

GOVERNANCE**IIT Council's Recommendations**

Recently, the Institute of Technology (IIT) Council has constituted four working groups to look at greater autonomy for the IITs.

- The decision is in line with the National Education Policy recommendation.
- The IITs are seeking autonomy on the lines of what was granted to the Indian Institutes of Management (IIMs).

Key Points**Members and Head:**

- The IIT Council is headed by the Education Minister.
- It includes the directors of all IITs, and the chairs of each IIT's Board of Governors (BoG).

Objective:

- It is meant to advise on admission standards, duration of courses, degrees and other academic distinctions.
- It lays down policy regarding cadre, methods of recruitment and conditions of service of employees of all IITs.

Working Groups of the Council:

- Group-1: Graded Autonomy, Empowered & accountable BoG and Director.
- Group-2: Grooming distinguished academics for directorship of IITs.
- Group-3: Reform and restructuring of Academic Senate.
- Group-4: Innovative funding mechanisms.

Other Recommendations:**Use of Technology:**

- To constitute a task force to review use of technology at all IITs and also to accelerate deployment of digital tools,
- Such as Blockchain, AI (Artificial intelligence), ML (machine learning), and Cloud Computing.

Reducing Staff:

- Cutting IIT staff strength to lower levels.
- The IITs currently function so that for every ten students, there is one faculty member. And for every ten faculty, they have pre-approval for 11 staff.

Research and Development Fair:

- To organise an IIT research and development fair to showcase the quality research work being done by IITs to the industries.

Need of Autonomy:**Better Decision Making:**

- Administrative and financial autonomy helps institutes to take a valuable decision for the benefit of students and the organisation.
- In the absence of autonomy, most decisions are taken by bureaucrats, who lack the technical knowledge needed to decide for technical institutes.
- Constructive decisions can be taken only by academicians and experts, while IITs do not enjoy complete autonomy, they have partial freedom.
- Recently, an expert panel, appointed to recommend measures to better implement reservations at IITs, has proposed that IITs should be exempted from caste reservations for faculty appointments as they are institutes of national importance.

Improved Responsibility:

- Lack of autonomy not only permits interference, but also creates divided responsibility, which inevitably leads to maintenance of the status quo, which in today's India is not desirable.
- With autonomy these institutes would have full control on their policies and operations, as well as have full responsibility for what value they provide.

INDIAN ECONOMY**Scheme of Fund for Regeneration of Traditional Industries**

The Ministry of Micro, Small & Medium Enterprises (MSME) inaugurated 50 artisan-based SFURTI clusters, spread over 18 States, to provide a boost to the MSME sector.

The Ministry of MSME is implementing a Scheme of Fund for Regeneration of Traditional Industries (SFURTI) with a view to organize traditional industries and artisans into clusters to make them competitive and increase their income.

Key Points

- The Ministry of MSME launched this scheme in the year 2005 with the view to promote Cluster development.
- Khadi and Village Industries Commission (KVIC) is the nodal Agency for promotion of Cluster development for Khadi as well as for Village Industries products.
- SFURTI clusters are of two types i.e., Regular Cluster (500 artisans) with Government assistance of up to Rs. 2.5 crore and Major Cluster (more than 500 artisans) with Government assistance up to Rs. 5 crore.
- The Ministry supports various interventions including setting up of infrastructure through Common Facility Centers (CFCs), procurement of new machineries, creating raw material banks, design intervention, improved packaging, improved skills and capacity development, etc.

Other Recent Initiatives to Promote MSME Sector

- **Udyog Aadhaar Memorandum (UAM):** It is a simple one-page registration form to promote ease of doing business for MSMEs in India.
- A Scheme for Promoting Innovation, Rural Industry and Entrepreneurship (ASPIRE): The scheme promotes innovation & rural entrepreneurship through rural Livelihood Business Incubator (LBI), Technology Business Incubator (TBI) and Fund of Funds for start up creation in the agro-based industry.
- **Credit Guarantee Fund Scheme:** To facilitate easy flow of credit, guarantee cover is provided for collateral free credit extended to MSMEs.

SCIENCE AND TECHNOLOGY**National Technology Awards 2020**

A total of 12 companies have been selected for the National Technology Awards 2020 for successful commercialization of innovative indigenous technologies.

Key Points

- The awards are conferred by the Technology Development Board (TDB).
- Every year TDB seeks applications for prestigious National awards for commercialization of technologies under three categories - Indigenous technologies, MSME, and Startups.
- **Category 1: National Award For Successful Commercialization of Indigenous Technology:**
- This award is given to an industrial concern which has successfully developed & commercialized an indigenous technology.
- In case, the technology developer / provider and the company commercializing the technology are two different organizations, each is eligible for award of Rs. 25 Lakh and a trophy.
- **Category 2: National Award For MSMEs:**
- The award of Rs. 15 lakhs each in this category is given to selected MSMEs that have successfully commercialized the product based on indigenous technology.
- **Category 3: National Award For Technology Start-ups:**
- This award is given to a technology start-up for promising new technology with potential for commercialization.
- The award in addition to the trophy includes a cash award of Rs. 15 Lakh.
- These awards conferred to various industries provide a platform of recognition to Indian industries and their technology provider, who have worked as a team, to bring innovation to the market and contributed to the vision of "Atmanirbhar Bharat".

Technology Development Board

- The Technology Development Board is a statutory body of the Government of India functioning under the Department of Science of Technology. It was established in 1996.
- It provides financial assistance to companies working for commercialization of indigenous technologies and adaptation of imported technologies for domestic applications.
- The National Technology Day (11th May) is organised every year by the TDB.

AGRICULTURE**Animal Husbandry**

A variety of policy concerns and the ongoing discussion over farm laws have fixed the spotlight on infrastructure investments necessary to boost productivity levels and fill critical gaps in production especially in the Animal Husbandry.

As the bulk of establishments in this sector is concentrated in rural India, the socio-economic relevance of this sector cannot be overstated.

Key Points

- Animal husbandry refers to livestock raising and selective breeding. It is the management and care of animals in which the genetic qualities and behavior of animals are further developed for profit.
- A large number of farmers depend upon animal husbandry for their livelihood. It supports the livelihood of almost 55% of the rural population.
- As per the Economic Survey-2021, the contribution of Livestock in total agriculture and allied sector Gross Value Added (at Constant Prices) has increased from 24.32% (2014-15) to 28.63% (2018-19).
- India is the highest livestock owner of the world.
- As per the 20th Livestock Census, the total Livestock population is 535.78 million in the country showing an increase of 4.6% over Livestock Census-2012.

Animal rearing has multidimensional potential.

- For instance, Operation Flood, launched in 1970, helped dairy farmers direct their own development, increased milk production ("a flood of milk"), augmented rural incomes and ensured reasonable prices for consumers.

Importance:

- It has contributed significantly to the empowerment of women and has increased their income and role in society.
- It is a major risk mitigation approach for small and marginal farmers, particularly across the rain-fed regions of India.
- It is at the centre of poverty alleviation programs from equity and livelihood standpoints.
- Livestock productivity has been identified as one of the seven sources of income growth by the Inter-Ministerial Committee under the government's target of doubling farmers' income by the year 2022.

Challenges:

- Non-availability of superior quality breeding bulls.
- Poor quality of semen produced by many of the laboratories.
- Shortage of fodder resources and ineffective control of animal diseases.
- Absence of field oriented conservation strategy for indigenous breeds.
- Lack of skills and quality services to farmers for improving productivity and improper infrastructure to support the sector.

Government Initiatives to Boost this Sector:**Animal Husbandry Infrastructure Development Fund (AHIDF):**

- This is the first major fund launched by the government in June 2020 that includes a diverse set of stakeholders such as Farmer Producer Organizations (FPO), private dairy players, individual entrepreneurs, and non-profits within its ambit.

National Animal Disease Control Programme:

- It has been launched for Foot and Mouth Disease (FMD) and Brucellosis with a total outlay of Rs.13,343 crore to ensure 100% vaccination of cattle, buffalo, sheep, goat and pig population.

Rashtriya Gokul Mission:

- To develop and conserve indigenous breeds of bovine population.
- To enhance milk production and to make it more remunerative to the farmers.

National Livestock Mission (2014-15): To ensure quantitative and qualitative improvement in livestock production systems and capacity building of all stakeholders.

National Artificial Insemination Programme: To suggest novel methods of bringing about impregnation in female breeds.

INTERNATIONAL AFFAIRS**India – Maldives**

Recently, India and the Maldives have signed a defence Line of Credit agreement worth USD 50 million. The agreement was signed during the visit by the External Affairs Minister of India to Maldives.

Key Points**Defence Line of Credit:**

- It was signed pursuant to the request by the Government of Maldives in April 2013 for India's support and cooperation in enhancing the capability of the Maldives Defence Forces in maritime surveillance, and subsequent requests in October 2015 and March 2016.
- It is seen as key to India's and Maldives' strategic interests, particularly given China's increasing footprint in the Indian Ocean Region.

Assistance to Build Dockyards:

- A dockyard will be developed at the Uthuru Thila Falhu (UTF) Naval Base with Indian assistance, a few miles northwest of Male, which will strengthen the Maldivian defence capabilities.
- The agreement is part of the defence action plan signed in 2016 by then Maldivian President Abdulla Yameen Abdul Gayoom during a visit to India.
- Indicating deepening security cooperation, an agreement to develop, support and maintain a Maldives National Defence Force Coast Guard Harbour at Sifavaru was also signed.
- India will also support development of other infrastructure needed for the harbour, support the development of communications resources and radar services, and provide training.

Review of Infrastructure Projects: A number of India-backed infrastructure projects including the National College of Policing and Law Enforcement Studies.

India - Maldives Relations**Geo-Strategic Importance of Maldives to India:**

- Maldives, a Toll Gate in Indian Ocean:
- Located at the southern and northern parts of this island chain lies the two important sea lanes of communication (SLOCs).
- These SLOCs are critical for maritime trade flow between the Gulf of Aden and Gulf of Hormuz in West Asia and the Strait of Malacca in Southeast Asia.
- Nearly 50% of India's external trade and 80% of its energy imports transit these SLOCs in the Arabian Sea.
- Part of Important Groupings: Besides, Maldives is a member of the South Asian Association for Regional Cooperation (SAARC) and the South Asia Subregional Economic Cooperation (SASEC).

Cooperation Between India & Maldives:

- Through the decades, India has rushed emergency assistance to the Maldives, whenever sought.
- India and Maldives conduct the joint military exercise 'Ekuverin'.
- Disaster Management: The 2004 tsunami and the drinking water crisis in Male a decade later were other occasions when India rushed assistance.
- The Maldives has been one of the biggest beneficiaries of the Covid-19 assistance and vaccines delivered by India among India's all of neighbouring countries.

Irritants in Relations:

Political Instability: India's major concern has been the impact of political instability in the neighbourhood on its security and development.

Radicalisation: In the past decade or so, the number of Maldivians drawn towards terrorist groups like the Islamic State (IS) and Pakistan-based madrassas and jihadist groups has been increasing.

China Angle: China's strategic footprint in India's neighbourhood has increased. The Maldives has emerged as an important 'pearl' in China's "String of Pearls" construct in South Asia.

Way Forward

India-Maldives defense cooperation will enhance India's capability to monitor Chinese maritime and naval movements along vital sea lanes of communication that run alongside the Maldives.

BIODIVERSITY AND ENVIRONMENT**Carbon Watch App: Chandigarh**

Chandigarh became the first state or Union Territory in India to launch Carbon Watch, a mobile application to assess the carbon footprint of an individual.

A carbon footprint is the total amount of greenhouse gases—primarily carbon dioxide—released into the atmosphere by a particular human activity.

Key Points**About the App:**

- The app focuses on individuals' actions and calculates carbon footprint on the basis of Transport, Energy, Waste and Water consumption.
- It will also provide information such as the national and world average of the emission, and the individual's level of emission generation.
- It encourages people to be Climate-Smart Citizens while making them capable of accessing their carbon footprint, along with providing them with steps to reduce it.
- It also sensitizes people about their lifestyle emissions, their impact and possible countermeasures to mitigate the same.

Carbon Footprint:

- According to the World Health Organization (WHO), a carbon footprint is a measure of the impact people's activities have on the amount of carbon dioxide (CO₂) produced through the burning of fossil fuels and is expressed as a weight of CO₂ emissions produced in tonnes.
- It is usually measured as tons of CO₂ emitted per year, a number that can be supplemented by tons of CO₂-equivalent gases, including methane, nitrous oxide, and other greenhouse gases.
- It can be a broad measure or be applied to the actions of an individual, a family, an event, an organization, or even an entire nation.

Effects of Higher Carbon Footprint:

- Climate change is the ultimate effect of large carbon footprints. Greenhouse gases, whether natural or human-produced, contribute to the warming of the planet.
- From 1990 to 2005, carbon dioxide emissions increased by 31%. By 2008, the emissions had contributed to a 35% increase in radiative warming, or a shift in Earth's energy balance toward warming, over 1990 levels.
- According to World Meteorological Organization (WMO) records, 2011-2020 was the warmest decade on record, in a persistent long-term climate change trend.
- Depletion of Resources: Large carbon footprints deplete resources on large scales, from a country's deforestation activities to one home's increased use of air conditioning.

Methods of Reducing Carbon Footprint:

- Adopting the 4 R's- **Refuse, Reduce, Reuse, Recycle.**
- Driving more-efficient vehicles (or making sure that current vehicles are properly maintained), taking public transportation.
- Individuals and companies can also offset some of their carbon dioxide emissions by purchasing carbon credits, the money from which can go into projects such as planting trees or investing in renewable energy.
- Implementation of the Climate change conventions like the Paris Agreement and Indian initiatives for the same must be fast forwarded.
- Indian initiatives include Nation Action Plan on Climate Change (NAPCC), National Wetland Conservation Programme, etc.

IMPORTANT FACTS FOR PRELIM**Non-Alcoholic Fatty Liver Disease**

Recently, the Ministry of Health & Family Welfare has launched the operational guidelines for integration of NAFLD (Non-Alcoholic Fatty Liver Disease) with NPCDCS (National Programme for Prevention & Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke).

The NPCDCS is being implemented under the National Health Mission (NHM). It was launched in 2010 to prevent and control Non-Communicable Diseases (NCDs).

Key Points**About NAFLD:**

- It is the abnormal accumulation of fat in the liver in the absence of secondary causes of fatty liver, such as harmful alcohol use, viral hepatitis.
- Fatty liver occurs when too much fat builds up in liver cells.
- It is a serious health concern as it encompasses a spectrum of liver abnormalities, from a simple non-alcoholic fatty liver (NAFL, simple fatty liver disease) to more advanced ones like non-alcoholic steatohepatitis (NASH), cirrhosis and even liver cancer.
- Steatohepatitis is characterized by inflammation of the liver with concurrent fat accumulation in the liver. Mere deposition of fat in the liver is termed steatosis.

- Cirrhosis is a complication of liver disease that involves loss of liver cells and irreversible scarring of the liver.
- NAFLD acts as an independent predictor of future risk of cardiovascular diseases, type 2 diabetes and other metabolic syndromes like hypertension, abdominal obesity, dyslipidaemia, glucose intolerance.

Risk From NAFLD:**High Fatality Rate:**

- Over the last two decades, the global burden of NASH has more than doubled. NASH caused 40 lakh prevalent cases of compensated cirrhosis in 1990, which increased to 94 lakh cases in 2017.
- Risks Obese and Diabetic Individuals:
- Epidemiological studies suggest that prevalence of NAFLD is around 9% to 32% of the general population in India with a higher prevalence in those with overweight or obesity and those with diabetes or prediabetes.

Incurable:

- Once the disease develops, there is no specific cure available, and health promotion and prevention aspects targeting weight reduction, healthy lifestyle, etc. can prevent the mortality and morbidity due to NAFLD.

Steps Taken by the Government:

- Aligning NPCDCS programme strategies to prevent and control NAFLD by encouraging behavior changes, early diagnosis and capacity building at various levels of healthcare.
- Promoting screening of cancer, diabetes and hypertension under Ayushman Bharat scheme.
- Along with the focus of 'Eat Right India' and 'Fit India Movement', the entire vision of the government is to move from Diagnostic Cure to Preventive Health.

DAILY ANSWER WRITING PRACTICE

Qns. Judicial Legislation is antithetical to the doctrine of separation of powers as envisaged in the Indian Constitution. In this context justify the filing of large number of public interest petitions praying for issuing guidelines to executive authorities. (UPSC GS-2 Mains 2020)

Ans:

The doctrine of separation of powers divides the functioning of government into three organs i.e legislature, executive, and the judiciary. This doctrine is one of the basic structures of the constitution. Various constitutional provisions like Article 50, 121, and 211, etc. embody the spirit of this doctrine.

However, of late we have observed the growing phenomenon of judicial legislation, specially filing of a large number of public interest petitions praying for issuing guidelines to executive authorities. There are multiple reasons for this need for PILs.

Need for PILs

Dereliction of Duty: It is the duty of the legislature to make laws while the executive should implement it in a proper manner. However, many times the legislature fails to make the necessary legislation to suit the changing times and the executive fails to perform their administrative functions.

Erosion of Confidence: This leads to an erosion of the confidence of the citizens in constitutional values and democracy.

Need to Fill the Vacuum: In this vacuum, driven by the motive to help the poor, marginalized and underrepresented, ensuring accountability of various instruments and functionaries of the State, individuals resort to Public Interest legislation or public interest petitions.

Direct Access to Justice: In the *Asiad Workers* judgment case, Justice P.N. Bhagwati held that anyone getting less than the minimum wage can approach the Supreme Court directly without going through the labor commissioner and lower courts.

Advantages of PILs

- **Instrument of Social Change:** According to the Supreme Court, the aim of PIL is to give to the common people of this country access to the Courts to obtain legal redress. It is an important instrument of social change and for maintaining the Rule of law and accelerating the balance between law and justice.
- **Inclusive:** PIL is a method to justice even to voiceless and vulnerable sections of society.
- **Monitoring of Institutions:** It helps in judicial monitoring of state institutions like prisons, asylums, protective homes, etc. It is an important tool to make human rights reach those who have been denied rights. E.g.: issues related to degraded bonded labourers, tortured under trials and

women prisoners, humiliated inmates of protective women's homes, blinded prisoners, exploited children, beggars, and many others.

Conclusion

Public Interest Litigation has produced astonishing results which were unthinkable three decades ago. However, the Judiciary should be cautious enough in the application of PILs to avoid Judicial Overreach that is violative of the principle of Separation of Power.

DAILY QUIZ

1. With reference to Carbon Footprint, consider the following statements:

1. It is a measure of the impact of people's activities on the amount of carbon dioxide produced.
2. It is strictly the same as the ecological footprint.

Which of the statements given above is/are correct ?

- a) **1 only**
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

2. Consider the following statements:

1. Blue hydrogen is produced using renewable energy and electrolysis to split water.
2. Grey hydrogen is produced from methane and releases greenhouse gases into the atmosphere.

Which of the statements given above is/are correct?

- a) 1 only
- b) **2 only**
- c) Both 1 and 2
- d) Neither 1 nor 2

3. Which of the following are the initiatives to promote MSME sector:

1. SFURTI
2. Credit Guarantee Fund Scheme
3. Udyog Aadhaar Memorandum
4. Prime Minister's Employment Generation Programme

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 1, 3 and 4
- c) 2 and 4 only
- d) **1, 2, 3 and 4**

4. Consider the following statements:

1. The contribution of Livestock in terms of Gross Value Added (at constant prices) in total agriculture and allied sector has declined in 2018-19 when compared from 2014-15.
2. As per the latest Livestock Census, the total Livestock population in the country has declined compared to the Livestock Census-2012.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) **Neither 1 nor 2**

5. Consider the following statements about India and Maldives:

1. India and Maldives are member nations of SAARC but not SASEC.
2. Operation Cactus was the assistance of the Indian Armed Forces to neutralize the coup attempt in Maldives.
3. Ekuverin is the joint military exercise of India and Maldives.

Which of the statements given above is/are not correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) **1 only**
- d) 1, 2 and 3