The company also has Rs.35 billion worth repayments scheduled for this year while it has **less than Rs.2 billion** worth of resources for the payment.

Role of CRAs in the crisis

- IL&FS debt papers enjoyed **highest safety status** for a long time despite their crisis condition.
- However, credit rating agencies (CRA), that rated its debt quickly downgraded them from high investment grade ratings (AA+ in some cases) to default/junk ratings when it started to miss deadlines on its debt obligations.
- This is not the first instance where CRAs downgrade ratings suddenly.
- Swift action by CRAs would have certainly averted a full-blown crisis.
- CRAs cannot afford to commit too many mistakes as it is the investor who pays the price for their mistakes.

Suggestions

- CRAs can best serve markets when they operate independently, adopt and enforce internal guidelines to avoid conflicts of interest, and protect confidential information received from issuers.
- CRAs should be **made accountable** for any faulty rating by penalizing them or even de-recognizing them, if needed.
- Competition in the rating industry should be enhanced by easing the entry of new players to enter the credit rating space and compete against incumbents.
- This will make credit rating agencies actually serve creditors rather than borrowers.
- The conflict of interest inherent with the “Issuer pays” model, where an issuer of debt securities also pays for the credit rating, has to be reconsidered by the regulating agencies and a proper alternative should have to be implemented.

Why it is important to preserve the independence of RBI from an over-arching reach of the state.

Discuss

KEY POINTS

Importance of an independent RBI

- **Functions** – A central bank performs several **important functions** for the economy.



- The RBI
 1. controls the money supply
 2. sets the rate of interest on borrowing and lending money
 3. manages the external sector including the exchange rate
 4. supervises and regulates the financial sector, notably banks
 5. often regulates credit and foreign exchange markets
 6. ensures financial stability, domestic as well as on the external front
- **Architecture** – Its tasks being somewhat complex and technical, central banks are ideally headed and manned by technocrats or field experts.
- This architecture reflects the acceptance of the thesis that central banks should be allowed to exercise their powers independently.
- **Approach** – The basic difference between the approach of a government and central bank is that the former is bound by short-term political targets but the latter is not bound by such targets.
- Use of its powers of money creation and setting the cost of money for short-term benefits can be disastrous for the economy.
- Therefore, it is important that central banks have the institutional wherewithal to take independent decisions in order to be able to maintain price and financial stability.
- To protect the economy from such short-termism, it is vital for the central bank to be at a safe distance from the executive branch of the government.
- Undermining the RBI's independence can trigger a crisis of confidence in capital markets that are tapped by governments (and others in the economy) to run their finances.
- Governments that do not respect central bank's independence will sooner or later incur the wrath of financial markets, ignite economic fire, and come to rue the day they undermined an important regulatory institution.
- Their wiser counterparts who invest in central bank independence will enjoy lower costs of borrowing, the love of international investors, and longer life spans.

Lack of tighter regulatory norms is cited to be one of the major reasons for the recent IL&FS crisis. In this context, discuss the measures need to be taken in order to strengthen the regulatory framework for Non-Banking Financial Companies (NBFCs).

KEY POINTS

IL&FS crisis

- IL&FS group of companies has a total consolidated debt of Rs 900 billion and it started to miss deadlines on its debt obligations.



- The company also has Rs.35 billion worth repayments scheduled for this year while it has **less than Rs.2 billion** worth of resources for the payment.
- The crisis at IL&FS surfaced when it defaulted on payment obligations, which followed by downgrades by credit rating agencies (CRAs).
- The major reason for the default was the problem in **mismatch of assets and liabilities (ALM)**.

Strengthening the framework

- **Entry level threshold** – Given the growing size and dominance of the NBFC sector, it is important that the threshold capital levels for entry be substantially increased.
- **Checks & Balances** – While RBI has identified systemically important NBFCs, it needs to step up the monitoring of NBFCs which belong to large, diversified groups.
- When there are multiple entities, the ability to shift assets from one balance sheet to another increases, leading to opaqueness in determining the actual quality of the asset.
- Checks and balances are needed to ensure that risks do not build up in the sector due to structures which are too-complex-to-manage.
- **Implement key recommendations** – RBI could consider re-visiting some of the unimplemented recommendations of Usha Thorat committee which includes introduction of **liquidity coverage ratio for NBFCs**, etc.

The impact of economic growth on the environment and health needs to be factored in to get a true picture of development. Discuss

KEY POINTS

Assessing Development

- In India, Gross Domestic Product (GDP) is used to assess development.
- But, GDP is most frequently used to measure growth and the figures released by the government cannot reflect the true picture of development.
- Because, it does not factored in the depreciation of environmental resources and deteriorating health conditions in a country in its assessment.

Need for such assessment

Environment

- **Agriculture** – Every time we assess agricultural output, we assess only the productivity over a period.
- The factors such as depletion of groundwater, intensity of water used for that productivity gets ignored in that output.



- **Hydropower projects** – Export of power is a significant source of income for hill regions from the hydroelectric power projects.
- But the degradation that the construction of hydropower projects causes in the form of disruption of habitat for animal and plant life, soil erosion, landslides, flash floods and more are often ignored.

Health

- Take for example; the decline in the air quality in Delhi invariably leads to a rise in respiratory ailments, apart from other longer term illnesses.
- Though residents of Delhi have a high level of per capita income, a large part of it goes in meeting health expenditure.

Road to future

- Though, the economic growth appears to be directly link with development, it fails to measure the cost incurred by the people to deal with environment and health hazards which degrades the opportunities for development.
- This creates a need to take into account the health costs of environmental pollution while calculating GDP.
- To get a true picture of development, the impact of economic growth on the environment and health needs to be factored in.

12. AGRICULTURE

Supporting agriculture through investments in the sector is far more powerful in alleviating poverty or increasing agriculture-GDP than a similar expenditure made on input subsidies. Comment

KEY POINTS

- The agriculture sector in India seems to be more dependent on input subsidies.
- But, subsidy-driven agriculture systems are not sustainable says the Dalwai Committee on doubling farmers' income.
- Excessive input subsidies have also caused large-scale inefficiencies in the agriculture system.
- For example, fertilizer subsidies, especially on urea, have led to the imbalanced use of soil nutrients.
- The subsidy on irrigation water has resulted in an inefficient use of scarce water.
- Highly subsidized power has led to over-exploitation of groundwater.
- Subsidy on the interest rates on crop loans has diverted substantial amounts of Agri-credit to non-agricultural use.



- But, expenditure incurred on Agri- Research and Education, roads or education is five to 10 times more powerful in alleviating poverty or increasing Agri-GDP than a similar expenditure made on input subsidies.
- For example, according to ICRIER study, for every million rupees spent on agricultural research, 328 people are pulled out of poverty.
- In contrast, the same amount spent on power subsidies brings only 23 people out of poverty.
- Capital investments for basic infrastructure like irrigation, power, roads, communication, post-harvest Agri-logistics, markets will make farm sector self-sufficient on ground.
- With much lesser subsidies a self-sufficient farmer may be able to serve the cause of Indian agriculture much better.
- Benefits from populist policies are short-lived and subsidies alone can't sustain a sector for long, unless '**blended**' with investments.
- Hence, it is time for the best blend of subsidies and investments with more weightage being given to the latter.

Examine how Krishi Vigyan Kendras (KVKs) are transforming the agricultural extension in India with suitable examples.

KEY POINTS

Agricultural extension

- It is the application of scientific research and new knowledge to agricultural practices through farmer education.
- Generally, agricultural extension can be defined as the “delivery of information inputs to farmers.
- But, the concept of extension in the modern context goes far beyond technology transfer. It covers integration of technology with farming systems.

KVKs

- Krishi Vigyan Kendras (KVKs) are agricultural science centres, run by farm research organisations with funding and guidance from the ICAR.
- KVKs located all over the country are giving a new identity to the extension work by adding new dimensions to it.

Role of KVKs in transformation

- It assesses the relevance of new technologies under local conditions and suitably modifying them, if needed.
- They conduct technology demonstrations and train farmers and extension workers in utilising them.

- Besides, they assist farm entrepreneurs in formulating and implementing the projects involving specialty agriculture and value addition of the farm goods.
- Moreover, they produce seeds and seedlings of improved crop varieties for distribution to farmers.
- Going a step further, they even help in preparing district level agricultural development plans.
- The three most significant among these initiatives are
- **Kshamta** – It aimed basically at improving the economic condition and nutritional status of people in 125 tribal-dominated districts.
- This is sought to be done by upgrading the traditional farming systems by modernising them.
- **Vatica** – It seeks to involve youth and others in taking up value-addition of farm products and setting up technology-based economic ventures.
- The KVKs provide them full research and development backing, including incubation of their projects, to ensure success.
- **Nari** – It intended to focus on the betterment of household nutrition by promoting nutri-cereals, nutrition gardening and nutrient-enriched (bio-fortified) crops as part of the homestead farming systems.
- The programme is largely women-centric as they play a major role in family nutrition.

What do you understand by the term Precision Farming? Discuss how such a practice will be a game changer in Indian Agriculture?

KEY POINTS

- Indian farmers practice their profession in the most adhoc manner possibly using gut feel, intuition or by blindly following legacy practices.
- If there is something missing in their process, it is data and data-based decision making. In other words, precision.

Precision Farming

- Precision farming or agriculture is about doing the right thing, in the right place, in the right way, at the right time.
- Precision farming is one where all critical decisions taken on the field by farmers is based on data and technology that interprets the data for them to make a value judgement.
- It manages crop production inputs such as water, seed, fertilizer etc to increase yield, quality, profit, reduce waste and becomes eco-friendly.



- The intent is to match agricultural inputs and practices as per crop and agro-climatic conditions to improve the accuracy of their applications.

Some of those techniques includes –

- Fitting the tractors with sensors to help farmers till the land to the exact depth that the crop needs.
- Watering the crops by measuring soil moisture using sensors.
- Using satellite imagery to identify nutrient level in the soil and taking remedial actions based on the need.

Benefits

- Reduce input costs.
- Brings in a measure of accuracy.
- Enhance productivity in agriculture.
- Reduce chemical use in crop production.
- Encourage efficient use of water resources.
- Prevents soil degradation in cultivable land.
- Dissemination of modern farm practices will improve quality & quantity of agricultural crops.

13. SCIENCE & TECHNOLOGY

What are quantum computers? Discuss its advantages over conventional computers.

KEY POINTS

Quantum computers

- Quantum computers use quantum mechanical techniques to do their computing.
- It takes advantage of the strange ability of subatomic particles to exist in more than one state at any time.
- Instead of bits, which conventional computers use, a quantum computer uses quantum bits—known as qubits.
- Their fundamental unit, called a qubit (quantum bit), still assumes one of two outcomes when it is measured: 0 and 1, like a bit.
- But, according to quantum mechanics, the state we find a qubit in can also be a “superposition” of both 0 & 1.

Advantages of Quantum computers

- Quantum computers will be much faster than regular ones. So, operations can be done much more quickly.
- It uses lesser energy than classical computers.



- Easily crack secret codes and its application in cryptography makes the systems much more secure than their conventional analogues.
- It can store more information than a conventional one.
- Fast in searching databases.

Environment & Biodiversity

Discuss the concerns with the Gujarat government's stand on relocating the Asiatic lions. Also suggest measures to protect those lions, the last of the Asiatic lions in the wild.

KEY POINTS

- In 2013, the Supreme Court issued an order to relocate the lions from Gujarat to the Kuno sanctuary in Madhya Pradesh to check against the threat of epidemic.

Gujarat's response & Concerns

- **Pride** – Gujarat has been unwilling to relocate its lions, calling them “its pride”.
- The big cat population in Gujarat is the last of the Asiatic lions in the wild and it has been restricted only to Gir National Forest and its surrounding areas.
- So, an outbreak of possible epidemic or natural calamity might **wipe off the entire species**.
- For example, 30% of the lion population in Tanzania's Serengeti was killed due to an outbreak of a viral disease.
- The recent death of 23 lions in Gujarat's Gir sanctuary is a significant example.
- **Intense managerial response** – When ill, lions are routinely picked up, medically treated, and then released.
- But, wildlife conservation does not entail treating wild animals for disease (in the way domestic animals are) as this can go against the processes of natural selection and ultimately **compromises immunity**.
- Intensive artificial medical treatment of wild animals does not augur well for long-term sustainability.
- **Meta-population** – It has also said that there are meta-populations in the State. (A meta-population is a group of populations that are separated by space but consist of the same species).
- Meta-population may be geographically separate but have interactions and have exchange of individuals and this does not address the main concern of creating **geographically distant populations**.

Suggestions

- A smaller population with limited genetic strength are more vulnerable to diseases and calamities than a large and widespread population.



- So, a geographically separate population of Asiatic lions needs to be created.
- Also, Gujarat government should work towards colonising new habitats outside the Gir landscape within the State.
- This is not for creating isolated populations but to increase the suitable lion range from its present, much smaller area to a larger area.
- The government should turn its attention to reducing the drivers of infectious disease, which includes controlling feral dog populations.

What is Ghost fishing? Examine its impact and suggest measures to tackle the problem.

KEY POINTS

Ghost Fishing

- It refers to lost or abandoned fishing gear that continues to capture fish and other marine animals after the gear is no longer under the control of a fisherman.
- The problem of ghost gear in Indian oceans is getting to be a serious concern.

Impacts

- **Species mortality** – One of the most significant impacts is the unintended deaths of target and non-target species (turtles, sea birds, whales and seals), which contribute to the overall depletion of populations.
- One way ghost fishing is perpetuated is by the trapped and dead animals in the derelict fishing gear acting as bait, attracting and potentially entrapping more organisms.
- **Habitat** – These ghost nets are often carried for thousands of km across the ocean floor through ocean currents and storm actions.
- For example, discarded Indian and Thai fishing nets have been fished out of Maldivian coasts.
- They destroy live corals and their associated inhabitants along the way.
- When the derelict fishing gear, sinks to the bottom, it can also smother organisms that live on top of and just below the sediments, like seagrasses, crabs, and worms.
- **Economic impact** – Some studies estimate that over 90% of species caught in derelict fishing gear are of commercial value, which can contribute to a significant loss of revenue for fishermen.

Preventive measures

- Improvement of gear design to reduce likelihood of failure or snagging.
- Spatial zoning of fisheries to avoid gear conflict and increase navigational awareness of gear in water.



- Reducing ghost fishing efficiency of gear (improve biodegradable aspects for release or disabling of lost gear over time).
- Provide affordable port disposal facilities and incentives to discourage improper disposal at sea.
- Government should take steps to remove derelict fishing gear from oceans in collaboration with civil societies.
- Outreach and education among fishing communities would also be crucial along with policy-level changes.

Innovative solutions

- In countries like Canada and Thailand, fishermen retain their used nets and recycled it into yarn to craft socks and even carpet tiles.
- In one instance in India, ghost nets hauled from Kerala's Kollam have been used to pave roads.

Cracker bans may help, but only as a few short gasps. Discuss in the light of the recent apex court ruling.

KEY POINTS

- In its recent ruling, the SC has ordered that, across the nation, only 'green firecrackers', which are free of chemicals that emit certain toxic gases on combustion, will be allowed, and only between 8 pm to 10 pm.
- Cracker-bursting on other festivals and weddings will also be restricted to the prescribed time-window.
- Naturally, the ban will help, but only as a few short gasps, because it fails to consider the real issues.

Real issues

- **Stubble burning** – Crop stubble burning in Haryana and Punjab adds considerably to NCR pollution over a longer period than crackers.
- Since the costs of the mechanised alternative to stubble-burning are very high, farmers find it cheaper to pay fines.
- **Road dust** – It contributes 56% and 38% of Delhi's PM10 and PM2.5 pollution, respectively.
- Industries including power plants are responsible for over 50% of the NOx pollution.
- **Vehicle density** – Increasing number of vehicles is one among the major reasons for Delhi's air pollution.
- **Waste** – While the capital has huge garbage fires in dumps, there has been no comprehensive solution for segregating and processing waste.

Solutions

- Pave or cover the sides of the roads with grass that holds the soil together and stops the production of the dust.
- Improve the quality and quantity of public transport.

- Focus on **transit oriented development** to encourage people to use public transports.
- Complete the peripheral highways around Delhi to lower the movement of trucks into the area.
- Build a market for straw by finding out the alternate uses of stubble and encourage farmers with proper incentives to bring stubble for that purpose.
- For example, properly cut stubble can be used to
 1. make bio-char or cellulosic ethanol
 2. burn in a power plant
 3. plant the next crop without tillage

Discuss the significance of Aravalli Mountains and examine the impact of rising illegal mining in Aravalli Mountains?

KEY POINTS

Aravalli Range

- It is a range of mountains running in North West direction extending for nearly 700 km from Banaskantha in Eastern Gujarat to Southern Haryana, through Rajasthan and Delhi.

Significance

- The Aravalli Range is the source area of many rivers, resulting in development of human settlements with sustainable economy since pre-historic times.
- The Aravalli Range has several forests rich in wildlife and with a diversity of environment.
- The Aravallis, despite its ecological value is instrumental in shaping the climate of the region, particularly rainfall, consequently recharging groundwater.
- It also acts as a green barrier against desertification of eastern-Rajasthan, Haryana and western Uttar Pradesh, checking the spread of the Thar desert.
- The Aravalli forests are also the green lungs of the NCR region, without which the problem of air pollution would only intensify.

Illegal mining

- According to a report of the Central Empowered Committee (CEC), 31 of the 128 hills in the Aravallis have vanished due to illegal mining.
- India's oldest mountain range has lost nearly a fourth of its hills.

Impacts



- The Aravallis in Rajasthan and Haryana keep the velocity of wind in check, but because of the mining activity the wind pattern is getting directed towards the plateau and that contains a lot of sand and dust.
- Loss of vegetative cover will lead to the natural drifting of Thar Desert towards the northwest.
- Increased desertification of the National Capital Region (NCR) and its adjoining areas can lead to more environmental hazards.
- These include more dust in the air, greater unpredictability of climate, meagre recharging of groundwater, and drying up of several natural water bodies.
- Earlier, the hills accelerate seasonal rainfall in the nearby areas. The degradation in hills along with changing land patterns and weather exploitation has decreased the amount of seasonal rainfall to minimal.
- The area under perennial water courses in this region has already contracted by nearly one-third and that under seasonal water flows by an even more alarming 97 per cent.

14. INFRASTRUCTURE

Metro rail systems are touted as a one-size-fits-all solution to traffic congestion and environmental problems of Indian cities. Do you agree? Justify your stand.

KEY POINTS

- In the past decade, more than 13 cities in India have sanctioned for metro rail systems and many more States are still vying to seek clearance.
- While metro rail systems are touted as a one-size-fits-all solution, the ground reality is incongruous, with the so far generated returns.

Concerns with universal applicability

- The studies on transport projects have questioned the universal applicability of metro rail projects as a mode of public transport.
- Such system can be advantageous only when carefully implemented in integration with other public conveyance modes.
- Furthermore, the effective utilisation of metros depends on the spatial attributes of cities such as concentration of business districts and population size and density.
- Also, it is one among the most expensive forms of mass rapid transit systems.
- Even amongst the middle-class users of private vehicles in India, the use of metro systems is not very encouraging because of its very high travelling cost.
- Moreover, the construction of metro projects tends to drive out investments from other cheaper modes of public transport such as bus systems, which cater to the majority of lower middle and urban poor segments.

- Also, for the same amount of expenditure the bus systems can cover a much larger area.
- It involves extensive land use changes for their implementation.
- In the absence of robust land regulations, private participation in metro systems may also lead to diversion of significant land resources to commercial gains.
- For instance, for Bengaluru and Kochi metro projects, land parcels have been acquired in addition to project requirements that are converted for profit generating real estate activities primarily targeted at higher income groups.
- So, there needs to be a proper assessment of economic viability and the transportation needs of cities prior to the adoption of metro systems.

15. INTERNAL SECURITY

List out the steps taken by India to strengthen its coastal security after the 26/11 Mumbai attacks. Also, examine the weak links in the system.

KEY POINTS

Steps taken

- India has rolled out a **coastal security scheme**, the second part of which will end in 2020. It has achieved the following goals –
 1. Tagging fishing boats
 2. Infusing training and equipment into India's coast guard
 3. Setting up an extensive network of radars, cameras and other sensors along the coast.
- Further steps includes, establishment of mechanisms for inter-agency coordination.
- Increased regulation of activities in the maritime zones.
- Integration of the fishing and coastal communities.
- Capacity augmentation of maritime security agencies for surveillance and patrol of the nation's maritime zones.
- Enhanced technical surveillance of coastal and offshore areas.
- Besides, State-wise Standard Operating Procedures (SOPs) for coordination among various agencies on coastal security issues have been formulated.
- Coastal Security Exercises are being conducted regularly by Indian Navy and Coast Guard to assess the effectiveness of existing mechanisms and to address gaps.

Weak links

- **Co-ordination** – There continues to be far too many government agencies involved in coastal and maritime security. Coordination still remains a huge challenge.
- **Role of States** – The response of state governments has been varied.
- For example, Gujarat and Tamil Nadu have been exemplary; other states treat the matter lightly.
- **Infrastructure** – Many of these coastal stations are unmanned or poorly maintained.
- The coast guard still has less than half the aircraft it needs.
- **Tracking beacons** – The requirement that only vessels over 20mtrs long need to fix tracking beacons resulted in many no. of vessels being outside the security net.

Road to future

- Terrorist techniques do not remain static. The trick is to be a step ahead of them.
- India must look to new technologies like data analytics and networked drones to prevent the attacks of the future.

India might lose the cyber space face-offs unless IT infrastructure of the military is indigenised soon.

Analyse

KEY POINTS

Vulnerability of India

- India seems to be largely unaware of the vulnerabilities that exist in the critical networks due to foreign hardware and software.
- **BSNL** – Over 60% of software and hardware being used by BSNL is sourced from Chinese Huawei or ZTE. This is despite Huawei being probed for hacking a BSNL network in 2014.
- **AFNET** – Cisco (US network equipment maker) was a major supplier of equipment for The Air Force Network (AFNET) which was launched in 2010.
- The army's latest communication backbone, Network for Spectrum (NFS), also uses Cisco equipment.
- **Software** – The Indian Army mostly uses the Microsoft Windows operating system on its official computers.
- Windows is an outstanding system but is a closed-source software owned by a company that is bound by US laws.
- It is historically tied to the American intelligence community.
- Past instances like, the U.S's PRISM program and the recent incident like the insertion of China's malicious chip in Super micro server motherboards bound for U.S, indicates the severity of emerging global cyber threats.



- Notably, India is a prime target for American spying as India stood at the 5th place in the overall list of countries targeted by PRISM.

Road to future

- Despite Indian products being available, a concerted effort to use indigenous solutions is conspicuously absent.
- But with clear dangers in cyber space, India needs to move towards making changes that are essential to protect national interests.
- A key task is for the Indian military to take the lead in indigenising its IT infrastructure.

Many of India's national security inadequacies stem from the absence of a wholesome national security vision. Analyse

KEY POINTS

Inadequacies

- **Neighbourhood policy** – India's neighbourhood policy holds a clear absence of vision on how to balance, engage and work with the many great powers in the regional and the broader international scene.
- For example, surgical strikes in Pakistan and doklam standoff in China, hardly made any significant gains in reality.
- **Defence preparedness** – India spends close to \$50 billion annually on defence and yet might still be ill-equipped to fight the wars of the modern age, especially in the neighbourhood.
- India also suffers from almost non-functional higher defence organization and the defence policy doesn't hold any political oversight or vision.
- **Defence management** – There is little conversation between the armed forces and the political class, and even lesser conversation among the various arms of the forces.
- **Institutional lacuna** – In India, talk of appointing a Chief of Defence Staff (CDS) has died down and the key post of military adviser in the National Security Council Secretariat (NSCS) remains vacant.
- The NSC almost never meets and the National Security Advisory Board, initially set up to seek 'outside expertise' on strategic matters, has become a space for retired officials.

Road to future

- Many of India's national security inadequacies stem from the absence of a wholesome national security/defence vision.
- To address such a problem, India should have an overall national security document from which the various agencies and the arms of the armed forces draw their mandate.
- It should also enable them to create their own respective and joint doctrines which would then translate into operational doctrines for tactical engagement.
- In the absence of this, national strategy is broadly a function of ad hocism and personal preferences.