

CURRENT AFFAIRS

WEEKLY

WEEK: 1
FEBRUARY
2022

MAINS

- GS-I
 - ❑ Women in Politics
- GS-II
 - ❑ Harnessing New Opportunities in a World of Declining Multilateralism
 - ❑ Use externment orders with caution: SC
 - ❑ Police Budgeting (Union Budget 2022-23)
- GS-III
 - ❑ India's New Battery Swap Scheme
 - ❑ Data 4.0 – Rethinking rules for a data-driven economy
 - ❑ Capex in budget
 - ❑ Crypto-currency and National Security
 - ❑ Challenge of Recidivism to Counter-Radicalisation Programmes
 - ❑ Importance of Drone Technology in Indian Agriculture
- GS-IV
 - ❑ Political Patronage of Bureaucrats, Ethics in Public Life

PRELIMS

- HISTORY ■ Bomb Cyclone
- GEOGRAPHY ■ Hoysala Temples in Karnataka
- INTERNATIONAL RELATIONS ■ Lal-Bal-Pal, the famous trio
 - Nord Stream Pipeline
- ENVIRONMENT ■ Push for zero-budget natural farming
 - World Wetlands Day
 - Parasitic Plant found in Nicobar
 - India's First Geo Park
- SCIENCE & TECH ■ Green Bonds and their green Impact
 - World Neglected Tropical Diseases Day

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— Disclaimer —

The current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

CURRENT AFFAIRS ANALYST

WEEK- 1 (FEBRUARY, 2022)

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SECTION: A

(MAINS)

CURRENT AFFAIRS

WOMEN IN POLITICS

CONTEXT:

While numerous political advancements have occurred throughout the world in recent decades, the most important influence has to be on women's involvement and representation in political roles.

◎ BACKGROUND

- In India, historically women are not given primacy in the decision-making process; they face institutional, systemic exclusion in the decision-making process.
- Political under-representation is one of the important factors for the poor developmental outcomes of women.

Set in this context, here an effort has been made to analyse the extent of political inclusiveness of women in governance.

◎ ANALYSIS

The current scenario

Women constitute almost half of the world population. Globally, they constitute **49.6 per cent** of the total population as against **50.6 per cent** of men. As per **Census 2011**, India's population constituted **48.5 per cent** of women and **51.5 per cent** of men.

- In a country with deplorable levels of women in the workforce, and social-cultural norms that heavily police women's mobility and participation in public life, getting involved in electoral politics is a far-fetched dream for most women.
- Politics is essentially a public act, and research shows that women's ability to negotiate a space independent of the household is an important factor in deciding if or not they will be politically active.
- In the recent polls, women made up **8 per cent** of all candidates in Assam and **11 per cent** in the other four states.
- Roughly, one in every 10 individuals who contested the election was a woman.

ECI on women's representation in Politics

- As per the report of the Election Commission of India, women represent 10.5 per cent of the total members of the Parliament.

- The plight of women in the state assemblies is even worse, where they nearly account for 9 percent of the leaders.
- Women's representation in the Lok Sabha has not even grown by 10 percent in the last 75 years of independence.
- Women workers abound in India's main political parties, but they are often marginalised and refused a party ticket to run in elections.
- Global Gender Gap Report 2020
- According to Global Gender Gap Report 2020, India ranks 112th in educational attainment out of 153 countries, which reveals a stark involvement of education as a factor that determines women's participation in politics.
- Women's social mobility is influenced by their education.

What hinders the inclusion of women in politics?

There are several factors responsible for the poor representation of women in Indian politics such as

- gender stereotypes
- lack of political network
- financial strains
- unavailability of resources
- lack of political education amongst women in the country

Socio Cultural Factor

- In countries like India Women are considered as the mothers and housewife and to participate in election are restricted due to patriarchal mindset of Indian society.
- In India women are considered as a weak and they are restricted only to boundary of house.
- Exclusion of women from Religious institution and religious leadership have impacted negatively on women's status and restrict them to take opportunity to participate in politics and public life.
- Lack of economic resources is the biggest obstacle to prevent to participate in politics and public life.

- Due to family responsibility women spend far more time in home than men so lesser time to participate in politics and public life.

What measures are required?

- **Gender Equality:** Women's should have equal rights with men in the political, social, economic and cultural spheres. Even though constitution guarantees women equal right in all spheres socio-cultural factors need to be adapted to modern ethos of equality. Institutions of Governance like courts, police, administrative bodies etc. should focus on gender equality.
- **Affirmative Action:** Action taken by the government by reserving certain percentage of seats at state legislature and parliament for women.
- **Women Empowerment:** To provide education and equal health access in all spheres of life can empower women to participate in politics and public sphere. Both education and health are important for women to participate in Central, state and Panchayat election and other public field.
- **Enforcing property rights:** Despite legal rights for women to inherit paternal property women are denied property rights and thus they lack economic resources. There is need to reinforce with in society and women about their right to property.
- **Social awareness campaigns:** Long held prejudices against women need to be dismantled through concerted social campaigns with help of educational institutions, media, religious leaders, celebrities, political leaders etc.
- With the **WEF 2021 report** data staring in our face, the country must invest and commit towards this for a more promising future to meet its commitments towards achieving the UN SDGs. We surely do not want to wait for 135 years as per the **WEF Global Gender Report 2021** to bring equality between men & women.

What is meant by Women's Empowerment?

- Based on the assumptions that women differ from men in their social positions and that those differences consist of asymmetric, unequal power relations between the genders, "women's empowerment" refers to the process of increasing women's access to control over the strategic life choices that affect them and access to the opportunities that allow them fully to realize their capacities.

- Majority of Indian **women politicians are highly educated** such as Nirmala Sitharaman, Finance Minister of India; Mamata Banerjee, Chief Minister of West Bengal; Mahua Moitra, an MP from West Bengal; Atishi Marlena, an MLA from Delhi; Mayawati, former Chief Minister of Uttar Pradesh.

Special Initiatives for Women

- **National Commission for Women:** In 1992, the Government set-up this statutory body with a specific mandate to study and monitor all matters relating to the constitutional and legal safeguards provided for women, review the existing legislation to suggest amendments wherever necessary, etc.
- **Reservation for Women in Local Self-Government:** The 73rd Constitutional Amendment Acts passed in 1992 by Parliament ensure one-third of the total seats for women in all elected offices in local bodies whether in rural areas or urban areas.
- **The National Plan of Action for the Girl Child (1991-2000):** The plan of Action is to ensure survival, protection and development of the girl child with the ultimate objective of building up a better future for the girl child.
- **National Policy for the Empowerment of Women, 2001:** The Department of Women & Child Development in the Ministry of Human Resource Development has prepared a "National Policy for the Empowerment of Women" in the year 2001. The goal of this policy is to bring about the advancement, development and empowerment of women.

◎ CONCLUSION

- Women participation has suffered for ages and looking at the grave circumstances we are in, these raw steps are nugatory, therefore, there is an urgent need for policies that can ensure better representation of women in the country such as more strict policies and implementation of girl-child education in the country.

HARNESSING NEW OPPORTUNITIES IN A WORLD OF DECLINING MULTILATERALISM

CONTEXT:

Today, the world is somehow witnessing the crisis of multilateralism, however, it is often forgotten that this crisis (declining multilateralism) could offer new opportunities that India should harness.

◎ BACKGROUND

- The **post-World War II** multilateral order may have been shaped largely by the western allies, but this did not deter India from taking on an active role across different negotiations for the setting up of new international organisations.
- ▶ For instance, even before the country won independence in 1947, its negotiators worked systematically to ensure that any international trade organisation that emerged would take into account its interests (and the concerns of several other developing countries).
- ▶ India was a founding member of the **United Nations (UN)**, and an original signatory to the **General Agreement on Tariffs and Trade (GATT)**.
- ▶ Even when the rules of the game did not turn out to its advantage—it was neither a permanent member of the **UN Security Council**, nor was it a member of the informal decision-making “**Quad**” group in the GATT—its enthusiasm for multilateralism seldom waned.

◎ ANALYSIS

What is ‘multilateralism’?

- Multilateralism is the process of organizing relations between groups of three or more states.
- Beyond that basic quantitative aspect, multilateralism is generally considered to comprise certain qualitative elements or principles that shape the character of the arrangement or institution. Those principles are:
 - ▶ An indivisibility of interests among participants
 - ▶ A system of dispute settlement intended to enforce a particular mode of behavior
- Multilateralism has a long history, but it is principally associated with the era after World War II, during which there was a burgeoning of multilateral agreements led primarily by the United States.

- The organizations most strongly embodying the principle of multilateralism are to be found in trade (the World Trade Organization [WTO]), security (the North Atlantic Treaty Organization [NATO]) and environment (numerous multilateral environmental institutions also exist).

Brief History of Multilateralism

- **Concert of Europe:** The end of the Napoleonic wars in Europe saw the establishment of the Concert of Europe, with the great powers redrawing European borders peacefully at the Congress of Vienna.
- **League of Nations:** The First World War destroyed the European Concert and replaced it with League of Nations.
- **UN, IMF & IB:** The post-World War II world saw the creation of a new world order sustained by multilateral and supranational institutions such as the United Nations, the International Monetary Fund and the World Bank.

The rise of multilateral system

- Over the next 70 years, sometimes in coalitions and sometimes alone, the world’s largest democracy sought to reform the multilateral system from the inside.
- This earned it a reputation of being a “difficult” negotiator, especially when dealing with western counterparts. Its persistent activism, however, contributed to at least some updating of the system (e.g., the **World Trade Organisation**, from the mid-2000s onwards, began to include Brazil and India in the Quad).

How has the multilateral system served India well?

- The multilateral system, in turn, served India well:
- India’s dramatic rise since the turn of the millennium, while in good measure a function of its **domestic economic and social reforms**, has also been facilitated by the many **growth and development opportunities** afforded to it by **free markets** and the **absence of major wars**.

Why multilateralism is facing issues?

- Today, multilateralism faces a crisis of unprecedented proportions.
 - ▶ The crisis has several sources. It manifests itself in a fundamental questioning of the very value of multilateralism within countries and deadlocks in negotiations in multilateral organisations.
 - ▶ Add to this the phenomenon of “Weaponised Interdependence” – the ability of some powerful states to exploit the control that they exercise over hubs of production networks in a world of closely integrated global value chains – and it is clear that multilateral institutions are ill-suited to meet the challenges of the present day.
- The long-standing vulnerabilities of the multilateral system have been laid bare by the pandemic:
 - ▶ The **World Health Organisation** has come under much critique for its mishandling of COVID-19; even now the World Trade Organisation stands by helplessly as members continue to bicker over the TRIPS waiver, and potential capacity for vaccine and medicine production in the Global South cannot be put to its much-needed use.
- The system is in dire crisis, at a time when the world needs it most; collapse of the system would hurt all parties, including India.
- Yet, amidst all the handwringing, it is often forgotten that the crisis of multilateralism could offer new opportunities that India should harness.

How is it an opportunity for India?

The opportunities emerging directly from the crisis are fourfold.

- **First**, while India itself had, for decades, pushed for reforms in the multilateral order (e.g., for greater inclusiveness in international organisations), the crisis of the system seems to have finally created a more widespread recognition for the necessity of reform.
- **Second**, key players in the west—especially in Europe—have begun to recognise that they need new allies and friends. This is especially so given that the US seems to be turning away from the very system that it had led in creating, and then served as a guarantor for.
- **Third**, a significant cause for the malaise of multilateralism lies in the disillusionment of the many—within both the global north and the global south—who believe that they have missed out on the gains of globalisation. This disillusionment, in turn, is a product not only of inequalities that have indeed increased across many societies, but also of the absence of a convincing narrative about globalisation and the multilateral rules that facilitate it. In some key policy circles in developed countries, this has prompted considerable soul-searching, as exemplified by Munich Security Conference 2020 and its focus on “westlessness”.
- **And fourth**, a recognition seems to be finally growing that sometimes helter-skelter globalisation—in a world where production chains can be weaponised—is no longer acceptable. Alternative and more sustainable forms of globalisation need to be developed, which meet goals of both prosperity and security. The moment is ripe for sharing new ideas. And while India has always had much to offer the world, the world may now be ready to appreciate it.

USE EXTERNMENT ORDERS WITH CAUTION: SC

CONTEXT:

Recently the Supreme Court said that authorities can pass an order of externment against a person only under extraordinary circumstances.

◎ BACKGROUND

- An order has been passed in December 2020 by which a man in Maharashtra was externed from Jalna district for two years.
- The authority had passed the December 15, 2020 order in exercise of powers under section **56(1)(a) (b) of the Maharashtra Police Act, 1951** and the man was directed to remove himself outside the limits of the district within five days for a period of two years.
 - ▶ **Section 56** of the Act deals with removal of persons about to commit offence.

◎ ANALYSIS

- What is Externment?
- A system of preventing people from entering into a particular place for a certain period, due to their ability to affect that place's conditions by criminal activity, as exhibited by their prior conduct, this system of restraining the criminal activities is known as externment.

Indian constitution on freedom of movement and restrictions:

- **Article 14** of the Indian Constitution promotes equality and prohibits discrimination on the grounds of "religion, race, caste, sex, or place of birth."
 - ▶ As Article 14 of the Indian Constitution upholds the **principle of natural justice**, the Supreme Court has been of the view that no externment order shall destroy natural justice's principles in any manner.
- **Article 19(1)(d), 19(1)(e) and Article 21** of the Indian Constitution guarantees the right to every citizen of India to move freely throughout the country and have a right to personal liberty.
 - ▶ However, the Rights under **Article 19(1)(d) and 19(1)(e)** are subjected to coherent restrictions enabled by the State "in the interest of general public" as defined under **Article 19(5)** of the Constitution of India. However, the court has said that an externment order "must stand the test of reasonableness".

What is the need of externment orders?

- To maintain the law and order in society.
- To ensure the restrictions on criminal acts.

How externment work towards social welfare?

- The principle of externment is to protect an area from probable danger of commission of offences by known criminals.
- The logic being that banishing a criminal from his area of operation would sever his link with the normal area of his criminal activities and reduce his criminal propensity in general.
- This provision is enacted with a view to ensure that the majority of the people may live in peace and harmony, and remain free from constant fear or threat of danger to their life or property by habitual criminals.

Important cases related to externment:

- **Bhagubhai Dullabhbhai v. District Magistrate, 1956:**
 - ▶ According to SC, since the restrictions under Article 19(5) have to be "reasonable", the period for maximum externment must also be reasonable.
 - ▶ SC said that the orders of externment must remain only for a certain reasonable period (for a maximum of two years).
 - ▶ Also, the orders must be allowed to review at specific intervals since these laws come with restrictions on the personal liberty of a person.
- **Nawabkhan Abbaskhan v. the State of Gujarat, 1974:**
 - ▶ In this case, the court explicitly ruled out that any order of externment, where the affected party is not heard before concluding a decision, is null and void.
 - ▶ The court expressed its concern that no order of externment shall violate the rule of 'Audi Alteram Partem' (Latin phrase meaning "listen to the other side") and must not injure the rights guaranteed by the Indian Constitution.

- **Town Area Committee v. Jagdish Prasad, 1978:** SC ruled out that cross-examination of the witness is regarded as a part of natural justice.

What is the position of externment in UK v/s India?

- As far as the concept of externment is concerned, the UK does not have any legislation for externment.
- The legislation of **The Vagrancy Acts 1824 & 1935** in the United Kingdom provides for imprisonment as a punitive action for constraining the crime but don't exhibit any provision of externment order by an executive.
- In India, there have been legislations as discussed earlier that certainly grants the power of externment a person having a criminal record or after the conviction in a crime, like
 - The Maharashtra Police Act (MPA) 1951
 - Punjab Security of State Act 1953
 - Assam Maintenance of Public Order Act 1947
 - Karnataka Police Act

What is recent stand of SC on externment?

- Externment Is Not An Ordinary Measure; Must Be Resorted To Sparingly And In Extraordinary Circumstances.
- The discretion should be used "very sparingly" as it deprived a person of his or her right of free movement in the country. An externed person may not even be able to stay with his family or home.

◎ CONCLUSION

- After analysing the certain aspects of externment concerning Indian Constitution, we can conclude that these laws are regarded constitutional by the Indian courts. We have observed that these provisions are there to put a constraint on the increasing number of crimes. Also, if all the procedures are duly followed, then we have found that courts have been upholding the externment orders. Therefore, our lawmakers should look forward to placing standardised law throughout the country so that courts can evolve a particular jurisprudence to avoid violations of natural justice principles.

POLICE BUDGETING (UNION BUDGET 2022-23)

CONTEXT:

Union Budget for 2022-23 has increased the allocation to Ministry of Home Affairs. Lion's share of this allocation has been given to police.

◎ BACKGROUND:

- The allocation of funds to police in Union Budget 2022-23 has increased but this news does not bring cheers for those rooting for reforms in India's police forces.
- It is important to note that out of total amount of money allotted to the police force (Rs. 1.03 lakh crore), only a small fraction is available for utilization as capital expenditure (Rs. 9,715 crore).

◎ ANALYSIS

Need for Police Reforms in India:

- **Indian Police Act, 1961** was enacted in the Background of the **Revolt of 1857**.
- The Colonial government therefore enacted an Act which was designed in such a way that police would 'rule' the people and not 'serve' them.
- The principle of police in India hence during colonial times was not Peelian, but based on Irish Constabulary.

Peelian Principles- These are the principles that summarize the ideas that Sir Robert Peel developed to define an ethical police force.

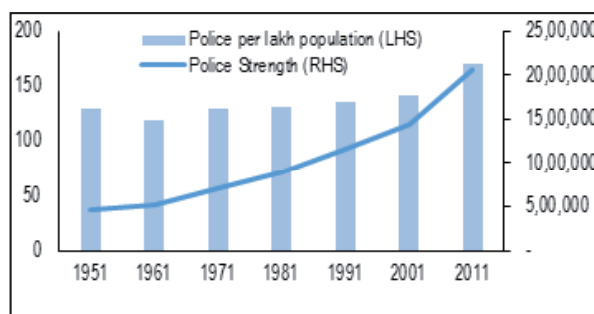
- After India's Independence, need was felt time and again to reform and restructure the police system in India. The same though has happened only to a limited extent.
- Reforms in police would better the law and order in India and this will result in improved socio-economic conditions of the country.

Why police reforms have had limited success in India?

- Law and Order is a **state subject** and hence enforcing police reforms from Centre is difficult.
- As section of those in power, in both politics and civil services, benefit from the colonial system of policing.
- Inertia shown by the stakeholders required to manifest willingness to change that would lead to modernization of police in India.

Issues plaguing the police establishment in India

- Funds allotted to police forces all over India are only 3% of the combined expenditure of Centre and all the states in India.
- Recruitments in the police departments all over the country is awfully low leading to vacancies of around 24% throughout the country. This adversely impacts police-public ratio.



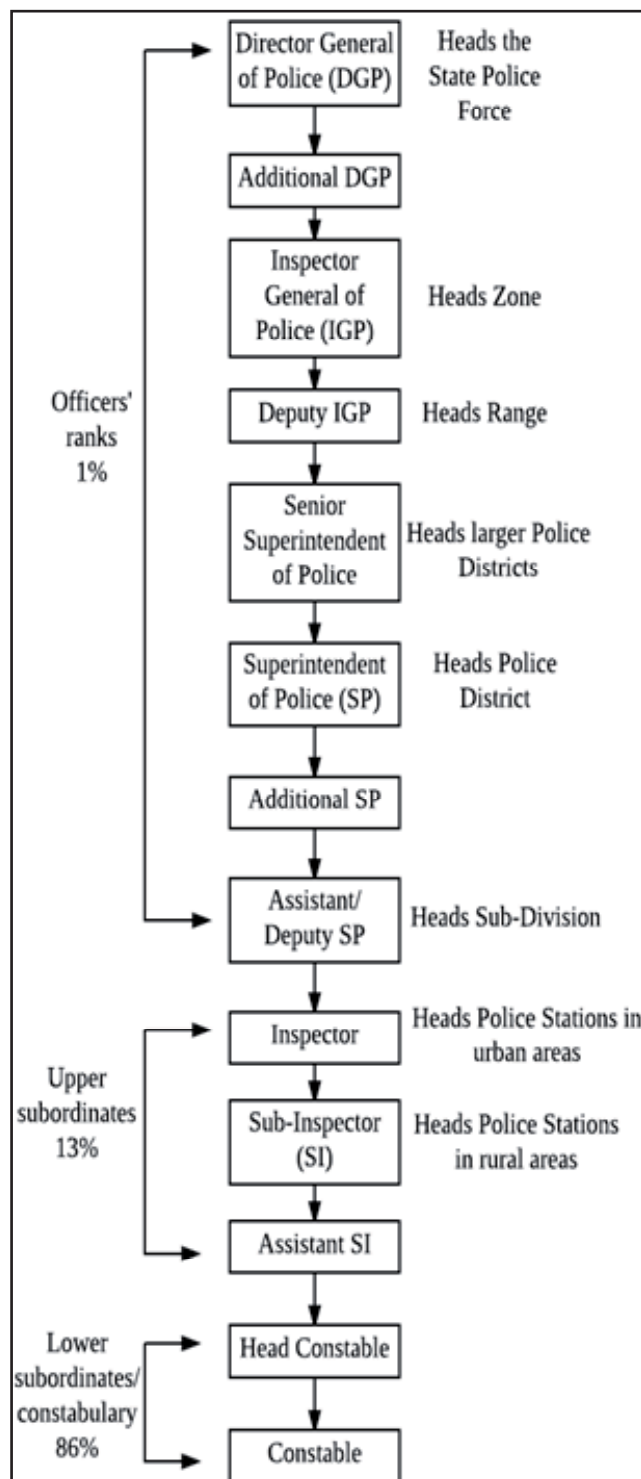
- It is also important to note that the proportion of personnel working in the police departments are largely concentrated at the subordinate or constabulary level.
- This not only burdens the officials at higher ranks but also leads to concentration of power in the hands of few leading to lack of accountability.
- Corruption has impacted the working of police department and led to deterioration of its functioning.

Efforts made for the purpose of modernizing police force in India-

- First effort to modernize the police force in India was done by the state of Kerala when in the 1959 it established the **Police Commission** to reform its police force.
- At the national level the earliest initiative to bring reforms was done when the Central Government instituted the **National Police Commission in the 1977**.
- **Nation Police Commission** recommended **Amendment of Code of Criminal Procedure**,

1973 and revision of syllabus for IPS probationers. Very little though was done to implement its recommendation.

- The **Padmanabhaiah Committee** on police reforms that was set in the year 2000 looked into police reforms in a comprehensive manner. It recommended modern methods for not only recruiting the police personnel but also their training, patrolling, posting and transfers.
- **Padmanabhaiah Committee** also recommended modernization of police forces and police stations all over India.
- **Malimath Committee** set up in the year 2000 was invested with the work of revamping the whole of criminal justice system in India. It paid special attention on technologically modernizing and paying special attention on improving the investigating abilities of the police forces in India.
- **New Model Police Act** was drafted by the Union Government in 2006 and the same was forwarded to the state governments to be implemented. As of now only 16 states have implemented it in limited way.
- Following are the salient features of New Model Police Act-
 - Effort was made through New Model Police Act to make policing in India a professional service that would strengthen country's democratic society.
 - Police to be governed by impartiality and human rights.
 - Special attention for the protection of weaker sections including minorities.
 - Functional autonomy to be provided by creation of State Police Board, Merit based selection, merit based selection and appointment of DGP.
 - Professionalism in police departments has to be encouraged by dedicating staff for crime investigation.
 - Accountability from police personnel has to be demanded through their conduct.
 - Police personnel should be provided better service conditions.



Supreme Court's view on Prakash Singh v/s Union of India

While considering a PIL filed by an eminent former police officer named Prakash Singh, the Supreme Court observed that reforms in the police force have to be undertaken at the earliest and recommended some steps to be undertaken for the same-

- Establishment of State Security Commission which would be headed by the Chief Minister or Home

Minister of the state and will consist of leader of Opposition in State Assembly, retired Judge of High Court and few non-political independent individuals as its members. This would check the misuse of police forces in India.

- Police Establishment Board to be set up consisting of DGP and four senior police officers. This board would decide on transfer/posting of officers' upto the rank of Dy. SP rank.
- A Police Complaint Authority to be formed and to be headed by retired High Court Judge. This body would decide the fate of police officers who have been alleged to have committed misconduct on duty.
- Merit based process for selection of DGP to take place.
- It is disheartening to know that the monitoring committee appointed by the Supreme Court reported that the states had shown total indifference to it's recommendation and only few measure were adopted to bring reforms in the police force.

Allocation to the police force in Union Budget 2022-23

- The Union Territory of Jammu & Kashmir has been allotted Rs. 4,800 for reshaping of its law and order machinery.
- The Union Territory of Ladakh has been allotted Rs. 3,768 for the purpose building its police infrastructure.
- The Central Armed Police Forces have been allotted Rs. 2,744 crore for infrastructure development.
- The Central Armed Police Forces have been mandated to take up border infrastructure management more effectively and for that purpose allocations have been made to erect barbed wires on fences, install flood lightings, construct roads and construct observation post towers along the border and install hi-tech surveillance.

What next for police reforms? (Way forward)

- People of India should make police reforms important a political issue. Thus for the purpose of winning elections, political parties will have take-up this issue seriously. It is essential that community leaders, NGOs etc. let people know as to what will be the benefits of good policing and why democratically pressure has to be exerted on law makers to make it happen

INDIA'S NEW BATTERY SWAP SCHEME

CONTEXT:

In order to meet its decarbonization goals, India will introduce a new policy for battery swapping to boost sales of electric vehicles (EVs).

◎ BACKGROUND

- This was a part of the 2022-23 Union Budget's focus on sunrise opportunities, energy transition, and climate action.
- A battery swapping policy will be brought out and interoperability standards will be formulated.
- The private sector will be encouraged to develop sustainable and innovative business models for 'Battery or Energy as a Service'. This will improve efficiency in the EV ecosystem.
- The move to come out with a policy on battery swapping is essentially an extension of the government's scheme for e-buses to swap drained batteries with fully-charged ones at depots across key metros, as a part of its ambitious plan for a mass shift to electric vehicles by the year 2030.

◎ ANALYSIS

Key Takeaways from the policy

- **Lowering of cost:** A battery is also the most expensive part of an EV and swapping allows companies to offer it as a service through lease or subscription models, bringing down the cost of owning and operating the vehicle.
- **Incentive to owner:** The government is likely to offer EV owners an incentive of up to 20% of the total subscription or lease cost of the battery and this will be in addition to what they already get for buying clean vehicles.
 - ▶ In 2019, India set aside 100 billion rupees (\$1.3 billion) to promote EVs by giving incentives directly to buyers, but only about 10% of this has been used. Incentives for battery swapping will likely be given from the same fund.
- **Uniform standards:** The government will also define battery design and charging standards for companies that want to set up swap stations. This is to ensure the batteries can be used across EV models of different automakers.
 - ▶ The idea is that if one company sets up a battery swap station, vehicles of another company should be able to use the same battery and service. Disruption will only come with scale.

- **Infrastructure:** The government's move to assign infrastructure status to the clean energy storage sector is expected to help the sector access credit.
- **Facilitating credit facility:** Data Centres and Energy Storage Systems including dense charging infrastructure and grid-scale battery systems will be included in the harmonized list of infrastructure. This will facilitate credit availability for digital infra and clean energy storage.
- **Building storage:** The Economic Survey called for a focus on building storage for intermittent electricity generation from solar PV and wind farms.
- **Linking with PLI Scheme:** In addition to this, the Budget also proposed an additional Rs 19,500 crore for a production linked incentive scheme in the solar sector for manufacturing of high-efficiency modules, to facilitate domestic manufacturing for the goal of 280 GW of installed solar capacity by 2030.
- **Awareness:** It will create new avenues for companies to venture into the business of battery swapping, he said, adding, additionally, creating special clean zones will further accelerate the adoption of EVs and spread awareness amongst the citizens.
- **Sustainable business models:** The private sector will be encouraged to develop sustainable and innovative business models for battery and energy as a service is a great boost to co-develop the battery swapping and EV charging ecosystem.
- **Extension of FAME Scheme:** What was missed was an explicit statement of the extension of the FAME scheme and how it can support the expansion of the charging network in India to help facilitate the switch from petrol and diesel-based vehicles to EVs.

Government's initiative

- Government seeks to achieve the target of electric vehicles to make up 30 % of new sales of cars and two-wheelers by 2030. India has launched the National Electric Mobility Mission Plan (NEMMP) and Faster Adoption & Manufacturing of (Hybrid &) Electric vehicles in India (FAME India), to build a sustainable EV ecosystem.

FAME SCHEME

- FAME India is a part of the National Electric Mobility Mission Plan. Main thrust of FAME is to encourage electric vehicles by providing subsidies.
- The FAME India Scheme is aimed at incentivizing all vehicle segments.
- Two phases of the scheme:
- Phase I: started in 2015 and was completed on 31st March 2019
- Phase II: started from April 2019, will be completed by 31st March 2022
- The scheme covers Hybrid & Electric technologies like Mild Hybrid, Strong Hybrid, and Plug-in Hybrid & Battery Electric Vehicles.
- Monitoring Authority: Department of Heavy Industries, the Ministry of Heavy Industries and Public Enterprises.
- Fame India Scheme has four focus Areas:
 - Technology development

- Demand Creation
- Pilot Projects
- Charging Infrastructure

Objectives of FAME Scheme:

- Encourage faster adoption of electric and hybrid vehicles by way of offering upfront Incentives on the purchase of Electric vehicles.
- Establish a necessary charging Infrastructure for electric vehicles.
- To address the issue of environmental pollution and fuel security.

© WAY AHEAD

The government will give \$6 billion in incentives to companies to build clean vehicles and produce batteries locally as it plans for electric cars to make up 30% of total private car sales by 2030 and for electric motorcycles and scooters to make up 40% of total sales

DATA 4.0 – RETHINKING RULES FOR A DATA-DRIVEN ECONOMY

CONTEXT:

Recently, estimates showed that the world could generate more data in the next three years than over the past 30. The explosive growth of data owes not only to “human” activities since as much as 40% of internet traffic is being generated by machines, between machines. However, this trend will likely continue and accelerate in the years ahead, with the number of networked devices in the world projected to reach a staggering 125 billion by 2030.

● ANALYSIS

- What is a Data-Driven Economy?
- A data economy is a global digital ecosystem in which data is gathered, organized, and exchanged by a network of vendors for the purpose of deriving value from accumulated information.
- Data inputs are collected by a variety of actors including search engines, social media websites, online vendors, brick and mortar vendors, payment gateways, software as a service (SaaS) purveyors, and an increasing number of firms deploying connected devices on the Internet of Things (IoT).
- The gathered data is then passed to individuals or firms which typically take a fee. In the United States, the Consumer Financial Protection Bureau and other agencies have developed early models to regulate the data economy.
- Data collected and managed in the data economy must be stored on dedicated servers. These servers can be located on-premises for access from a single physical location, or off-premises.
- The data will reside in data centers and will remain available for access and exchange via internet-based applications, referred to collectively as the cloud. Storing and securing collected data represent a significant portion of the data economy.

Data economy categories

- **Big data economy:** Big data is defined as the algorithm-based analysis of large-scale, distinct digital data for purposes of prediction, measurement, and governance.
- **Human-driven data economy:** The human-driven data economy is a fair and functioning data economy in which data is controlled and used fairly and ethically in a human-oriented manner. The human-driven data economy is linked to the My Data Movement and is a human-centered approach to personal data management.
- **Personal data economy:** The personal data economy is created by individuals using personal data, which people supply either directly or indirectly. Consumers become suppliers and controllers.

- **Algorithm economy:** In an algorithm economy, companies and individuals can buy, sell, trade, or donate individual algorithms or apps pieces.

Data Paradox

- A recent Forrester survey of 4,036 high-level executives showed that 70% of data decision-makers are gathering data faster than they can analyze and use it, yet 67% constantly need more data. The massive opportunity brought about by data-driven decisions is being hampered by capacity constraints. Sometimes, this challenge is further amplified by the predominantly “defensive” narrative on data governance and policy, which rightfully places paramount importance on accountability, transparency, and privacy.

How to unlock and harness the current data opportunity?

- **Firms need to institutionalize data strategy at a human level**
 - ▶ Designing, implementing, and overseeing a holistic data strategy (from collection to analytics to monetization) that informs business decisions and units;
 - ▶ Facilitating the free-flowing of data, data-driven insights, and data-related managerial decisions both internally and with external partners and regulators; and
 - ▶ Supporting HR in recruiting or upskilling/reskilling employees.
- **Institutions need to rise to the challenge**
 - ▶ With data as a new strategic asset, present and future economy incentivizes the smart and responsible generation, exchange, and use of high-quality, interoperable data. To this end, institutions—including data-related rules, regulations, agreements, and governing bodies within and across national borders—must be modernized.

- The recently adopted global agreement on the Ethics of Artificial Intelligence led by UNESCO is among the most promising global effort to guide smart regulation towards the healthy development of this field.
- **All stakeholders in the data ecosystems must embrace and promote a truly data-oriented culture**
- Data skill knowledge with training programs on digital and analytical skills now along with governments and educational institutions, who can deliver that should be encouraged more.

◎ WAY AHEAD

- ◉ Transforming data from the raw material into a genuine factor of production and engine of innovation requires changes at the individual and organizational levels. It can flow among citizens, businesses, and governments. As 5G, AI, and other technologies reinforce both data supply and demand, this is the time to update our approach to data in a more forward-looking way. With the right people, institutions, and culture, we can build the economies of the future and use data as a driver of change for good.

CAPEX IN BUDGET

CONTEXT:

Recently, the government has announced a sharp jump of 35.4 percent in capital expenditure to fund various infrastructure projects in 2022-23.



◎ BACKGROUND

- The central government's budget for 2022-23 showed a sharp jump in capital expenditure to a planned Rs 7.5 lakh crore. That 35% increase in budgeted CAPEX, however, may not all be fresh funding.
- This push is proposed to target growth of 8.2 percent in 2022-23.
- The Finance Minister noted that the public capital expenditure has been raised to pump prime the investment cycle and support demand, thereby boosting India's economic recovery from the COVID-19 pandemic.
- Centre will provide Rs 1 lakh crore of interest-free bonds to states to help prioritize Capex as they face challenges posed by end of goods and services tax compensation.
- Capex is concentrated in eight ministries and departments, with atomic energy accounting for 1.9% of the total Capex, telecommunications 7.2%, defense 20.3%, transfer to states 14.9%, police 1.4%, housing, and urban affairs 3.6%, railways 18.3% and road transport and highways 25.0%.
- This indicates the government is attempting demand-side support to the economy through CAPEX.

◎ ANALYSIS

What is Capital Expenditure?

- Capital expenditure is the amount spent by the government on the development of infrastructure, facilities, equipment, etc.
- It also includes the expenditure incurred on acquiring fixed assets such as land and investment by the government, which will give profits or dividends in the future.

Capital Expenditure hike significance

- Also, early implementation of the expansion of capital spending can trigger durable economic growth momentum, with the potential to augment job creation, prop up domestic consumption and hasten capacity expansion by the private sector.
- The Finance Minister said that the virtuous cycle of investment is expected to revive on the back of capital expenditure and crowd in private investment.
- The total spending for the financial year 2022-23 has been estimated to be around Rs 39.45 trillion. This will constitute 2.9 percent of the GDP.

What are the examples of Capital Expenditure?

- Capital expenditure is the part of the government spending that goes into the creation of assets like schools, colleges, hospitals, roads, bridges, dams, railway lines, airports, and seaports.
- Capital expenditure also covers the acquisition of equipment and machinery by the government, including those for defense purposes.
- Capital expenditure also includes investment by the government that yields profits or dividends in the future.

Benefits of Capital expenditure

- **Multiplier effect** - Capex has the maximum multiplier effect (change in rupee value of output with respect to a change in rupee value of expenditure).
 - ▶ This multiplier effect works through the expansion of ancillary industries and services and job creation.
 - ▶ According to the National Institute of Public Finance and Policy, every rupee spent as a

revenue expenditure has a multiplier effect of Rs 0.98 while Capex delivers a multiplier effect of Rs 2.25 in the year it is incurred and Rs 4.80 during the course of the entire expenditure.

- ◉ **Labour productivity** - On the supply side, Capex can facilitate labor productivity.
- ◉ **Macroeconomic stabilizer** - Capital expenditure is an effective tool for countercyclical fiscal policy and acts as a macroeconomic stabilizer
- ◉ **Revenue generation** - Capital expenditure leads to the creation of assets that are long-term in nature and allow the economy to generate revenue for many years and boosts operational efficiency.
- ◉ **Liability reduction** - Along with the creation of assets, repayment of loans is also capital expenditure as it reduces liability.
- ◉ **Economic growth** - Government CAPEX catalyzes

private investment, increases production capacity thereby speeding up economic growth which in turn creates a lot more jobs.

Drawbacks of Capex

- ◉ The increase in the fiscal deficit as of present is 6.9 percent.
- ◉ It can cause a deficit in the balance of payment.
- ◉ It can increase inflation in the economy

Suggestive measures

- ◉ Promoting the foreign exchange reserve to bear the market shocks.
- ◉ Increase in revenue receipt by disinvestment in Public undertaking.
- ◉ Robust tax collection and GST Compliances

CRYPTO-CURRENCY AND NATIONAL SECURITY

CONTEXT:

The growing use of cryptos has led to several innovations and changes in the global economic sphere. However, the anonymity of cryptos may become a serious threat to India's national security.

● ANALYSIS

What is Crypto Currency?

- A cryptocurrency is a medium of exchange that is digital, encrypted and decentralized.
- Crypto Currency is a type of digital or **virtual currency** which is concealed, secure and impossible to counterfeit.
- It is **not a physical** source, everything is online.

Bitcoin was the first cryptocurrency, first outlined in principle by **Satoshi Nakamoto** in a 2008 paper titled "**Bitcoin: A Peer-to-Peer Electronic Cash System.**"

What makes crypto currency different from other sources of online payments?

- The main difference in crypto currency is that a specific person can directly transfer his/her money to another person **without any middleman** that is a bank.
- One doesn't have to link his/her money to a bank account.
- The banks or any other financial institutions have **no control over crypto transactions**.
- Hence, it is said to be one of the **most secure sources of payment**.
- All these crypto currency transactions are stored in a record keeping technology known as **Blockchain technology**.

Cryptocurrency: the Indian conundrum

- There are 15 million to 20 million crypto investors in India, with total crypto holdings of around 400 billion rupees (\$5.37 billion).
- In Budget 2022, government announced that India will impose a tax of 30% on income from cryptocurrencies and other digital assets.
- Many countries around the world like Saudi Arabia, Turkey have **completely banned** crypto currencies.
- Other Countries like USA, Japan, and Canada have **imposed reasonable restrictions** regarding the

same.

- In the recent budget, Government has announced the Reserve Bank of India (RBI) will soon issue a **central bank-backed digital currency** (CBDC).

How is cryptocurrency a threat to national security?

- **Terrorism (through dark net):** The use of cryptocurrencies on the dark net for terror acts and drug trafficking by militant organisations is posing a severe threat to the national security and a big challenge to security agencies in India
 - Cryptocurrencies have emerged as the most advanced methods of terror financing and when it is being transacted on the dark net like TOR, Freenet, Zeronet and Perfectdark, it becomes untraceable for the security agencies.
- **Money Laundering:** Money launderers, cyber criminals and terrorists find cryptocurrencies such as Bitcoin, Monero, Ripples and Zcash highly convenient because they offer anonymity and non-traceability.

Money laundering

- The **UN Vienna 1988 Convention** described Money Laundering as the conversion of property derived from any offenses for the purpose of concealing the origin.
- In India, the **Prevention of Money Laundering Act, 2002 (PMLA)** describes money laundering as an activity connected with the process to project proceeds of a crime as untainted property.

- **Illegal game:** The legal environment of this phenomenon is not regulated.
- **Cryptocurrency frauds:** Crypto frauds can take many shapes and impact a wide range of demographics. Some common frauds include:
 - **Scam Initial Coin Offerings** where scammers offer cryptocurrency coins to a select pool of investors and then vanish after the sale;
 - **Pump and Dump schemes** where fraud is perpetuated when a fraudulent group starts selling coins based on a show and then selling

entire holdings, once the value goes up. OneCoin Scam, BitConnect fraud, Karnataka Bitcoin scam are some example; and

- **Fraud through Defi platforms**, recorded to the tune of USD 10.5 billion in 2021.

Dark Net

- The dark net is a deep under variable link in the area of internet where one cannot find the identity of the users as the router browser keeps complete anonymity on the identity of the users.
- It keeps the user anonymous with whom he or she is interacting with because of the end-to-end encryption.
- **Popular dark net browsers:** The TOR software, Freenet, Zeronet, Perfect dark, are some popular dark net browsers and these can be accessed only through the specialised software.

Extant laws

- In India, cryptocurrencies in the **absence of a governing legislation**, have been operating in an open field. (In 2020, Supreme Court had set aside an RBI Circular prohibiting regulated entities from dealing in virtual currencies).
- The traditional AML and combating of financing of terrorism (CFT) apparatus consists of PMLA as the primary legislation aided by others as the Foreign Exchange Management Act, 1999, the Securities and Exchange Board of India Act, 1992, the AML Guidelines 2006, and a RBI Master Circular.
- Cryptocurrency ecosystems by design **bypass traditional institutional** intermediaries and hence in the current state, may not fall within the purview of the legal regime.
- Till now, cryptocurrency facilitated money laundering has been (established) more through statistical space.
- Though Enforcement Directorate has been investigating role of exchanges in few cases neither cryptocurrencies nor exchanges fall under the entities covered under PMLA/FEMA.
- It is yet to be seen how the courts would treat any such criminal liability within the domain of extant laws and regulations.
- Globally, the **Financial Action Task Force (FATF)** has been issuing recommendations surrounding virtual currencies.
- In 2021, FATF issued **Updated Guidance on Virtual Assets** suggesting specific activity-based AML/CFT obligations on intermediaries and recommending licensing requirements, compliance, and supervision mechanisms.

◎ WAY FORWARD

- The Indian government is planning to introduce the **Cryptocurrency Bill** in the Parliament.
- While, the measure has been long overdue, it is unlikely the proposed legislation will end the debate on regulation versus complete ban of cryptocurrencies.
- Where **protectionists recommend banning** of cryptocurrencies to counter illicit activities and safeguard against volatility and speculation, enthusiasts recommend regulation considering the potential for job creation and contribution to India's GDP.
- The **argument also finds support** from the data which shows that less than **1% of illicit activity** is through cryptocurrency transactions. Of that, scams make up majority of cryptocurrency related crime.
- Even so, it is accepted that either of the approaches would not suffice to counter illicit activities through P2P networks which by design are immune to institutional control.
- **Inclusive regulations** with strict enforcement (through mandatory KYC (know your customer), **real-time suspicious transaction reporting, industry wide-compliance standards, stringent reporting and monitoring by the regulator** might help minimise crypto related illegal activities.
- Thus, enabling **economic growth and financial inclusion** versus a complete ban which could further push illegal transactions to the underbelly leading to more difficult tracking and penalizing the genuine investor.
- A **comprehensive Cryptocurrency Bill** would as a first step go a long way in establishing a sound regulatory and inclusive regime for the cryptocurrency ecosystem.

CHALLENGE OF RECIDIVISM TO COUNTER-RADICALISATION PROGRAMMES

CONTEXT:

In recent times, recidivism has increased, as some of the released terrorists have carried out terrorist acts.

- Some international policy organisations have expressed concern that certain individuals receiving therapy at counter-radicalisation centres may have learnt the art of deceiving the psychologists and in passing the tests conducted there to procure an early release from the prisons.

◎ BACKGROUND

- For over a decade, **counter-radicalisation** programmes have been trying to de-radicalise and rehabilitate violent extremists and terrorists.
- Various countries have developed different counter-radicalisation programmes with varied results.
- In Britain, such programmes have been able to counsel, reclaim and rehabilitate several violent extremists and terrorists.
- In specific instances, the proportion of rehabilitated individuals is much higher than cases of recidivism when violent extremists, released by de-radicalisation-based institutions, have reverted to their violent ways.

In a speech before the **Shanghai Cooperation Organisation**, Prime Minister Narendra Modi identified **radicalisation as the greatest threat** to the security and safety of all member countries.

◎ ANALYSIS

Understanding radicalisation

- Radicalisation is a process with multiple reinforcing pathways of developing extremist beliefs, emotions, and behaviours.
- People become increasingly motivated to use violent means against members of an out-group or symbolic targets to achieve behavioural change and political goals.
- Radicalisation develops gradually over time and may occur at individual, group or mass public levels.
- It also involves changes in attitudes, beliefs, behaviour, ideals, goals, ideology, and willingness, which become extreme.
- Those extreme aspects are related to political, social, religious, ideological, economic or societal issues.

De-radicalisation

- De-radicalisation is a process in which people reject the ideology they once embraced.
- This is a step further than disengagement, characterised by a change in behaviour (leaving the radical group, stopping violence) without giving up.

Different kinds of radicals

- There are different kinds of radicals in our midst: Believers in the dictatorship of the proletariat replacing multiparty democracy, or in the idea of a world ruled by Sharia or in the thought of India being a land primarily of Hindus, with others having lesser rights.

What is the actual nature of radicalisation?

- It must be understood that radicalisation by itself is not bad and gains a positive or negative characteristic based upon its context.
- A mere deviation from conventional thinking must not be penalised.
- Radicalisation becomes problematic only where it has the propensity to lead to violence.
- The challenge lies in preventing such radicalisation.
- Developing a nuanced understanding of the process of radicalisation as well as its characteristics can help guide the Action Plan in effectively meeting such challenges.

Why radicalisation is dangerous?

- Since 2002, eight of the nine regions in the world experienced an increase in terrorism.
- The November 2008 terrorist attacks in Mumbai perpetrated by the Lashkar-e-Taiba, wherein 166 people were killed, revealed how deadly violence can be unleashed by a few individuals.
- It has been seen that rigid, dogmatic convictions, along with condemnation beliefs, lead to a path of destroying the other.

- In 2019, when the fidayeen suicide attack on a convoy of the **CRPF in Pulwama** took place, it revealed how a youth with a history of minor grievances can be indoctrinated.
- Prisons have been found to be fertile grounds for radicalisation. Imprisonment may increase a prisoner's susceptibility to new and radicalising ideas or beliefs; referred to as a cognitive opening.

Counter-Terrorism and Counter Radicalisation division

- The Ministry of Home Affairs had set up the **Counter-Terrorism and Counter Radicalisation division** in November 2017.
- The focus of the division is largely on the implementation and administration of counter-terror laws and monitoring of fundamentalist organisations such as the Students Islamic Movement of India, Popular Front of India, Jamaat-e-Islami and Sanatan Sanstha.
- The division was originally mandated with the task of developing policies and strategies to counter-radicalisation.

Why is counter-radicalisation concerning?

- **Easy deceiving:** Certain individuals receiving therapy at counter-radicalisation centres may have learnt the art of deceiving the psychologists and in passing the tests conducted there to procure an early release from the prisons.
- **False success rate:** Such events have raised the question of whether or not have any potential of success, and their scope in the states' counter-terrorism strategies.
- However, this analysis does not argue for the scrapping of de-radicalisation programmes worldwide.
- **NOT a fool-proof measure:** Moreover, while psychology is relied on to counter radical threats, it is understandably not a foolproof measure, more so because it is a recent phenomenon, requiring at least a few decades to mature and counter threats that have taken considerably longer to evolve and achieve their goals.

- The terrorists portray to the authorities that they have been redeemed by the de-radicalisation programmes and have sworn off from committing terrorist offenses in the future.
- Traditionally, compliance involves altering behaviour at the behest of someone's direction or request. However, in this instance, the act of submission presented by convicted individuals is simply a deceptive strategy.
- Furthermore, what is worrisome is that officials responsible for de-radicalisation programmes, such as *Prevent* (United Kingdom), have, in some instances, not been able to accurately assess those posing a grave danger to mainstream society.
- On the whole, the programmes are effective, but the possibility of some cases of recidivism would be there, because psychological and religious counselling can never be an exact science.
 - However, **Norwegian de-radicalisation programmes** are a **case in point** because incidents of recidivism there amount to 20 per cent, one of the lowest worldwide.

India's counter-terrorism initiatives

- India's counter-terrorism initiatives in Kerala and Maharashtra. _
- Notably, this is a more desirable alternative than simply incarcerating radicalised individuals who could reform themselves by engaging with de-radicalisation experts.

◎ CONCLUSION

- The Indian state should develop and enforce de-radicalisation, counter-radicalisation and anti-radicalisation strategies at a pan-India and pan-ideology level on a war footing. Such attempts must be informed by the fact that the battle against radicalisation begins in the minds and hearts much before it manifests in terms of violence. Any programme aimed at deterring or reversing radicalisation must focus on the ideological commitment that enables the violence, rather than the violence or the justification of violence itself.

IMPORTANCE OF DRONE TECHNOLOGY IN INDIAN AGRICULTURE

CONTEXT:

Union Finance Minister announced in her Budget speech that the Centre will promote 'Kisan Drones' to help farmers assess crops, digitize land records as well as spray insecticides and nutrients.

- ❑ The Finance Minister also said the government would promote start-ups through its 'Drone Shakti' initiative. It will facilitate the use of drones as a service.
- ❑ Drone services is an emerging market that finds application in agriculture, construction, search and rescue, package delivery, industrial inspection, insurance and videography.

● ANALYSIS:

Why adopt Agricultural Drones?

- Drone technology has gotten most of the recognition in the industry because of its diversity and considered the future for the agrarian community.
- The military initially used them. However, other sectors quickly embraced unmanned aerial vehicles (UAVs) when they learned about its widespread applications.
- Drones don't merely enhance overall performance but also encourage farmers to solve other assorted barriers and receive plenty of benefits through precision agriculture.
- Agriculture drone empowers the farmer to adapt to specific environments and make mindful choices accordingly.
- The gained data helps regulate crop health, crop treatment, crop scouting, irrigation, and carry out field soil analysis and crop damage assessments.
- The drone survey helps boost crop yields and minimize time and expenses.

How does Drone Technology Work?

- Typically, drones include a navigation system, GPS, multiple sensors, high-quality cameras, programmable controllers, and tools for autonomous drones.
- Most farmers currently use satellite imagery as an introductory guide for farm management.
- Furnished with modern technology, Unmanned aerial vehicles (UAVs) can get more precise data than satellites for precision agriculture.
- They then process the data captured into agri-tech software to produce beneficial knowledge.
- Capturing data from agriculture drone takes place as in the following stages

- **Analyzing the area:** Establishing a boundary, analyzing the area, and then finally, uploading the technical GPS information into the drone's navigation system.
- **Using Autonomous Drones:** Since UAVs are independent, they enter flight patterns into their already established system to collect required data.
- **Uploading the data:** After capturing all the required data through sensors such as the multispectral sensor/RGB sensor, it is processed through numerous software for further analysis and interpretation.
- **Output:** After collecting the data, they format it so that farmers can understand the data with no hassle, bringing them a step closer to precision farming.

Best Drone Practices/Application

- **Irrigation Monitoring:** Drones, including hyperspectral, thermal, or multispectral sensors, recognize areas that are too dry or need improvement by the farmer. Drone survey helps improve water efficiency and disclose potential leaks in irrigation.
- **Crop Health Monitoring and Surveillance:** It is crucial to track the health of the vegetation and spot bacterial/fungal plagues in the early stages. Agriculture drones can see which plants reflect different amounts of green light and Near-infrared spectroscopy (NIRS) light. This data helps produce multispectral images to track crop health.
- **Crop Damage Assessment:** Agricultural drones detect field areas inflicted by weeds, infections, and pests. According to this data, the exact amounts of chemicals needed to fight these infestations are known, and this helps diminish the costs inflicted by the farmer.
- **Field Soil Analysis:** The drone survey allows farmers to obtain information about their land's soil conditions.

- **Planting:** Drone startups in India have invented drone-planting systems that allow drones to shoot pods, their seeds, and crucial nutrients into the soil. This technology doesn't only reduce costs by almost 85% but also increases consistency and efficiency.
- **Agricultural spraying:** Through drone crop spraying, human contact with such harmful chemicals is limited. Agri-drones can carry out this task much quicker than vehicles/airplanes. Drones with RGB sensors and multispectral sensors can precisely identify and treat problematic areas.
- **Livestock tracking:** The drone survey allows the farmers not to keep track of their crops only but also monitor the movements of their cattle. Thermal sensor technology helps find lost animals and detect an injury or sickness. Drones can carry out this function favorably.

Benefits Of Drone Technology

- **Enhanced Production** - The farmer can improve production capabilities through comprehensive irrigation planning, adequate monitoring of crop health, increased knowledge about soil health, and adaptation to environmental changes.
- **Greater safety of farmers** - It is safer and more convenient for farmers to use drones to spray pesticides in terrains challenging to reach, infected areas, taller crops, and power lines. It also helps

farmers prevent spraying the crops, which leads to less pollution and chemicals in the soil.

- **Faster data for quick decision making** - Drone surveys back farmers with accurate data processing that encourages them to make quick and mindful decisions.
- **Less wastage of resources** - Agri-drones enables optimum usage of all resources such as fertilizer, water, seeds, and pesticides.
- **Useful for Insurance claims** - Farmers use the data captured through drones to claim crop insurance in case of any damages.

◎ CONCLUSION:

- According to experts, the predicted world population will be 9 billion by 2050. Agricultural consumption is also said to increase simultaneously by nearly 70%. Drone technology, equipped with artificial intelligence (AI), machine learning (ML), and remote sensing features, are rising in demand because of its advantages.
- The central government has acknowledged the importance of unmanned aerial vehicles (UAVs), machine learning, and artificial intelligence with their 'Digital Sky Platform' online. Drone startups in India have used this opportunity to accomplish better technological capacities.

POLITICAL PATRONAGE OF BUREAUCRATS, ETHICS IN PUBLIC LIFE

◎ INTRODUCTION

- For many years after Independence, India's civil services were regarded as exemplary among developing nations. Under India's system of public administration, there was supposed to be a clear division of roles between the permanent civil service and the political leadership. The bureaucracy was subordinate to the elected politicians, who were chosen by the Prime Minister at the Centre (and by the Chief Ministers in the states) to head different ministries and departments.
- The government's priorities and its work program were set by the elected politicians, and the bureaucracy was supposed to ensure that this program was implemented according to the laws in force and line with approved administrative procedures. While implementing the programs set by the Cabinet and the ministers, bureaucrats were expected to act without fear or favor and ensure that the benefits of the programs flowed to the people regardless of their political affiliations. While the elected politicians were free to overrule the advice rendered by civil servants, the advisory functions of the bureaucracy were expected to be performed without regard to their impact on the private interests of politicians and the party in power.

◎ MEANING OF CIVIL SERVICE

- The civil service is for all purposes an important part of the government. It is the competencies of the civil service that form the base for efficient and effective governance. Its importance can be gauged from two parts. Firstly, for bringing and managing change in the political system; and secondly, for not permitting any such kind of changes that could put the system in specific and society in general to any disadvantageous position.
- Civil services have gained enormous importance and significance over the years. Its major task is to implement the Policies and Programmes and help the Political masters in framing the policies. It is strongly felt that a government can be made to perform without a legislative for some time, but it cannot perform without civil service.

◎ MEANING OF BUREAUCRACY

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- Bureaucracy is as old as is government and administration. Though the concept of bureaucracy was developed largely by the sociologists who took a relatively detached, scholarly, and descriptive point of view, it is a difficult term to define. It means different things to different people. There are almost as many definitions of bureaucracy as there are writers on the subject who emphasize different aspects of bureaucracy. As such, there is no terminological accuracy about the concept of bureaucracy. The term bureaucracy connotes different meanings to highlight different things.
- Max Weber, a German Sociologist, occupies a pivotal position about explanations of the concept of bureaucracy. He referred to the formulation of bureaucracy as 'Ideal Type'. The normative model of bureaucracy emphasizes the structure of the organization. While the empirical model of bureaucracy, that is, bureaucracy in the modern context emphasizes the behavioral and functional patterns in an organization. If we look into structural features of bureaucracy like hierarchy, division of labor, the system of rules, etc., bureaucracy is value-neutral. From the behavioral angle, since it displays certain characteristics like objectivity, rationality, impersonality, rule orientation, etc., bureaucracy shows some functional, that is, positive as well as some dysfunctional, that is, negative symptoms. From the achievement point of view, it can be regarded as a pattern of organization that maximizes the efficiency of administration.

◎ TYPES OF BUREAUCRACY

- Bureaucracy is influenced by social, cultural, economic, and political factors. As a result, at different points of time in history, it has taken different shapes and forms. Fritz Morstein Marx has categorized bureaucracy into the following four types:
 1. The Guardian bureaucracy
 2. The Caste bureaucracy
 3. The Patronage bureaucracy
 4. The Merit bureaucracy

What is Political patronage?

- Political patronage is the appointment or hiring of a person to a government post based on partisan loyalty. Elected officials at the national,

state, and local levels of government use such appointments to reward the people who help them win and maintain an office. This practice led to the saying, "to the victor go the spoils." When politicians use the patronage system to fire their political opponents, those fired may charge that the practice penalizes them for exercising their First Amendment rights of political association.

- Another name for the Patronage bureaucracy is the "spoils system". Its traditional home has been the U.S.A. through patronage had full sway even in the U.K., till the middle of the 19th century when public jobs were given as a personal favor or political award. It is interesting to note that this system worked differently in the U.K. and the U.S.A. In the U.K., patronage bureaucracy marched side by side with an aristocratic social order and fulfilled its purpose. In the United States, on the contrary, the system worked quite differently and jobs were distributed as spoils to the victorious political party. This system of patronage bureaucracy was condemned as an anachronism for its lack of technical competence, careless discipline, concealed greediness, irregular ways, partisanship, and its absence of the spirit of service.

Recent examples

- The introduction of lateral entry for the post of joint Secretary. The proposal of lateral entry is "aimed at bringing in fresh ideas and new approaches to governance and also to augment manpower. The appointments will be on a contract basis for a period of three years initially, extendable to up to five years in case of satisfactory performance. There is a perception that such 'extra-UPSC lateral inductions' could multiply in the future and at all levels. This has caused apprehension that India's 160-year old Merit System of recruitment is being undermined and that 'lateral entry' is simply another name for the nefarious Spoils System.
- The proposed model of evaluation doesn't inspire confidence about its fairness and transparency and is open to serious abuse, more so since the recruitments will not be done by UPSC but by DOPT or the departments concerned. This is not a 'level playing field' and, apart from seriously demoralizing the permanent civil service, it may attract legal challenge on the grounds of violating Article 14 of the Constitution of India.
- Lateral induction at the level of Joint Secretary — as presently proposed — fails when evaluated on the touchstone of legality, fairness, transparency, objectivity, and bona fides. It has all the trappings of the Spoils System. It is important to note that 'government underperformance' is a complex problem that calls for wide-ranging political,

administrative, and judicial reforms; simplistic solutions like 'lateral entry from the private sector will not work and may end up doing more harm than good.

Ethical concern

- In each government service, there are various factions based on language, religion, caste, and region. To gain promotion and perks for their faction, they'd bend to the wills of politicians.
- There will be more secrecy in official functioning. As a result, there develops nexus between the political executive and civil servants to fulfill their illegitimate gratifications.
- Due to the lack of an independent board, civil servants align with one or the other political party to get their favorite postings and other perks.
- Transfers have been used as instruments of reward and punishment, as tools for controlling and taming the bureaucracy. There is no transparency, and in the public mind transfer after a short categorized as a stigma.
- Some civil servants are deeply involved in partisan politics: they are preoccupied with it, penetrated by it, and now participate individually and collectively in it.
- Over the years, whatever virtues the IAS possessed – integrity, political neutrality, courage, and high morale – are showing signs of decay.

As a civil servant, one has the responsibility towards the public and must adhere to constitutional principles keeping his conscience intact. His primary job is to perform Nishkama Karma (selfless and desire less duty).

Ethics in Public Life

- Public relationships are those that exist by the virtue of profession (e.g. Civil services) or the position one holds in professional life (e.g. Prime Minister or President). Ethics in Public relationships guides one's behavior, action, and decision-making process. It is vital to maintain the integrity of the profession. For instance, Ethical conduct such as adhering to rule of law by civil servants maintains the integrity of civil services but instances of Encounter Killing, Preferential treatments, etc. lower public confidence in the administrative machinery.

Ethical Principles in Public life

- Rule of law** – It is a constitutional directive for civil servants that must be adhered to. This brings consistency and predictability to the conduct of civil servants. For example, Civil servants are expected

to honor the due process of law concerning investigation, inquiry, and arrest in criminal cases. They should restrain from torturing accused and encounter killings.

- **Fairness & Justice** – This is the basic demand of our constitution. This directs politicians and civil servants to frame a policy framework to accommodate all sections of society based on the Principle of Equity. For instance, Affirmative Actions (Provisions of Reservation) for weaker sections have been incorporated through various legislations.
- **Transparency and Accountability** – Public relationships require transparency and accountability in order fairness in public dealings and increase public confidence. For instance, a Social audit is an important mechanism to ensure transparency in the expenditure of public funds and also makes public servants accountable for any mismanagement.
- **Honesty, integrity, and Probity** – These values direct a civil servant to show the highest standards of moral behavior while engaging with the public at large. For instance, Mere non-involvement in coercive and collusive corruption (Honesty and Integrity) is not enough but civil servants are expected to expose and fight corruption (Whistleblowing) till the end (Probity).
- **Impartiality and Non-Partisanship** – Right to equality under Art 14 of the Indian Constitution is the source of this principle. This helps civil servants to restrain from personal biases, engaging in nepotism or potential conflict of interest situations. For instance, In Janta Darbar (Public hearings) organized by various Chief Ministers, every citizen is allowed to raise their grievances without any preferential to the minimum
- **The minimum level of Courtesy** – It is highly important in the official conduct of civil servants in India. This induces a sense of belongingness among the common masses. For instance, Prashanth Nair's (IAS) style of engaging with the public at large earned him the title of 'Collector bro'.
- **Spirit of service** – This is closer to serving the purpose of service. Civil servants are expected to go beyond the call of duty to serve the public interest. This has dual benefits – inner satisfaction to the person concerned and inspiration for his colleagues to fulfill the service goals.

Public officials are expected to uphold the highest standards in their actions and an ethical code acts as a guide to achieve this. In the year 1994, The Committee on Standards in Public Life, famously known as the Nolan Committee, was set up in the UK

to advise on the ethical standards in public life.

One of the most comprehensive statements of what constitutes principles of public life came from the Nolan Committee, which outlined the following seven principles of public life: Selflessness, Integrity, Objectivity, Accountability, Openness, Honesty, Leadership.

The seven principles of public life given by the Nolan Committee are as follows:

- **Leadership:** Holders of public office should promote and support the principles of public life by leadership and example.
 - For eg., Lal Bahadur Shastri used to fast every Monday to save grains for poor people of the country and he gave a call for the nation to follow it. Thus exhibiting a true example of how leaders should lead from the front.
- **Selflessness:** Holders of public office should act solely in terms of public interest. They should not do so to gain financial or other benefits for themselves, their family, or their friends.
 - For eg. Tukara, Omble of Maharashtra police tackled Kasab one of the terrorists of the Mumbai attack so that he couldn't attack his fellow servicemen. Thus showing exemplary courage and the highest degree of selflessness by giving away his life for the cause of his nation.
- Gita also in one of its shloka- *karmanye vadhikaraste ma phaleshu kadachana* reiterates the principle of selflessness which means one should only focus on our actions and should not worry about the result.
- **Accountability:** Holders of public office are accountable for their decisions and actions to the public and must submit themselves to whatever scrutiny is appropriate to their office.
 - For eg., Vikram Sarabhai accepted the failure of ISRO's first mission without actually putting it on the mission head (APJ Abdul Kalam). Thus taking full accountability for the failure of his team.

Thus it can be established that principles of public life are important for every democracy. Guidelines of public behavior arising from such principles can play a crucial role in creating trust between the public functionaries and the common public. Therefore any person who is privileged to guide the destiny of the people must not only be ethical but must be seen to practice these principles of public life.

SECTION: B

(PRELIMS)

CURRENT AFFAIRS

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BOMB CYCLONE

◎ **CONTEXT:**

The US East Coast is bracing itself for a “bomb cyclone” that is on course to barrel in from the mid-Atlantic.

What is Bomb Cyclone?

- A bomb cyclone is a winter cyclone. It occurs through the process known as bombogenesis.
 - The word “bombogenesis” is a combination of cyclogenesis which describes the formation of a cyclone or storm and bomb, which is self-explanatory.
- A bomb cyclone occurs when a mid-latitude cyclone rapidly intensifies or quickly drops in atmospheric pressure, marking the strengthening of the storm.
- It occurs when a storm’s central barometric pressure drops at least 24 millibars in 24 hours.
 - A millibar is a way of measuring pressure. The lower the pressure, the more powerful the storm.
- Some storms have intensified as rapidly as 60 millibars in 24 hours. A few bomb cyclones even develop “eyes,” similar to the centre of a hurricane.

In which region does a Bomb Cyclone occur?

- There are four active regions which are hot spots for Bomb Cyclone
- The Northwest Pacific
- The Northern region of the Atlantic Ocean
- The Southwest Pacific
- The Southern region of the Atlantic Ocean.

How is Bomb Cyclone different from Hurricanes?

- It essentially amounts to a rapidly developing storm system, distinct from a tropical hurricane because it occurs over mid latitudes where fronts of warm and cold air meet and collide, rather than relying on the balmy ocean waters of late summer as a catalyst.
- **Bomb cyclones have cold air and fronts:** Cold air rapidly weakens hurricanes, while it is an essential ingredient for bomb cyclones.
- **Bomb cyclones form during winter:** Hurricanes form from late spring to early fall, while bomb cyclones form from late fall to early spring.
- **Bomb cyclones form at higher latitudes:** Hurricanes form in tropical waters, while bomb cyclones form over the northwestern Atlantic, northwestern Pacific and sometimes the Mediterranean Sea.

HOYSALA TEMPLES IN KARNATAKA

◎ **CONTEXT:**

- India has finalised the Hoysala Temples in Karnataka as its nominations for consideration in the World Heritage Sites List for 2022-23. The Hoysala temples in Belur and Halebeedu in Hassan district and Somanathapura in Mysuru district have been nominated.

- They were finalised by the Union Ministry of Culture and Archaeological Survey of India (ASI).

About Hoysala Temples

- The Hoysalas temples of Belur, Halebid and Somnathapur were reportedly built in the 12th-13th centuries.
- The masterpieces represent and attest to the creativity and skill of the Hoysala artists and architects. Hoysala architecture is the building style that was developed by architects under the rule of the Hoysala Empire between the 11th and 14th centuries.
- The Hoysala influence was at its peak in the **13th century and several large and small temples built** during the era remain today as examples of the **Hoysala architectural style**.
 - The Hoysala temples include Chennakesava Temple at Belur, the Hoysaleswara Temple at Halebidu and the Kesava Temple at Somanathapur.
- There are several other examples of Hoysala craftsmanship such as the temples at Hosaholalu, Belavadi, Amruthapura, Basaralu, Mosale, Arasikere, Nuggehalli and Kikkeri.
 - The Hoysala architectural style reveals a negligible Indo-Aryan influence and a more distinct impact of Southern Indian style.
- The Hoysala temples are protected monuments under the **Archaeological Survey of India (ASI)**. Their conservation and maintenance is done by ASI but the Karnataka state government will ensure the conservation of state-protected monuments around these three monuments.

Archaeological Survey of India (ASI)

- The ASI is the premier organisation for the **archaeological research and protection of the cultural heritage of the country**.
- The prime objection of ASI is to **maintain the archaeological sites, ancient monuments and remains of national importance**.
- The ASI Headquarters is in **New Delhi**.
- It was established in **1861 by Alexander Cunningham**.
- It regulates all archaeological activities as per the provisions of the **Ancient Monuments and Archaeological Sites and Remains Act, 1958**.
- It functions under the aegis of the **Union Ministry of Culture**.
- It also regulates the **Antiquities and Art Treasure Act, 1972**.

What is a World Heritage Site?

- A World Heritage Site is a location having an **"Outstanding Universal Value"**.
- According to the **World Heritage Convention's** Operational Guidelines, an Outstanding Universal Value signifies **"cultural and/or natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity."**
- The Sites fall into **three categories: cultural heritage, natural heritage, and mixed heritage (cultural as well as natural)**.
 - Cultural heritage entails an Outstanding Universal Value from the **point of view of history, art or science, and includes monuments, groups of buildings, and sites which are the combined work of nature and human agency**.
 - Examples include the **Taj Mahal, the Statue of Liberty, and the Sydney Opera House**.

- The Sites under natural heritage are those having **Outstanding Universal Value from the point of view of science, conservation of natural beauty**, such as the **Sundarbans Natural Park or the Victoria Falls**.
- Of the 1121 World Heritage Sites in the world, 869 are cultural, 213 are natural, and 39 are mixed.

LAL-BAL-PAL, THE FAMOUS TRIO

◎ **CONTEXT:** Birth Anniversary of Lala Lajpat Rai was observed by the nation on 28th January, 2022.

◎ **ABOUT:** LALA LAJPAT RAI

- **Early Life-** He was born on 28 January 1865 in Dudhike, Punjab. His father, Munshi Azad was a scholar of Persian and Urdu and was a teacher at a Government school. Rai studied in the same school.
- **Education-** Lala Lajpat Rai studied law from Government Law College and it was here that he was first introduced to politics and **social** reform movements.
- **Social Reform Movement-** After getting influence by the thoughts of Arya Samaj, Lala Lajpat Rai became its member.

Arya Samaj: It is Indian Hindu reform movement that promotes values and practices based on the belief in the infallible authority of the Vedas. The samaj was founded by Dayanand Saraswati on 10 April 1875. It believes in monotheism i.e. belief in one supreme god.

- He became the co-editor of **Arya-Gazette**, which was the mouth piece of Arya Samaj, in Lahore.
- He was **against the practice of untouchability**.
- Lala Lajpat Rai supported the **Shudi movement**.

Shudi Movement: It focussed for bringing back the people into the Hindu fold who had earlier got converted into other religions.

- He established Hindu Relief Movement in 1897 and Servants of People's Society in 1921.

■ Institution Builder:

- He was a strong proponent of swadeshi even in the field of education.
- With the help of his colleagues he established National DAV Managing Committee which provided an alternative to British education.
- Lakshmi Insurance Company was established by him in 1894.
- In 1895, he started the Punjab National Bank—the first Indian bank to begin solely with Indian capital, and that continues to function till date.
- Rai had travelled to America in 1907 and immediately caught up similarities between the 'colour-caste' i.e. racism practised there and the caste system prevalent in India.

■ Politics:

- He became the member of **Indian National Congress** during his student days and was its active member.

- For his extremist view against the British Government, he was deported to Burma in 1907. Though the decision could not be sustained due to lack of evidence.
- In the year 1917, Lala Lajpat Rai, after getting inspired by the Home Rule Movement in India, established a Home Rule League of America. Through this organisation he tried to get support on international community for India's political struggle.
- He opposed to the **Rowlatt Act**.

Anarchical and Revolutionary Crimes Act of 1919, also known as **Rowlatt Act**, authorised the British Government to keep any suspect in prison for two years without trial on the suspicion of being a terrorist in British-India. This Act was also called the Sidney Act, as Sir Sidney Rowlatt was the chairperson of the committee that recommended it.

- He became **the President of Indian National Congress** in special session held at **Calcutta** in 1920.
- He became the first President of **All India Trade Union Congress** in 1920. The session was held at Bombay.
- **Non-Cooperation Movement** started by Mahatma Gandhi was wholeheartedly supported by Lala Lajpat Rai.
- He was involved in the working of **Hindu Mahasabha**.
- His last political agitation was the **Anti-Simon Commission Movement**. While protesting in this movement he died due to the injuries caused to him due to police lathi-charge.
- Death of Lala Lajpat Rai was avenged by the members of **Hindustan Socialist Republican Association**. They killed John Saunders, who was one of the police officers responsible for the lathi charge.
- Bhagat Singh in his early political years considered Lala Lajpat Rai to be his political mentor.

■ Literary Work:

- Most important and well known book written by him is **"England's debt to India"**.
- Apart from that he also wrote Message from Gita, Political Future of India, Depressed Classes and Problem of National Education in India.
- Travelogue called **"United States of America"** was written by him.
- He was joint owner of Hindustan Times alongwith Madan Mohan Malviya and Raja Narendra Nath.
- He started an Urdu daily called **Vande Mataram** in Lahore.
- Lala Lajpat Rai along with Lala Hansraj started a daily in Lahore called Punjabee.

■ Titles:

- People called Lala Lajpat Rai **"Punjab Kesari"**.

Lal-Bal-Pal, the trio

Lal Bal Pal was a triumvirate of extremist nationalists that led Congress and the nation in the first two decades of 20th Century. Other close associates of theirs who shared their extremist ideology were Aurobindo Ghosh, Ajit Singh and Sayed Haidar Raza.



LOKMANYA BALGANGADAR TILAK



■ Early Life and Education

- He was born on 23rd July, 1856 in Ratnagiri district of Maharashtra. His parents named him Keshav but he was fondly called 'Bal' by his family members. This stuck with him throughout his life.
- He completed his law education from **Government Law College** in Pune.

■ Politics

- Joined the Congress in 1890 and became the leader of party's extremist group.
- He was strong proponent of passive resistance and its implementation during the Swadeshi Movement.

- His writings in newspapers were considered inspirational for revolutionaries like **Champekar brothers**, who had killed the plague commissioner of Pune.
- Writings of Lokmanya Tilak had profound influence on **Vinayak Damodar Savarkar**.
- Surat split of Congress caused his expulsion from the party and soon he was arrested and imprisoned for 6 years.
- After his release from prison he focussed his energy on returning to Congress and for this he was helped by Dr. Annie Besant.
- He and his extremist supporters gained back the membership of Congress at the 1916 Lucknow Session which was presided over by **A. C. Mazumdar**.
- This session is also memorable because it was here that Congress-Muslim League Pact, also known as **Lucknow Pact**, was signed.
- By signing of the **Lucknow Pact**, Congress agreed to support the provision of Communal Electorate for Muslims provided by **Government of India Act. 1909**.

Communal Electorate means that political representatives of a particular community can be elected by members of that community only. It essentially conveys the message that politically that community is different from others.

- In the Lucknow Pact, Congress was represented by **Lokmanya Tilak** and **Muslim League** was represented by Mohammed Ali Jinnah.
- Co-led the Home Rule League Movement with **Dr. Annie Besant**.

Home Rule League Movement demanded internal political autonomy in India. It was inspired by the Irish Home Rule League Movement.

- He proclaimed that Swaraj is my birth right and I shall have it.
- He favoured the use of regional languages by Congress at provincial level. This he thought would make it easy for people to understand political issues and the stand of Congress on those issues.
- For the propagation of his political ideas Tilak used festivals like Shiv Jayanti and Ganesh Chaturti.

■ Social Outlook

- His social outlook was conservative in nature.
- Understanding of Tilak on social issues was opposite to that of **M. G. Ranade** and **G. K. Gokhale**. These two were considered to be the leaders of people who supported social reforms.

■ Institutions Build

- In 1884, he established the Deccan Education Society in Pune.
- Under the banner of Deccan Education Society he opened the New English School for primary studies and Fergusson College for higher education, along with **Gopal Ganesh Agarkar** and **Vishnushastri Chiplunkar**.
- Literary Work-
- Two newspapers Kesari (Marathi) and Mahratta (English) were set up by him.

- Wrote Gita Rahasya and Artic home of Aryans.
- Gita Rahasya was written by him while in prison at Mandalay, Burma. The book says that the core message of Bhagwat Gita is to focus on **Nishkam Karmayoga (selfless action)**.

■ Death

- Lokmanya Tilak died on 1st August, 1920.
- On the day of his death Congress launched the Non-Cooperation Movement.
- After his death Congress took donations from people through Tilak Swaraj Fund. This was used by the party to bear expenses during the non-cooperation movement.

■ Titles

- Bal Gangadhar Tilak was called **Lokmanya**, which simply means accepted by the people.
- **Valentine Chirol** termed **Tilak** as **father of Indian Unrest** in his book titled **"Indian Unrest"**.

BIPIN CHANDRA PAL



■ Early Life and Education

- He was born on 7th November, 1858 at Poil village in the Sylhet district of present day Bangladesh.
- Bipin Chandra Pal studied and latter also taught in the University of Calcutta.
- **Title**-He is known as the **"Father of Revolutionary Thoughts in India"**.

■ Social Reforms

- He was an adhered supporter of widow re-marriage. He remained true to his values and married a widow after the death of his first wife.

- Bipin Chandra Pal was an opponent of caste system.
- He was the member of **Brahmo Samaj**.

■ Politics

- Alongwith Aurobindo Ghosh, Bipin Chandra Pal is considered to be pioneer of aggressive and assertive nationalism.
- Partition of Bengal broke his heart and he alongside Aurobindo Ghosh emerged as the proponents of extremist nationalism in Bengal.
- He during the anti-partition movement focused on swadeshi, boycott and national education.
- Stress on swadeshi i.e. relying of Indian goods would get rid of poverty in India.
- His lecture series on nationalism during the anti-partition movement in Bengal had become very popular in Bengal and rest of India.
- Political thoughts of Bipin Chandra Pal were opposite to that of Mahatma Gandhi and hence during the last 6 years of his life he stayed away from Congress.

■ Journalism

- He wrote for newspaper like **Bengal Public Opinion, The Tribune and New India**.
- **Death**-Bipin Chandra Pal died on 20th May, 1932.

NORD STREAM PIPELINE

◎ **CONTEXT:** Amid tensions between Russia and Ukraine, pressure is mounting on Germany to stop the Nord Stream 2 gas pipeline project.

◎ **ABOUT:** The original project

- The original Nord Stream pipeline, with an annual capacity of 55 billion cubic metres (bcm), was finished in late 2012.
- The pipeline system's total capacity is set to double to 110 bcm following Nord Stream 2's completion.
- Current status of project:- The pipeline falls in German and Danish Territory, and all but 150 km pipes for the project have already been laid.

Facts about Russia Energy Reserve:

- Russia has the largest known natural gas reserves of any state on earth.
- This is the 32% of world proven natural gas reserves mainly owned and operated by Russian monopoly Gazprom, which produces 94% of Russia's natural gas Production.

What is Nord Stream 2 Pipeline Project?

- Nord Stream 2 is an underwater twin pipeline that would transport natural gas from Russia directly to Germany.
- At a length of 1,230 kilometres, it is to follow the route of the existing Nord Stream twin pipeline underneath the Baltic Sea.
- It will carry 55 billion cubic meter of gas per year.

- The pipeline crosses into the exclusive economic zones of five countries: **Russia, Germany, Denmark, Finland, and Sweden.**
- It would transport natural gas from Russia directly to Germany.
- Nord Stream 2 is being built by **Nord Stream 2 AG**, a consortium incorporated in Switzerland.
- **Moscow-based**, state-owned Gazprom is the project's sole shareholder.



Natural gas is a lower-carbon fuel that can replace other fossil fuels in the energy mix and deliver a reliable output to complement intermittent renewable energy.

Largest natural gas fields in Russia

- **Urengoy field – 10.9Tcm:** Located in the northern West Siberia Basin, the Urengoyskoye gas and condensate field has been in production since 1978.
- **Yamburg field – 8.2Tcm:** Yamburg, which is operated by Gazprom and located in Yamalo-Nenets Autonomous Okrug in Tyumen Oblast, is also the world's third biggest natural gas field.
- **Bovanenkovo field – 4.9Tcm:** Located in the Yamalo-Nenets Autonomous Okrug, the onshore Bovanenkovo field operated by Gazprom has been in production since 2012.
- **Shtokmn field – 3.9Tcm:** Discovered in 1988, the Shtokman gas and condensate field is located in the central part of the Russian sector of the Barents Sea, approximately 600km north-east of Murmansk and in water depths of ranging from 320m to 340m.
- **Zapolyarnoye field – 3.5Tcm:** The Zapolyarnoye field is located in the southern part of the Taz District, 220km away from Novy Urengoy, Yamal-Nenets Autonomous Area.

Objections

- Environmentalists argue that it will create further dependence of Germany on fossil fuels, which will impact its fight against climate change.
- The US says that the pipeline will make Europe further dependent on Russia for energy security. Russia could use it as a geopolitical weapon.
- Countries like Ukraine, Poland and Belarus are also opposing it as they will lose billions as transit fees due to bypassing.
- The US has threatened to impose sanctions on Nord Stream if Russia invades Ukraine. Germany has also said that it may be forced to impose sanctions.

GREEN BONDS AND THEIR GREEN IMPACT

◎ CONTEXT:

- Giving a push to the government's borrowing programme in 2022-23, finance minister Nirmala Sitharaman proposed to issue sovereign green bonds to mobilize resources in the Budget.
- *"Sovereign 'green bonds' will be issued for mobilizing resources for green infrastructure," said the FM.*

◎ ABOUT:

What Are Green Bonds?

■ Category: Debt Instruments

- Simply put, Green bonds are **financial instruments** that finance green projects and provide investors with regular or fixed income payments.
- **Inception:** The first green bond was issued in 2007 by the European Investment Bank, the EU's lending arm.
- **Issued by:** Green bonds are the bonds issued by any sovereign entity, inter-governmental groups or alliances, and corporates.
- **Aim:** The proceeds of the bonds are utilized for projects classified as environmentally sustainable.

Environmentally Sustainable Projects

- Moreover, projects defined as sustainable under the disclosure requirement for **Green Debt Securities** include
 - climate change adaptation,
 - sustainable waste and water management
 - sustainable land use including sustainable forestry and agriculture
 - biodiversity conservation

How they different from conventional securities?

- Green bonds differ **from conventional fixed-income securities** in one aspect that the issuer pledges to use the proceeds to finance projects meant for **positive environmental or climate effects**.

Government's plan

- As a part of the government's overall market borrowings in 2022-23, **Sovereign Green Bonds** will be issued for **mobilising resources for green infrastructure**.

- The proceeds from these bonds will be deployed in public sector projects which help in reducing the **carbon intensity** of the economy.
- The government has unveiled a record borrowing of Rs 14.95 trillion in FY23.

Benefits of Green Bonds:

- **Showcasing commitment towards sustainable development:** Green Bonds enhances issuer's reputation and showcases its commitment to sustainable development.
- **Lower interest rate:** They typically have a lower interest rate than the loans offered by the commercial banks.
- **Fulfilling green commitments:** Ability to meet commitments, for signatories to climate agreements and other green commitments.
- **Attracting investment:** Foreign investors are focusing more on green investments which in turn may help in reducing the cost of raising capital.
- **Increasing financial flow:** They have been crucial in increasing financing to sunrise sectors such as renewable energy, thereby contributing to sustainable growth.

Challenges associated with Green Bonds:

- **Misuse of funds:** It has been noted that many times that the proceeds of green bonds are being used to fund projects that harm the environment.
- **Lack of guidelines:** There's a lack of credit ratings or rating guidelines for Green Bonds or Green Projects.
- **Time-taking process:** Green projects require more time to derive returns.

INDIA'S FIRST GEO PARK

◎ CONTEXT:

The Geological Survey of India (GSI) has approved the setting up of the country's first geo park at Lamheta village on the banks of the Narmada river in Jabalpur district of Madhya Pradesh.

Key-Points

- This First geopark approval was given by the **Geological Survey of India, under the ministry of mining.**
- This Park will be constructed with an **investment of Rs 35 crores, over five-acre land.**
- The geological park will be built in Lamheta, because this place is among **significant places in the world, from a geological point of view.**
 - In 1928, William Henry Sleeman had **discovered Dinosaur fossils from this area.**
 - **UNESCO has also recognised Lamheta as a geo heritage site.**

What is geopark?

- **Geopark is a unified area, which advances the protection and use of geological heritage in a sustainable manner.**
- It also promotes the **economic well-being of the people living there.**

Geological Survey of India (GSI)

- The Geological Survey of India (GSI) is a scientific agency of India.
- The GSI is a government organisation in India, attached to the **Ministry of Mines for conducting geological surveys and studies.**
- It is one of the **premier organisations of earth science survey and research** in the world.
- **The GSI was established in 1851** and is one of the **oldest of such organisations in the world and the second oldest survey institution in the country.**
- It is the prime provider of **basic earth science information to the government, industry and the general public**, as well as the official participant in steel, coal, metals, cement, power industries and international geoscientific forums.
- Its main function is related **to creation and update of national geoscientific information and mineral resource assessment.**
- **It is headquartered in Kolkata** and has six regional offices located at **Lucknow, Jaipur, Nagpur, Hyderabad, Shillong and Kolkata.** Every state has a state unit.

PUSH FOR ZERO-BUDGET NATURAL FARMING

◎ CONTEXT:

- The Centre has announced to promote chemical-free natural farming, to farmers across the country during the financial year 2022-23.
- Organic and chemical-free farming is an agricultural approach that advocates healthy products free from components that may harm humans and nature.
- They include but are not limited to industrial pesticides, insecticides, fertilizers, clones, GMOs, chemical medications, hormones, growth boosters, etc.

First Stage

- Chemical-free natural farming will be promoted throughout the country with a focus on farmers' land in 5 km wide corridors along the river Ganga, in the first stage.

◎ ABOUT:**What is natural farming?**

- Natural farming is a system where the laws of nature are applied to agricultural practices.
- This method works along with the natural biodiversity of each farmed area, encouraging the complexity of living organisms, both plants, and animals that shape each particular ecosystem to thrive along with food plants.
- In India, Natural farming is promoted as **Bhartiya Prakritik Krishi Paddhati Programme (BPKP) under Paramparagat Krishi Vikas Yojana (PKVY).**
 - It was developed by **Subhash Palekar** from Maharashtra in the mid-1990s as an alternative to the **Green Revolution's methods**, which led to indebtedness and suicide among farmers due to rising cost on external inputs in agriculture.

Similarities between natural farming and organic farming:

- Natural and organic both are chemical free and more or less poison free farming methods.

- Both systems discourage farmers from using any chemical fertilizers, pesticides on plants and in all agricultural practices.
- Both farming methods encourage farmers to use local breeds of seeds, and native varieties of vegetables, grains, pulses and other crops.
- Organic and natural farming methods promote nonchemical and homemade pest control methods.

What is Zero budget natural farming (ZBNF)?

- It is a method of chemical-free agriculture drawing from traditional Indian practices.
- Using cow dung, urine based formulations and botanical extracts would help farmers in reducing the input cost.
- Intercropping with leguminous crops is one of the components of ZBNF and it improves the crop productivity and soil fertility by way of fixing the atmospheric nitrogen.
- It promotes soil aeration, minimal watering, intercropping, bunds and topsoil mulching and discourages intensive irrigation and deep ploughing.

Components of Natural Farming:

- **Beejamrit:** The process includes treatment of seed using cow dung, urine and lime based formulation.
- **Jivamrit:** The process enhances the fertility of soil using cow urine, dung, flour of pulses and jiggery concoction.
- **Whapasa:** The process involves activating earthworms in the soil in order to create water vapour condensation.
- **Mulching:** The process involves creating micro climate using different mulches with trees, crop biomass to conserve soil moisture.
- **Plant Protection:** The process involves spraying of biological concoctions which prevents pest, disease and weed problems and protects the plant and improves their soil fertility.



Significance of Natural Farming:

- Minimized Cost Of Production
- Ensures Better Health
- Employment Generation
- Environment Conservation
- Reduced Water Consumption
- Rejuvenates Soil Health
- Livestock Sustainability
- Resilience

PARASITIC PLANT FOUND IN NICOBAR

◎ **CONTEXT:** A new genus of a parasitic flowering plant (*Septemeranthus*) has recently been discovered from the Nicobar group of islands.

◎ **ABOUT:** What is Parasitic plant?

- Parasitic plants produce root-like structures called haustoria which penetrate the host, connect to its vasculature and facilitate the exchange of materials such as water, nutrients, and pathogens between the host and the parasite, and between any plants simultaneously parasitized, even unrelated plant species.

Key-highlights of the discovery

- The genus *Septemeranthus* grows on the plant species **Horsfieldiaglabra (Blume) Warb.**
- The parasitic flowering plants have a **modified root structure spread on the stem of the tree and are anchored inside the bark of the host tree.**
- The plant was found on the **periphery of the tropical forest in one of the biodiversity hotspots** referred to as the **Nicobar group of islands separated from the Andaman group of Islands by a wide gap of 160 km with heavy tidal flows.**
- ***Septemeranthus* partially depends** on its host but also has **leaves capable of photosynthesis.**
- In addition to *Septemeranthus*, four other genera have also been discovered earlier from Nicobar group of islands, highlighting the ecological significance of the region on **non-parasitic plants-**
 - ***Nicobariodendron* (Hippocrateaceae)**
 - ***Pseudodiplospora* (Rubiaceae),**
 - ***Pubistylis* (Rubiaceae),**
 - ***Sphyranthera* (Euphorbiaceae)**

Recently a **new species in the hemiparasitic family Loranthaceae, *Dendrophthoe lalji*** have also been discovered from the Nicobar group of islands.

WORLD WETLANDS DAY

◎ CONTEXT:

- **World Wetlands Day is observed every year on February 2 all over the world. It is celebrated to raise global awareness about the vital role of wetlands for people and our planet.**
- **The year 2022 commemorates the 51th anniversary of the signing of the Ramsar Convention on Wetlands on 2 February 1971 in Ramsar, Iran, celebrated annually as World Wetlands Day.**

About Wetlands

- Wetlands are land areas that are saturated or flooded with water either permanently or seasonally.
- Inland wetlands include marshes, ponds, lakes, fens, rivers, floodplains, and swamps.
- Coastal wetlands include saltwater marshes, estuaries, mangroves, lagoons, and even coral reefs. Fishponds, rice paddies, and saltpans are human-made wetlands.
- On this day, environmentalists and community protectors come together to celebrate their love for nature.
- This is done through seminars, exhibitions, and special on-ground campaigns.

History of World Wetlands Day

- **February 2, World Wetlands Day is the United Nations International Day of Importance when the Convention on Wetlands of International Importance was signed on 2 February 1971 to raise public awareness of wetland values and benefits.**
- It was also aimed to make the world's population aware of the **conservation and wise use of wetlands.**
- The day was founded as initially **five nations signed the Convention, but today over 170 nations are signatories to the Ramsar Convention** and there are over **2,400 listed Ramsar wetlands, including in India.**

Ramsar Convention

- **The Ramsar Convention is an international agreement promoting the conservation of wetlands.**
- The Convention was adopted at Ramsar in Iran in **1971 and came into force in 1975.** Almost 90% of the UN member states are part of the Convention.

Theme

- **In 2021, the world wetlands day is celebrated under the following theme 'Wetlands and Water,'** highlights the importance of wetlands as a source of freshwater and encourages action to restore them and stop their loss.
- **In 2022, the World Wetlands Day is celebrated under the following theme "Wetlands action for people and nature".**

Significance of wetlands

- Wetlands are a critical part of our natural environment. They mitigate floods, protect coastlines and build community resilience to disasters, absorb pollutants and improve water quality.
- The wetlands have a major role in **water security.**

- They provide a **barrier against natural disasters such as flooding**.
- They are a vital source for food, raw materials, genetic resources for medicines, and hydropower.
- **They nurture complex ecosystems.** They prevent **soil erosion and help fight against climate change**.
- The wetlands act as carbon stores. They act as one of the **best sinks for greenhouse gases, especially carbon monoxide**.
 - 30% of land-based carbon is stored in peatland (a type of wetlands).

WORLD NEGLECTED TROPICAL DISEASES DAY

◎ **CONTEXT:** World Neglected Tropical Diseases Day (World NTD Day) is observed on January 30 every year.

- ◎ **ABOUT :**
- **What are Neglected Tropical Diseases (NTD)?**
 - **NTDs are a group of infections** that are most common among marginalised communities in the **developing regions of Africa, Asia and the Americas**. They are **caused by a variety of pathogens such as viruses, bacteria, protozoa and parasitic worms**.
 - NTDs are especially common in **tropical areas** where people do not have **access to clean water or safe ways to dispose of human waste**.
 - Examples of NTDs are: **snakebite envenomation, scabies, yaws, trachoma, Leishmaniasis and Chagas disease etc.**
 - These diseases generally **receive less funding for research and treatment** than **malaises like tuberculosis, HIV-AIDS and malaria**.

Theme

- The 2022 theme is '**Achieving health equity to end the neglect of poverty-related diseases**'.
- The 2022 slogan is "**From neglect to care**".

- ◎ **BACKGROUND:**
- **The first World NTD Day** was held on **30 January 2020**.
 - The proposal to recognise the day was made by the **United Arab Emirates (UAE)**.
 - **The 74th World Health Assembly** endorsed a decision recognizing **30 January as World Neglected Tropical Diseases Day ('World NTD Day')**.
 - World NTD Day commemorates the simultaneous launch of the **first NTD road map and the London Declaration on NTDs on 30 January 2012**.
 - For countries where **neglected tropical diseases (NTDs) are prevalent and for the global community of partners**, this is a new dawn.

NTDs in India

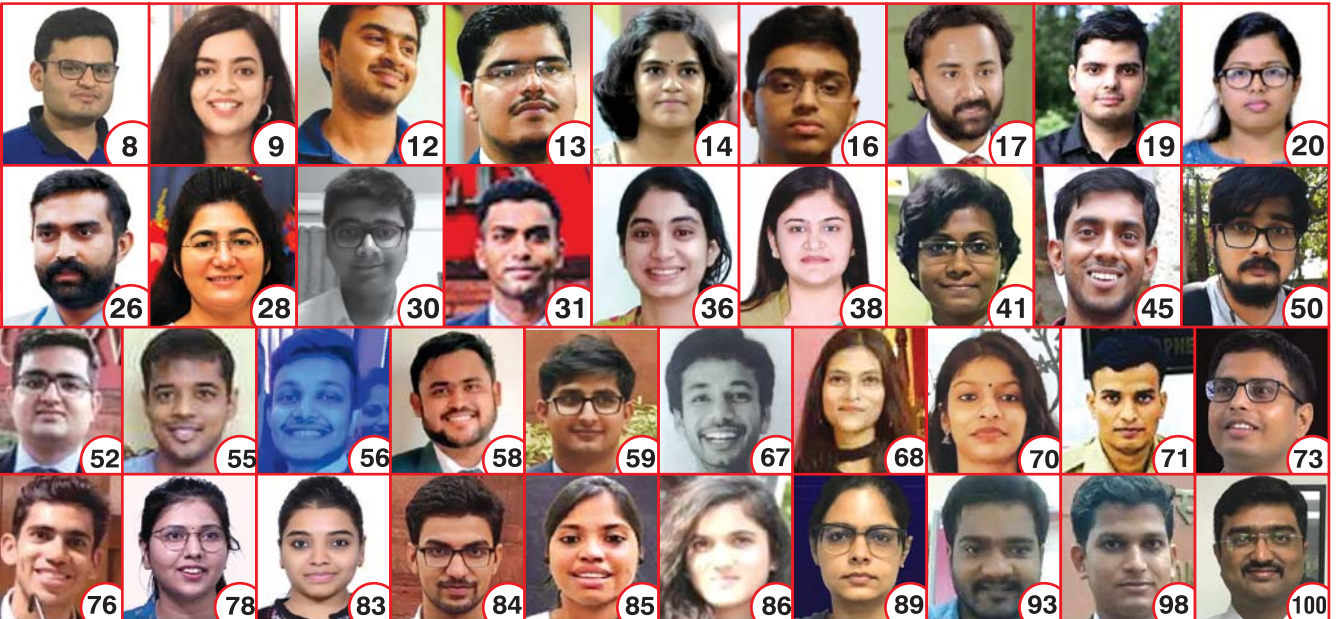
- **India is home to the world's largest absolute burden** of **at least 11 of these major NTDs**.
- NTDs are commonly seen to **affect people living in poverty** and hence, **many people in India are afflicted by these diseases every year**.

- The most common NTDs in India: **Lymphatic Filariasis, Visceral Leishmaniasis, Rabies, Leptospirosis, Dengue and Soil-Transmitted Helminth Infections (STH).**
- As per WHO data, **India ranks number 1** in the number of cases for many **major NTDs in the world.**
 - However, India has made tremendous progress in controlling many such diseases.
- **Leprosy is no longer a public health concern** in the country and **mass treatment coverage has also been achieved for Filaria.**
- **The Ministry of Health and Family Welfare** has highlighted that **India has already eliminated several other NTDs, including guinea worm, trachoma, and yaws.**

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