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7 PM COMPILATION

3rd and 4th Week Nov, 2024

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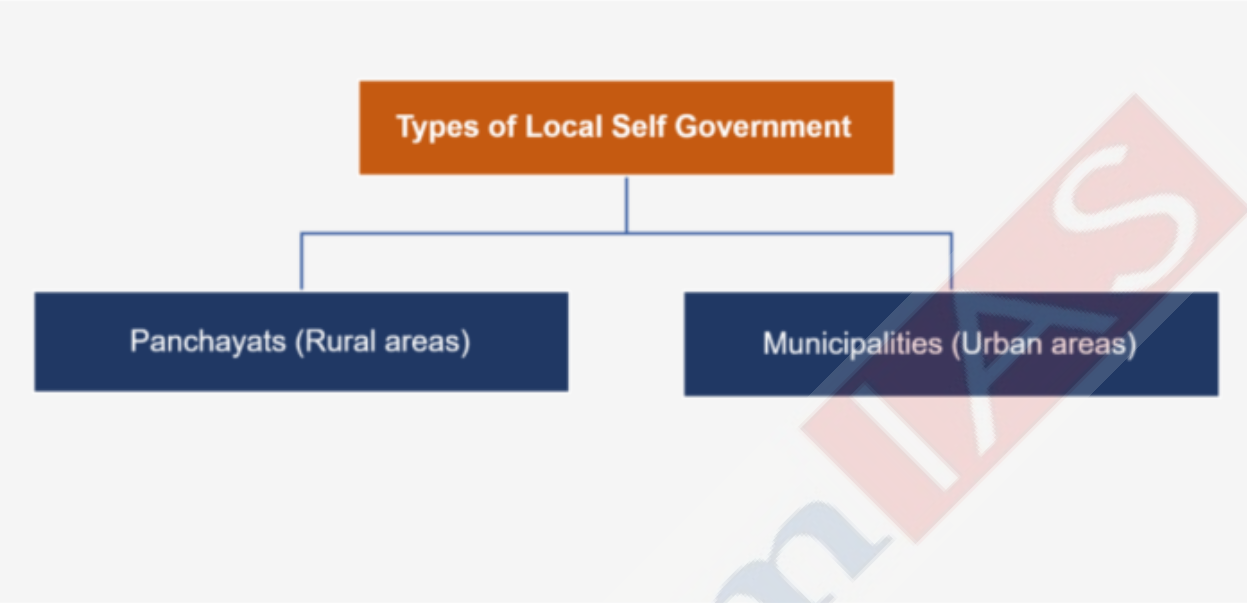
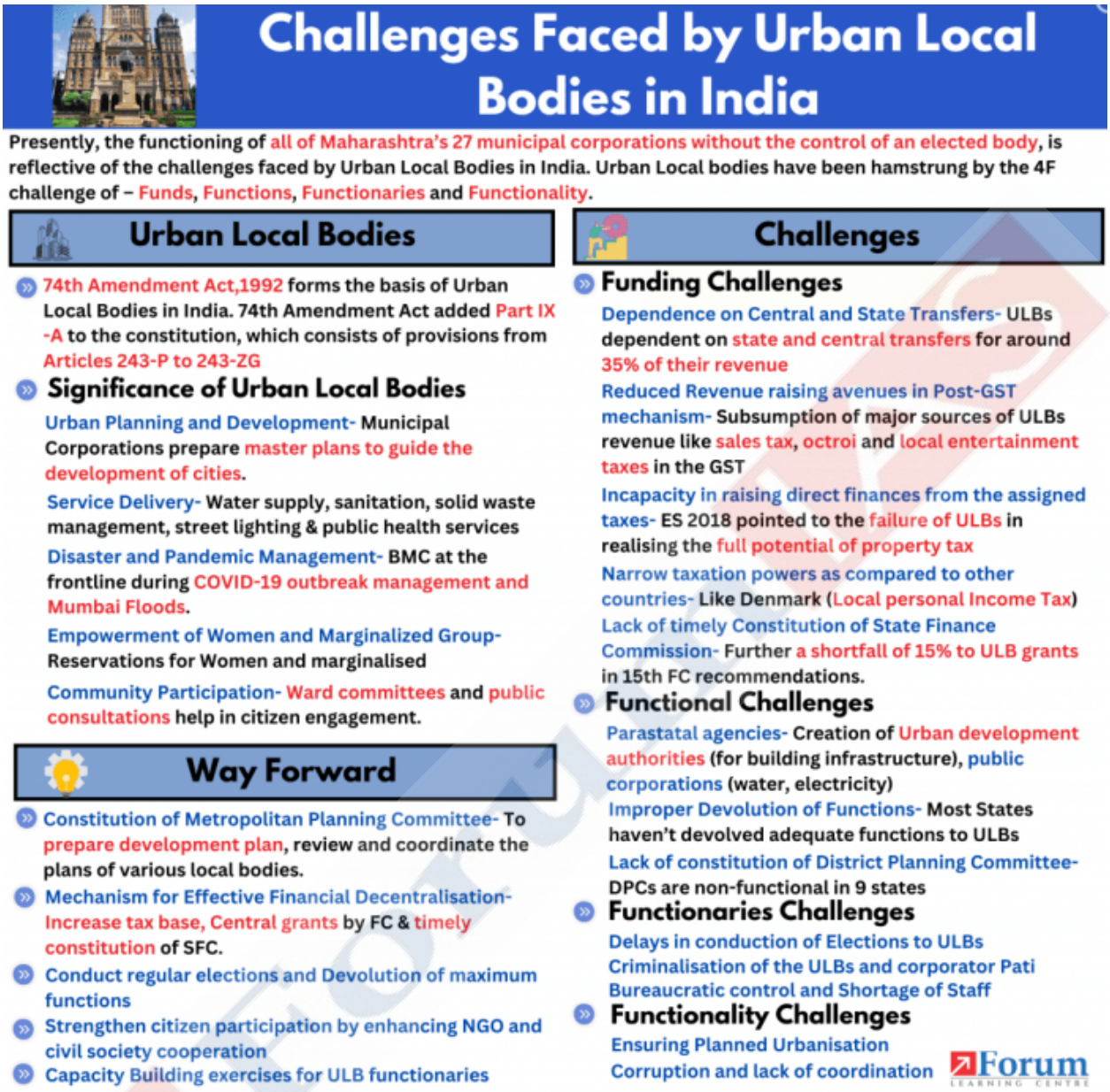
Urban Local Bodies In India- Significance and Challenges - Explained Pointwise



Urban Local Bodies In India Significance and Challenges

Recently, the Comptroller and Auditor General of India (CAG) has flagged a concerning gap of 42% between the resources and expenditure of urban local bodies (ULBs) across 18 states. The CAG report has also highlighted that the Urban bodies generate only 32% of their revenue independently, with the rest coming from state and Union government transfers. In this article we will further delve into the challenges faced by Urban local bodies in India. **Urban Local Bodies In India**



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What is the constitutional mandate and structure of Urban Local Bodies in India?

74th Amendment Act,1992 forms the basis of Urban Local Bodies in India. 74th Amendment Act added Part IX -A to the constitution, which consists of provisions from Articles 243-P to 243-ZG. It also added 12th Schedule to the Constitution. It contains 18 functional items of Municipalities.

Structure of Urban Local Bodies in India- The Urban Local Government in India consists of eight types of Urban local bodies.

Municipal Corporation	Mahanagar Palikas/Municipal Corporation for areas with a population of more than one million. Municipal corporations are usually found in big cities such as Bangalore, Delhi, Mumbai, Kolkata, etc.

Municipality	Nagar Palikas/Municipal council/Municipal committee/Municipal board for areas with less than a million people. The smaller cities tend to have the provision of municipalities.
Notified Area Committee	Notified area committees are set up for the fast-developing towns and the towns lacking the basic amenities. All the members of the notified area committee are nominated by the state government.
Town Area Committee	The town area committee is found in the small towns. It has minimal authority such as street lighting, drainage roads, and conservancy.
Cantonment Board	It is usually set up for a civilian population living in the cantonment area. It is created and run by the central government.
Township	Township is another form of urban government to provide basic facilities to the staff and workers living in the colonies established near the plant. It has no elected members and is merely an extension of the bureaucratic structure.
Port Trust	Port trusts are established in the port areas such as Mumbai, Chennai, Kolkata, etc. It manages and takes care of the port. It also provides basic civic amenities to the people living in that area.
Special Purpose Agency	These agencies undertake the designated activities or specific functions belonging to the municipal corporations or municipalities.

What is the significance of Urban Local Bodies in India?

1. **Urban Planning and Development-** Urban local bodies play a crucial role in land-use planning, infrastructure development, and implementing policies that promote sustainable urban growth. **For ex-** Municipal Corporations prepare master plans to guide the development of cities.

2. **Service Delivery-** ULBs are responsible for providing essential services to urban residents like water supply, sanitation, solid waste management, street lighting, and public health services.

3. **Disaster and Pandemic Management-** ULBs are involved in developing and implementing plans to mitigate the impact of natural disasters and other emergencies at the local Level. **For Ex-** BMC at the frontline during COVID-19 outbreak management and Mumbai Floods.

4. **Empowerment of Women and Marginalized Groups-** Reservations for women and marginalized groups in local bodies, as mandated by the 73rd and 74th Constitution Amendment Acts, have led to their increased participation in the decision-making processes.

5. **Community Participation-** The urban local bodies is reflective of Gandhiji's dream of 'Poorna Swaraj' through 'Oceanic circle of power' and 'democratic decentralisation'. **For ex-** Mechanisms such as ward committees and public consultations help the residents to actively engage in local governance.

What are the Challenges faced by Urban Local Bodies In India?

Funding Challenges

1. **Dependence on Central and State Transfers-** According to the RBI Report on Municipal Finances 2022, Urban Local Bodies are dependent on state and central transfers for around 35% of their revenue. Further, the top-down transfers to the ULBs from the state and central Govt. as a percentage of GDP is extremely less in comparison with other countries.

2. **Reduced Revenue raising avenues in Post-GST mechanism-** ULBs have bore the burnt in the Post-GST era with the subsumption of major sources of its revenue like sales tax, octroi (in states like Maharashtra) and local entertainment taxes in the GST structure. **For Ex-** Loss of around ₹7,000 crore, or 35% of its total revenue to Municipal Corporation of Greater Mumbai (MCGM) with the subsumption of Octroi taxes in GST regime. Also, the increase in cess and surcharges by the Central Govt, which need not be devolved, has impacted the ULBs finances.

3. **Incapacity in raising direct finances from the assigned taxes-** The ES 2018 has pointed out the failure of Urban Local Bodies in realising the full potential of property tax, which is the exclusive domain of Urban local

bodies. **For Ex-** A/c to Peterson Institute of International Economics, China's ULBs raise 20-22% of finance from property taxes while Indian ULBs raise only 10-11% from property taxes.

4. **Narrow taxation powers-** ULBs in India do not have wide taxation powers as compared to other developed nations. **For ex-** China (ULBs major component comes from selling land use rights), Denmark (Local personal Income Tax), US (City governments can impose wide-ranging taxes).

5. **Lack of timely Constitution of State Finance Commission-** States in India have failed in timely constitution of the state finance commissions. Further, according to RBI report, there has been a shortfall of 15% in the 15th FC recommended grants to ULBs due to attached conditionalities.

Functional Challenges

1. **Parastatal agencies-** Various parastatal agencies created by the State government deny the local bodies their functional autonomy. **For Ex-** Creation of Urban development authorities (for building infrastructure), public corporations (water, electricity, transportation services etc).

2. **Improper Devolution of Functions-** The power to devolve functions to local governments rests with the State Government. Most States have not devolved adequate functions to local government bodies.

3. **Lack of constitution of District Planning Committee-** The 74th amendment requires a District Planning Committee to be set up in each district, for the consolidation and integration of development plans prepared by the panchayats and urban local bodies. According to a study by the India Development Review, District Planning Committees are non-functional in 9 states. Further, in states where DPCs have been created, DPCs have failed to prepare integrated plans in 15 states.

Functionaries Challenges

1. **Delays in conduction of Elections to ULBs-** There have been delays in conduction of elections to the urban local bodies by the state Govt, as no constitutional provisions for ensuring elections to ULBs. **For Ex-** BBMP, the municipal corporation of Bangalore, has been without an elected body since late 2020. There have been regular delays in conduction of MCD, Chennai and Mumbai Municipal Corporations.

2. **Criminalisation of the ULBs-** There has been increasing criminalisation of ULBs as large number of corporators having criminal and corrupt backgrounds getting selected to the corporations and councils.

3. **Corporator Pati-** The real aim of political empowerment of women in urban areas has been thwarted by the emergence of Corporator pati/Mayor Pati syndrome.

4. **Bureaucratic control-** Many cash rich corporations are controlled by the municipal commissioners appointed by the state governments and with the Mayor just being a ceremonial head.

5. **Lack of Staff-** There is huge shortage of skilled staff in the Urban local bodies to carry out the designated functions entrusted to them. About 35% of posts in India's municipal corporations are vacant (as of 2022).

Functionality Challenge

1. **Ensuring Planned Urbanisation-** The municipal corporations have failed in comprehensively planning the holistic urban development. These have resulted in growth of unchecked slums, traffic congestion and colonies without proper facilities such as schools, parks and hospitals.

2. **Corruption-** The Corruption scandals, like MCD corruption in contract award, have severely hampered the effective functionality of these bodies. Only 11 of the 35 States/Union Territories have enacted the Public Disclosure Law that mandates publishing of key civic data.

3. **Lack of coordination-** Poor coordination among centre, state, and various departments at local level lead to poor implementation of urban policies.

What should be the way forward to improve the ULB functioning in India?

The following recommendations of the 6th ARC on Urban Governance and NITI aayog's recommendations must be implemented to ensure that the ULBs function as true instruments of local self-government in India.

6th ARC recommendations on Urban Governance

1. **Constitution of Metropolitan Planning Committee-** The metropolitan Planning committee must be constituted to prepare development plan, review and coordinate the plans of various local bodies in India.

2. **Establishment of Unified Metropolitan Transport Authority (UMTA)-** To integrate and manage public transportation services and improve traffic management in the region.

3. **Strengthening of ULBs-** Conduct regular elections, devolve maximum functions and supplement the urban local bodies with adequate resources.

4. **Creation of National Urban Development and Housing Fund (NUDHF)-** NUDHF must be created to provide financial assistance to ULBs for urban development and housing projects.

5. **Implementation of PPP model and e-Governance-** PPP model and e-Governance like citizen grievance redressal mechanism must be adopted by the ULBs to enhance their transparency and accountability of functioning.

NITI Aayog's Recommendations

1. **Improving Financial Management of ULBs-** ULBs must be provided adequate sources to raise their revenues. Also, there must be an increase in the central devolution of funds by the Finance Commission. State Finance Commissions should be regularly constituted with clearly defined Terms of Reference (ToR).

2. **Capacity Building-** Capacity building programs must be developed for local government officials, urban planners and other stakeholders in urban governance.

3. **Strenghthening citizen participation-** Ward committees and other mechanisms like NGOs and civil society organizations must be used for strengthening citizen's participation in the ULBs functioning.

CAG's Recommendations for Strengthening ULBs

The CAG emphasized the urgent need for state governments to enhance ULB autonomy and participation in key areas like urban planning. Stronger laws, policies, and institutional frameworks are critical to fostering economically, environmentally, and democratically vibrant cities.

Read More- The Indian Express
UPSC Syllabus- GS-2- Issues and Challenges with the functioning of local Self Government in India

India-Nigeria Relations- Explained Pointwise

Recently, PM Narendra Modi visited Nigeria for the first leg of his three-nation tour. The discussion between PM Modi and Nigerian President Bola Ahmed Tinubu focused on further strengthening of the India-Nigeria strategic partnership in sectors like defence, technology, health, and education. India has extended 20 tons of humanitarian aid for Nigerian flood victims. President Tinubu acknowledged India's efforts to amplify the concerns of developing countries through the Voice of the Global South Summits. PM Modi was conferred Grand Commander of the Order of the Niger, Nigeria's national award. **India-Nigeria Relation**

PM Narendra Modi and Nigerian President Bola Ahmed Tinubu (PTI)

Figure 1.Source- Hindustan Times

What has been the history of engagement of India with Nigeria?

India and Nigeria enjoy warm, friendly, and deep-rooted bilateral relations. The two nations have been close partners for more than 60 years.
India, with a population

of 1.3 billion, and Nigeria, over 190 million, are large developing and democratic countries with multi-religious, multi-ethnic, and multilingual societies. India as the largest democracy in the world and Nigeria as the largest in Africa, have become natural partners.

1958	India's first diplomatic mission in Nigeria opened in 1958. India opened its mission two years before the latter country formally gained independence from the British rule
2007	The ties between India-Nigeria were elevated to the status of a "strategic partnership" when then prime minister Dr. Manmohan Singh, PM Modi's predecessor, visited the African state in October 2007.

What are the areas of cooperation between India and Nigeria?

1. South-South Cooperation- Both India and Nigeria have been cooperating in the multilateral organizations like the United Nations, G77 and NAM by articulating the voice of the developing world in a coordinated and effective manner.

2. Defense Cooperation- India has been providing training, capacity building & supplying defense equipment to the Nigerian defense forces. **For ex-** The National Defense Academy at Kaduna exemplifies this cooperation.

3. Development Cooperation- India has supported Nigeria's capacity-building efforts under the Indian Technical and Economic Cooperation (ITEC) Programme since 1964. India has also extended Lines of Credit worth $30 million for a gas-fired turbine electricity generation station in Cross River State of Nigeria.

4. Economic Cooperation- Nigeria is India's largest trading partner in West Africa and India's investment in Nigeria is around $20 billion.

5. India Nigeria Energy Cooperation- Nigeria is one of the leading suppliers of crude oil to India. Nigerian oil exports contribute to about 12% of India's oil imports.

What are the challenges in India-Nigeria Relations?

1. Declining Bilateral Trade- The Bilateral trade volume between Nigeria and India has fallen from US$ 14.95 billion in 2021-22 to US$ 11.8 billion in 2022-23, due to a decrease in the volume of oil purchase from Nigeria.

2. Lack of significant upstream energy assets- India remains a mere buyer rather than a strategic investor in Nigeria's energy sector. India lacks significant upstream assets in Nigeria, unlike China, which holds substantial production rights.

3. Sparse High-Level Engagements- The absence of regular Joint Commission meetings limits strategic dialogues on areas like defence and economic cooperation. Further limited diplomatic interactions at the level of heads of states (with the last Prime Ministerial visit 17 years ago) has weakened political ties.

4. Increasing Chinese footprint- The increase in Chinese footprint in Nigeria through the Belt and Road Initiative projects, is challenging India's position as a key partner in Nigeria.

5. Lack of Economic Partnership Frameworks- The absence of a comprehensive economic partnership agreement has limited the potential for trade diversification and industrial collaboration.

6. Nigeria's Political Instability and Economic Reforms- Recent political and economic reforms like President Tinubu's subsidy cuts and currency devaluation, has created uncertainity and has impacted the Indian investments.

What can be the future areas of cooperation between India and Nigeria?

1. Defense and Security- Nigeria faces security challenges like Boko Haram, piracy, and oil theft. India can offer defense supplies, training, and remote sensing technology to tackle terrorism (e.g., Boko Haram) and piracy in the Gulf of Guinea. Seven Nigerian Presidents since 1960 were trained in India as defense officers.

2. Economic Stabilization- Nigeria faces foreign exchange shortages and inflation (32%). Strategic initiatives such as partnerships in hydrocarbon sectors and infrastructure development can help stabilize Nigeria's

economy. India can offer large financial facilitations and consider barter arrangements to ease Nigeria's foreign exchange shortage.

3. Trade Enhancement- India can increase exports to Nigeria, including essential commodities like pharmaceuticals, foodstuffs, and textiles. India should also explore the potential for rupee-based trade to boost bilateral trade from the current $7.9 billion.

4. Capacity Building- India should offer its expertise in IT, healthcare, and education to support Nigeria's infrastructure and human resource development.

What should be the Way Forward?

1. Establishment of Comprehensive Economic Partnership Agreement (CEPA)- A CEPA will encourage investment, and reduce trade barriers in sectors like defence and hydrocarbons.

2. Currency Swap Arrangements- Currency swap agreement can help in mitigating Nigeria's forex shortage, will help in stabilising trade between the two economies.

3. Increased Investment in Nigeria's Infrastructure- India should invest in Nigerian transport networks like the Ethiopian power infrastructure.

4. Leverage Diaspora potential- Engaging the 50,000-strong Indian diaspora in Nigeria as cultural and business ambassadors can bridge economic and social exchanges.

Read More- The Hindu
UPSC Syllabus- GS 2- International Relations

High Performance Buildings- Explained Pointwise

High-performance buildings (HPBs) have come into focus with the acceleration of urbanization and worsening of climate change. High-performance buildings (HPBs) are essential for sustainable living, addressing critical challenges like energy efficiency, climate resilience, and resource conservation. HPBs are designed to minimize energy consumption, conserve resources, and endure extreme weather.

In this article we will focus on what are **High Performance Buildings** (HPBs), what are their advantages, and the challenges in their creation.

Source- The Hindu

What are High Performance Buildings (HPBs)? What are the key features of HPBs?

High-performance buildings are structures designed to exceed traditional standards in areas such as energy efficiency, environmental sustainability, occupant comfort, and operational performance.

Key Features of HPBs

Integrative Design	Integrative design is central to HPBs. HPBs have measurable goals, uniting architects, engineers, sustainability experts, and building owners to achieve the same. **For example-** Achieving 90% daylighting or optimizing cooling to 700 sq. ft. per tonne of air-conditioning.
Sustainable Material Choices	HPBs prioritize durable, energy-efficient materials with low embodied carbon and high recycled content. Life-cycle assessments help identify materials with minimal environmental impact, while low-emission interior materials improve indoor air quality by reducing harmful volatile organic compounds. **For Example-** The Indian Institute of Human Settlements (IIHS) campus in Bengaluru uses lifecycle cost analyses to select materials that balance comfort, durability, and energy efficiency over 50 years.
Energy Efficiency Strategies	HPBs aim for net-zero or net-positive energy performance, generating as much or more energy than they consume. The use of renewable like solar and wind energy is prominent in HPBs. **For Example-** The Infosys Hyderabad campus features a radiant cooling HVAC system combined with daylighting and task lighting, significantly cutting energy use.

Water Conservation	HPBs tackle water scarcity through efficient fixtures, rainwater harvesting, and wastewater recycling. **For Example-** Infosys campuses recycle 100% of wastewater using aerobic membrane bioreactors, achieving zero-discharge status.
Performance Monitoring	HPBs use advanced monitoring systems to track real-time energy, water use, and indoor environmental quality. **For example-** The IIHS Bengaluru campus uses AI-linked smart devices to maintain thermal regulation and operational efficiency.
Resilience to Climate Risks	HPBs are designed to endure extreme weather, integrating site-specific flood protection, durable materials, and passive survivability measures. Renewable energy and water systems enhance resilience during outages.

What are the advantages of High Performance Buildings?

Economic Advantages

1. Energy Cost Savings- High energy efficiency in HPBs reduces heating, cooling and lighting needs of the building.

2. Increased Property Value- Sustainable and high-performing buildings tend to have higher market values due to lower operational costs and greater appeal to tenants or buyers.

Environmental Benefits

1. Reduced Carbon Footprint- Lower energy consumption and the use of renewable energy in the HPBs help in decreasing greenhouse gas emissions.

2. Resource Efficiency- Optimized water use, energy-efficient systems, and the use of recycled or sustainable materials minimize resource depletion.

Social and Health Benefits

1. Enhanced Indoor Air Quality- High-performance buildings are designed to minimize pollutants and provide clean, healthy air for occupants.

2. Improved Comfort- Features like optimal thermal insulation, acoustic controls, and advanced lighting systems in HPBs ensure a more comfortable living or working environment.

What are the challenges with HPBs?

Financial Challenges

1. Higher Initial Costs- HPBs have higher upfront costs compared to traditional buildings due to the use of advanced materials, technologies, and design processes.

2. Budget Constraints- Balancing sustainability goals with cost-effectiveness is difficult, especially for smaller projects or in regions with limited financial resources.

Technical Challenges

1. Complex Design and Planning- High-performance buildings require integrated design processes, involving collaboration among architects, engineers, contractors, and sustainability experts. This can lead to complicated project management.

2. Maintenance Complexity- Sophisticated systems such as smart HVAC, building automation systems (BAS), and renewable energy sources require specialized knowledge for maintenance and troubleshooting.

Regulatory and Policy Challenges

1. Lack of Standardized Metrics- Measurement and definition of "high performance" often vary across regions and projects. This leads to inconsistencies in HPBs maintenance and operation.

2. Changing Building Codes and Standards- HPBs also face the challenge of resource-intensiveness due to evolving regulations and meeting certification requirements.

How are governments worldwide supporting HPBs?

1. The European Union's Green Deal mandates energy-efficient building designs and retrofits, aiming for climate neutrality by 2050.

2. Germany's KfW Bank provides low-interest loans for energy-efficient projects. Denmark's BR18 building codes encourage sustainable construction by offering incentives.

3. The U.S. programmes Energy Star and LEED promote energy-efficient buildings and offer tax credits for green building initiatives.

How is India adopting HPBs?

1. India promotes High-Performance Buildings (HPBs) through its National Action Plan on Climate Change, focusing on energy-efficient construction.

2. The Energy Conservation Building Code (ECBC) aims to reduce energy demands by up to 30% in buildings. Cities like Hyderabad, Noida, and Pune offer higher floor area ratios and incentives for buildings that meet ECBC standards. Examples include ITC's Green Centre in Gurugram, TCS Siruseri IT Park in Chennai, and the Embassy's commercial developments in Bengaluru, which command premium rents and higher occupancy rates due to their green certifications.

3. India's Green Rating for Integrated Habitat Assessment (GRIHA) has registered over 3,000 projects that prioritize sustainable practices and reducing carbon emissions.

4. The Indian Green Building Council (IGBC) has certified more than 14,000 projects, covering 12.5 billion square feet of green building space.

What should be the way Forward?

1. Strengthen Building Codes and Standards- The focus must be on updation and enforcement of energy and sustainability standards to align with high-performance goals.

2. Provide Financial Incentives- There must be expansion of grants, tax credits, and subsidies to offset the higher upfront costs of HPBs.

3. Support Research and Development- Investment in R&D for innovative materials, energy-efficient technologies, and building design tools, will propell the HPB sector.

4. Encourage Mandatory Reporting- Transparent and mandatory reporting of building performance metrics, such as energy use and carbon footprint, will help in further development of High performance buildings.

HPBs exemplify sustainability, lowering operational costs, boosting real estate value, and fostering climate resilience. As these practices gain traction, the ultimate goal is to transition all buildings into high-performance benchmarks for a sustainable future.

Read More- The Hindu
UPSC Syllabus- GS 3- Environment conservation

Air Pollution In Delhi- Reasons and Solutions- Explained Pointwise

The air pollution in Delhi is again in the news, with the worsening of Delhi's air quality. The AQI in certain areas of Delhi like Alipur, Anand Vihar, Bawana, Narela, Pusa and Sonia Vihar has touched 500. The choking air pollution has led to the invocation of **Graded Response Action Plan** (GRAP) in Dehli-NCR region. **Air pollution in Delhi**

In this article we will look into the reasons for air pollution in Delhi. We will also look at the possible solutions to combat this climate health emergency.

Figure 2.Source- The Indian Express

What is air Pollution and how is it measured in India?

Air Pollution- Air pollution is the introduction of chemicals, particulates or biological materials into the atmosphere that cause discomfort, disease, or death to humans.

Measurement of Air Pollution In India

In India, air pollution is measured according to the National Air Quality Index developed by Central Pollution Control Board (CPCB) in 2014.

The measurement of air quality in the NAQI framework is based on eight pollutants, namely- Particulate Matter (PM10), Particulate

Matter (PM2.5), Nitrogen Dioxide (NO2), Sulphur Dioxide (SO2), Carbon Monoxide (CO), Ozone (O3), Ammonia (NH3) and Lead (Pb).

Categorization of Air Quality under AQI:

AQI	Remark	Colour Code	Possible Health Impacts
0-50	Good		Minimal Impact
51-100	Satisfactory		Minor breathing discomfort in sensitive people
101-200	Moderate		Breathing discomfort to people with asthma and heart disease.
201-300	Poor		Breathing discomfort to most people on prolonged exposure.
301-400	Very Poor		Respiratory illness on prolonged exposure
401-500	Severe		Affects healthy people and seriously impacts those with existing diseases.

Source- CPCB

Read More- Air Quality Standard of India

What are the reasons for the rise in air pollution in Delhi?

1. Stubble Burning- Stubble burning in Punjab, Rajasthan, and Haryana emits large amounts of toxic pollutants in the atmosphere. These pollutants contain harmful gases like methane (CH4), carbon monoxide (CO), volatile organic compounds (VOC) and carcinogenic polycyclic aromatic hydrocarbons. The IIT consortium report (IIT Kanpur, IIT Delhi, TERI, and Airshed, Kanpur) have estimated that stubble burning contributed up to 35% of Delhi's PM 2.5 levels during the peak October-November season.

2. Reduced Wind Speed- Low-speed winds in winters are unable to disperse these pollutants effectively. Further, Delhi lies in a landlocked region and does not have the geographical advantage of sea breeze to disperse the suspended pollutants.

3. Effect of Northwesterly winds- After the withdrawal of monsoons, the predominant direction of winds in northern India is northwesterly. These northwesterly winds bring the dust from the gulf region, northern Pakistan and Afghanistan.

4. Dip in Temperatures lowers the inversion height- With the decrease in temperature, inversion height lowers down, leading to concentration of pollutants in the lower atmosphere. (Inversion height is the layer beyond which pollutants cannot disperse into the upper layer of the atmosphere).

5. Vehicular Pollution- Delhi has one of the highest number of registered private vehicles in India. Official emissions inventories of 2018 show that vehicles emit about 40 per cent of the particulate load in the city of Delhi.

6. Construction Activities and Open Waste Burning- Pollution due to landfill burning and construction debris enhances the pollution levels in the Delhi NCR region.

7. Firecrackers- Firecrackers burning during Diwali further adds to the increase in air pollution levels.

8. Urban development strategy in India- The current strategy focuses on real estate development, a widening of roads and allowing large fuel guzzling vehicles which are major reasons for increased pollution.

9. Expansion of 'Grey' infrastructure- Water bodies, urban forests, green cover, and urban agriculture have all reported shrinkage, and "grey" infrastructure has seen rapid expansion.

10. Land use change- The handing over of open spaces to real estate developers and lack of any meaningful afforestation affects the city's ecology.

11. Promotion of car sales- Widening roads induces people to buy more cars, thus leading to more pollution levels.

12. Construction activities- It contributes roughly 10% of air pollution in Delhi-NCR. There are hardly any steps being taken to monitor construction activities.

What are the harmful effects of air pollution?

The harmful effects of air pollution have been tabulated below-

Economic effects	(1) Leads to loss of labour productivity, GDP and per capita income levels. (The Confederation of Indian Industry estimates that air pollution costs Indian businesses $95 billion, or 3 per cent of India's GDP every year). (Poor air amounts to about Rs 7 lakh crore of annual economic loss, which is more than a third of our annual GST collection) (2) Air pollution reduces agricultural crop yields and commercial forest yields.
Human Health Effects	(1) Air pollution leads to multiple health conditions including respiratory infections, heart disease and lung cancer. (2) As per the Global Burden of Disease comparative risk assessment for 2015, air pollution exposure contributes to approximately 1.8 million premature deaths and loss of 49 million disability adjusted life-years (DALYs) in India.
Environment	(1) Acid Rain– Damages crops, natural vegetation, soil chemistry and leads to damage to ancient monuments (Taj Mahal Yellowing). (2) Eutrophication of water bodies- Increases nitrogen intake of freshwater bodies leading to Eutrophication.

What Govt initiatives have been taken to reduce air pollution in Delhi?

(1) **Crop Residue Management Scheme-** Crop Residue Management (CRM) scheme which provides subsidy to farmers for buying 'Turbo Happy Seeder', 'Super SMS attachment', 'rotavators' and 'superseeder'.

(2) **Commission for Air Quality Management (CAQM)-** CAQM is a statutory body formed under the Commission for Air Quality Management in National Capital Region and Adjoining Areas, Act 2021. CAQM has provided a framework to tackle the problem of air pollution due to stubble burning.

(3) **Initiatives to reduce Vehicular Pollution-** The shift from BS-IV to BS-VI, push for Electric Vehicles (EVs), Odd-even Policy have all been implemented to reduce Vehicular pollution.

(4) **Graded Response Action Plan (GRAP)-** GRAP measures like shutting down thermal power plants and a ban on construction activities are implemented to curb air pollution.

What should be the way ahead?

A start has been made to recognise the severity of air pollution on the health of the population and the economy. Delhi and Mumbai are the two financial backbones of our country. The following measures need to be undertaken to curb air pollution in Delhi and Mumbai-

(1) **Increase the AQI monitoring stations-** The adequate numbers of AQI monitoring stations as mandated by the National Clean Air Programme (NCAP) must be installed. Also, sensor based AQI monitoring units that give hyperlocal data must be set up.

(2) **Enhanced powers to the authorities to take action according to the hyperlocal data-** It will help the authorities take pre-emptive actions and allow denser monitoring. For example, if it is found that construction is taking place in a certain pocket without following norms, the authorities can identify the location and immediately penalise the violators.

(3) **National Nodal Authority for Air pollution-** India needs a nodal authority with constitutional powers to ensure collaborative pre-emptive action on air pollution with timelines for all stakeholders.

(4) **Setting up Independent commissions for management of AQI-** Independent commissions like the Commission for Air Quality Management (CAQM) for NCR and adjoining regions, should be set up in other major cities like Mumbai and Chennai. It will help in taking actions against the violators irrespective of the geographical region. Regional or airshed approach must be used to counter the geographical challenge to air pollution management as done in Los Angeles, Mexico City and many mega-urban regions in China.

(5) **Stricter guidelines for industrial emmissions-** SEBI's Business Responsibility and Sustainability Report (BRSR) framework can lay down tighter guidelines to ensure uniformity in the unit of reporting pollutant emissions, declaration of air pollution mitigation targets (like companies do for carbon emissions), and reporting of disaggregated emissions data. We must reduce exposure across the value chain from production to consumption to recycling of goods and delivery of services.

(6) **Making 'Clean air' an investment sector-** The push for substitution of fossil fuels will increase investment opportunities in clean energy transition sector like green mobility, clean cooking. This will open up a new sector for investment and will help in reducing the air pollution simultaneously.

(7) **Funds and Manpower Training to combat pollution-** The Sixteenth Finance commission should provide finance to urban local bodies for climate change and air pollution reduction interventions. The urban local bodies manpower must be properly trained and the dysfunctional State pollution Control Boards must be empowered to take punitive actions.

(8) **Increased awareness and incentive for civil society-** Different stakeholders need to know why cleaning the air will benefit their livelihoods and businesses. For instance, farmers will not curb stubble burning until a viable circular economy for alternative uses of biomass emerges. We must adopt sustainable lifestyles which are in line with government's LiFE initiative.

(9) **Increased use of Public transport and reduced dependence on private vehicles-** The Delhi Master Plan target of 80 per cent of motorised trips by public transport by 2020 has not been met yet. The deadline has been shifted to 2041. This deadline needs to be met by augmenting the public transport system. The private

vehicles use must be disincentivised by introducing ward-wise parking management area plans and parking tax.

(10) **Limit crop residue burning-** We must implement known solutions like shifting to less water-intensive crops, altering irrigation arrangements, timing, harvesting, baling practices and building a wider year-round market for straw.

(11) **End-to-end construction and waste management**– It is pivotal to reducing tonnes of dust and waste released in the air and water bodies.

(12) **Learnings from London, China, Singapore, Hong Kong must be incorporated-** London does not allow private vehicles in areas well-connected by public transport. China uses 'fixed number of car sales per year' in Beijing. We must improve the public transport like London, China, Singapore and Hong-Kong.

(13) **Exploring the option of Cloud seeding- Cloud seeding** must be explored as an option for temporary relief during spiked AQI levels. However, it should be undertaken after a detailed and deliberated discussion with experts.

Read More- The Indian Express
UPSC Syllabus- GS 3- Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment.

Undertrial Prisoners in India- Explained Pointwise

Recently, the Union Home Minister Amit Shah has called for the release of undertrial prisoners who have spent more than one-third of the maximum prescribed sentence for the crimes they are accused of committing, before Constitution Day (November 26). Shah emphasized the need for the release of undertrial prisoners to ensure that no such prisoner remains in jail without receiving justice. **Undertrial Prisoners in India**

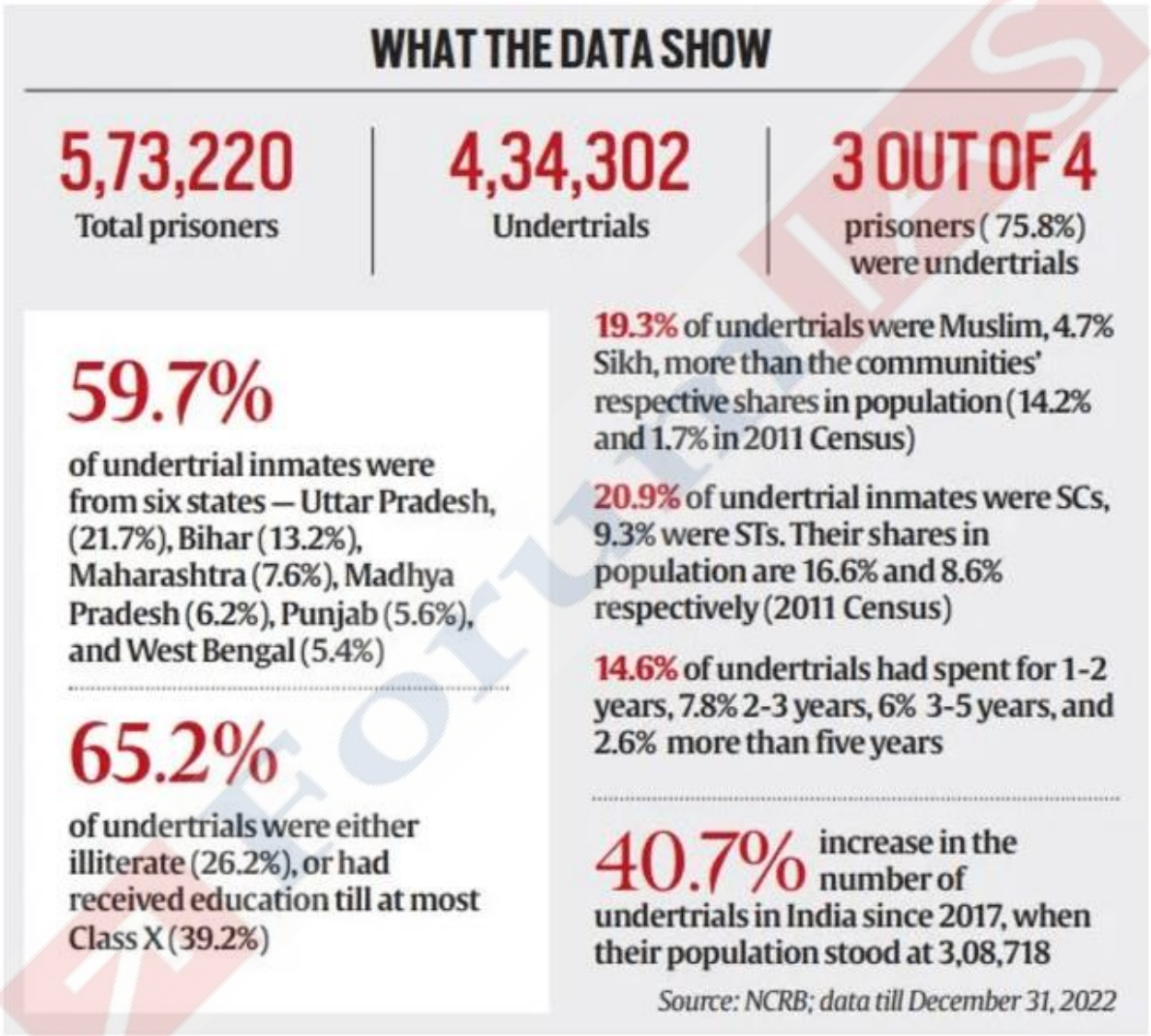
What is the status of Undertrial Prisoners in India?

India's prisons are heavily overcrowded with undertrial prisoners.

a. According to the National Crime Records Bureau (NCRB) Prison Statistics India 2022 report, out of the 5,73,220 total incarcerated prisoners, 4,34,302 (75.8% of the total prison population) were undertrials.

b. Out of the 23,772 women prisoners, 18,146 (76.33% of the total women prisoners) are undertrials.

c. 8.6% of undertrials have been in prison for over three years (long-term undertrials).



Source- Indian Express

What are the bail provisions under the BNSS for Undertrials in India?

Section 479 of the Bharatiya Nagarik Suraksha Sanhita (BNSS), 2023, introduces new bail provisions, building on the standards previously outlined in Section 436A of the Code of Criminal Procedure (CrPC), 1973.

Standard for Bail	Prisoners accused of offenses not punishable by death or life imprisonment must be released on bail if they have served half the maximum sentence prescribed for their offense.
Relaxation for First-Time Offenders	First-time offenders, who have no prior convictions, are eligible for release on bail after serving one-third of the maximum sentence. **Exceptions:** The provision does not apply if the accused faces charges in multiple cases or if investigations/trials in other cases are ongoing.
Role of Jail Superintendents	Jail Superintendents must file applications with courts to release eligible prisoners under Section 479 once the requisite time period has been served.

What other safeguards are in place for the protection of Undertrials?

Constitutional Safeguards

Article 21	"No person shall be deprived of his life or personal liberty except according to procedure established by law".
Article 22	Undertrials have the right to consult and be defended by a legal practitioner of their choice (State of Madhya Pradesh vs. Shobharam (1966)).
Article 39A	The State is obligated to ensure that the functioning of the judicial system promotes justice and should provide free legal aid.

Supreme Court Judgements

Re: Inhuman conditions in 1382 prisons	The Supreme Court ruled that Section 479 of the BNSS should apply retrospectively to first-time offenders in cases registered before the BNSS's implementation (July 1, 2024). The court emphasized that the provision is "more beneficial" and directed state governments and Union Territories (UTs) to identify eligible prisoners and ensure their release.

International Safeguards

UDHR(1948)	The Universal Declaration of Human Rights (1948) recognises the presumption of innocence until proven guilty.
Nelson Mandela Rules	The United Nations Standard Minimum Rules for the Treatment of Prisoners (the Nelson Mandela Rules) clearly specify the standards of treatment with prisoners on trial.

What are the reasons for high number of Undertrials in India?

1. Low Capacity of Judicial System- India has 21 judges per million population, while the Law commission has recommended 50 per million. This along with lack of infrastructure results in large pendency of cases which now has reached over 4.5 crore cases.

2. Poor Economic and Education Levels- A large number of under trials are poor, illiterate, belonging to the marginalized communities. This along with lack of financial resources leads to inability to get legal aid and pay the bail amount.

3. Unnecessary Arrests and Issues of Bail System- Law Commission (268th Report) has highlighted that over 60% of arrests are unnecessary. The Commission report also highlighted that the rich and the affluent get bail with ease. However, poverty becomes the reason for incarceration of many prisoners, as they are unable to afford bail bonds or provide sureties.

4. Delay in Investigation- Investigation and trial process is often delayed by police and prosecution functionaries. This is due to poor 'Police-Population' Ratio. According to PRS, the sanctioned police strength was 181 police personnel per lakh persons in 2016, the actual strength was 137. The United Nations recommended standard is 222 police personnel per lakh persons.

What are the problems faced by Undertrials?

1. Prison Violence- Prisoners are vulnerable to violence. Group violence is also endemic and riots are common.

2. Criminalizing effect of Prison- There is absence of scientific classification methods to separate hardened criminals/convicts from young, first-time new criminals. Intermingling exposes circumstantial/young offenders to hardcore criminals making them vulnerable.

3. Health Problems- Overcrowding of prisons leads to shortage of adequate space to lodge prisoners in safe and healthy conditions.

4. Mental Health Issues- Long incarceration without conviction, especially when the undertrial eventually turns out to be innocent, leads to mental health issues. Moreover, there is lack of facilities to deal with mental health issues in prisons.

5. Drug Abuse- People booked under anti-drug laws constitute a substantial percentage of the prison population. Isolation inside prison leads to increased desperation to access banned substances. It also increases the danger of other prisoners being inducted into drug abuse.

6. Effect on the Families- Many prisoners are sole breadwinners for their families. Arrest and incarceration leads to loss of income and susceptible to poverty. Also, social stigmatization post release impact the ability to get employment. Often it leads to juvenile delinquency among suffering families.

7. Violation of Rights- The 'Right to Speedy Trial' was recognized by the Supreme Court in Hussainara Khatoon vs. Home Secretary, State of Bihar (1979). Prolonged incarceration without bail violates the right. The 'Right to Bail' is denied. Even in bailable offences, many prisoners continue to be in prisons due to exorbitantly high bail amount. 'Right to Effective Legal Aid' is violated due to absence of adequate support.

What should be done to address the problem?

Prisoners

(a) Undertrials should be housed in open jails, where they can move around freely and earn a living, to reduce the punitive character of incarceration. They can be provided greater opportunity to communicate with families
(b) Undertrials should also be compensated, upon release/acquittal
(c) Steps should be taken for their rehabilitation after release, by providing them with self-employment skills, educational and vocational training etc.

Government

(a) A comprehensive Bail Law should be enacted to curb arbitrary arrests. There is a need to revamp outdated prison laws like the Prisons Act, that provide for penalties like fetters, solitary confinement etc. for prison offences, which have been held to be violative of the Constitution
(b) Police functions should be separated into investigation and law and order duties and sufficient strength should be provided to complete investigations on time and avoid delays

(c) To counter discrimination, prejudice and bias in the police, sensitisation programmes and workshops should be introduced
(d) The issue of judicial vacancies should be addressed on an urgent basis. The number of judges should be increased.

Judicial Processes

(a) Aid to Undertrials- Access to free legal aid shall be provided to under trials through NALSA by increasing its capacity and reach.
(b) Automatic extension of remands should be stopped
(c) Video conferencing between jails and courts should be encouraged and tried in all states beginning with the big Central jails and then expanding to District and Sub-jails
(d) The practice of lower judiciary to grant adjournment of hearings on arbitrary grounds should be curbed. A big cause for pendency is arbitrary adjournments delaying court proceedings
(e) Computerization of Court procedures can help manage pendency.

UPSC Syllabus- The Indian Express
Syllabus- GS II, Structure, organization and functioning of the Judiciary, Important aspects of governance, transparency and accountability.

Immunisation in India- Explained Pointwise

Immunisation has been one of the greatest triumphs in public health in India. Immunisation has helped in the eradication of diseases like smallpox and polio in India, by drastically reducing their devastating impact. Despite these successes in immunisation, the persistence of gaps in vaccination coverage poses future health and economic challenges.

Figure 3.Source- One Health Trust

What is immunisation? What is the status of immunisation in India?

Immunisation is a process by which a person becomes protected against a disease through vaccination. This term is often used interchangeably with vaccination or inoculation.

Increased Coverage- According to the National Family Health Survey (NFHS-5, 2019–2021) over 76% of children aged 12–23 months were fully immunized. This has increased from 62% in NFHS-4 (2015–2016).

Polio and Smallpox Eradication- Polio and smallpox have been eradicated by the successful implementation of the immunisation programme.

COVID-19 Vaccination/Immunisation Drive- India conducted one of the world's largest COVID-19 vaccination drives, administering over 2 billion doses by 2023.

India's immunisation programmes

Universal Immunization Programme 1985	Universal Immunization Programme (UIP) is one of the largest public health programmes targeting close of 2.67 crore newborns and 2.9 crore pregnant women annually. It is one of the most cost-effective public health interventions and largely responsible for reduction of vaccine preventable under-5 mortality rate. Under UIP, immunization is providing free of cost against 12 vaccine preventable diseases: **a. Nationally against 9 diseases-** Diphtheria, Pertussis, Tetanus, Polio, Measles, Rubella, severe form of Childhood Tuberculosis, Hepatitis B and Meningitis & Pneumonia caused by Hemophilus Influenza type B **b. Sub-nationally against 3 diseases-** Rotavirus diarrhoea, Pneumococcal Pneumonia and Japanese Encephalitis.
Mission Indradhanush (IMI) 2014	Mission Indradhanush was launched as a special drive to vaccinate all unvaccinated and partially vaccinated children, pregnant women under UIP. So far 5.46 crore children and 1.32 crore pregnant women have been vaccinated.
Intensified Mission Indradhanush (IMI) 5.0, 2023	It is a catch-up vaccination campaign for children up to 5 years of age and pregnant women, who were left out. **12 diseases covered:** Diphtheria, whooping cough, tetanus, polio, tuberculosis, measles and hepatitis-B, pertussis, meningitis and pneumonia, Japanese encephalitis (JE) and measles-rubella (MR).

What are the advantages of immunisation in India?

1. Protection from Life-threatening Diseases- Immunization prevents deadly diseases such as polio, measles, diphtheria, tetanus, hepatitis B, and rotavirus diarrhea. **For Ex-** The eradication of smallpox in 1977 and polio in 2014 in India are landmark achievements of vaccination campaigns.

2. Reduction of infant mortality- Immunization is one of the most cost-effective ways to protect children's lives and significantly reduce the number of deaths from vaccine-preventable diseases in children under five.

3. Cost-Effectiveness- Preventing diseases through vaccines is far less expensive than treating them. **For ex-** The Rotavirus vaccine, introduced in India, prevents severe diarrhea in children, which otherwise leads to costly hospitalizations and loss of productivity for families.

4. Promotion of Herd Immunity- When a large portion of the population is vaccinated, the spread of infectious diseases slows down. This helps in the protection of unvaccinated population.

5. Economic and Social Benefits- Healthier populations contribute more to economic growth and reduce the financial strain on families. **For Ex-** India's Mission Indradhanush, targeting of unvaccinated children, has improved productivity by reducing the long-term health impacts of diseases.

6. Control of Emerging Diseases- Immunization is a key tool for controlling outbreaks of new or re-emerging diseases. **For Ex-** During the COVID-19 pandemic, India's vaccination drive with Covishield and Covaxin curbed severe cases and fatalities.

7. Strengthened Global Health Security- Immunization programs help India participate in global health security efforts by controlling outbreaks and contributing to research and production. **For ex-** India, as the world's largest vaccine producer (e.g., through Serum Institute of India), supplies vaccines to developing countries, enhancing global immunization efforts.

8. Encouragement of Scientific Innovation- Robust immunization programs encourage investment in vaccine research and development. **For ex-** India's development of indigenous vaccines, such as Covaxin, showcases its growing capacity for innovation.

9. Addressing Anti Microbial Resistance (AMR)- Wider vaccine adoption is expected to reduce antibiotic consumption, helping reduce the challenge of AMR.

What are the challenges with the immunisation programmes of India?

1. Geographical disparities in immunisation coverage- Immunization coverage varies significantly across states and regions due to infrastructure gaps, inaccessibility, and socio-economic differences. **For ex-** States like Kerala and Tamil Nadu have over 90% full immunization coverage, while Uttar Pradesh and Bihar struggle, with coverage below 60% in certain areas (NFHS-5, 2019–21).

2. Vaccine Hesitancy- Cultural beliefs, misinformation, and fear of side effects contribute to vaccine hesitancy. This often results in low immunisation coverage. **For ex-** A survey by WHO in 2021 highlighted that over 15% of respondents in some communities showed reluctance toward newer vaccines like the COVID-19 vaccine.

3. Inadequate Health Infrastructure- Rural and hard-to-reach areas often lack sufficient cold chain infrastructure, healthcare workers, and vaccine supplies. According to the National Cold Chain Assessment, only 60% of Primary Health Centers (PHCs) have fully functional cold chain equipment.

4. Migrant Populations- Migrant populations and urban slum residents are often missed by routine immunization drives due to mobility and lack of documentation. In cities like Mumbai and Delhi, immunization coverage is lower in slum areas compared to the overall urban population.

5. Insufficient Awareness and Education- Lack of awareness about the benefits of vaccines leads to lower participation. According to a UNICEF study, over 25% of families in rural areas were unaware of new vaccines like the rotavirus vaccine.

6. Funding and Resource Allocation- Immunization programs often face inadequate funding for outreach, logistics, and healthcare personnel. India spends approximately $9 per child on immunization, far less than the global average of $58 per child in middle-income countries.

7. Vaccine Wastage- Vaccine wastage occurs due to improper storage, distribution delays, or underuse of multidose vials. WHO estimates India's vaccine wastage rates for routine immunizations to range from 15% to 30%.

8. Workforce Shortages- A shortage of trained healthcare workers, especially in rural areas, hampers vaccine delivery. India has a shortfall of 30% in ANMs at the sub-center level, as per the Rural Health Statistics (2021–22).

9. Emerging Diseases and Pandemic Strain- he emergence of diseases like COVID-19 and the diversion of resources to pandemic management disrupts routine immunization services. UNICEF reported a 12% reduction in DPT3 vaccination coverage during the pandemic.

What are the other initiatives of immunisation being undertaken in India?

Capacity building	National Cold Chain Training Centre (NCCTE), Pune and National Cold Chain & Vaccine Management Resource Centre (NCCVMRC)-NIHFW, New Delhi have been established to provide technical training to cold chain technicians in repair & maintenance of cold chain equipment.
Electronic Vaccine Intelligence Network (eVIN) rollout	The Government of India has rolled out an Electronic Vaccine Intelligence Network (eVIN)system that digitizes the entire vaccine stock management, their logistics and temperature tracking at all levels of vaccine storage – from national to the sub-district.
National Cold Chain Management Information System (NCCMIS)	National Cold Chain Management Information System (NCCMIS) tracks the cold chain equipment inventory, availability and functionality.

What should be the Way Forward?

1. Strengthen Healthcare Infrastructure- The focus must be on enhancing the cold chain systems and healthcare facilities, especially in underserved regions, to ensure the safe storage and administration of vaccines.

2. Focused Interventions for High-Risk Areas- We must focus on implementing targeted strategies for areas with low coverage rates. This will address the immunisation gaps in challenging regions and among vulnerable populations .

3. Enhancement of Data Systems- Developing robust health information management systems will help to improve data accuracy and facilitate real-time monitoring and decision-making .

4. Community Engagement and Education- We must focus on strengthening community outreach and education programs to increase awareness about the benefits of immunization and address vaccine hesitancy.

5. Integrating Immunization with one health approach- The immunization programs must be linked with other health and welfare schemes to broaden the scope of health services and ensure a holistic approach to public health.

Read More- The Hindu
UPSC Syllabus- GS Paper-2– Issues Relating to Development and Management of Social Sector/Services relating to Health.

India China Relations – Development and Challenges- Explained Pointwise

Recently, the Indian Foreign Secretary Vikram Misri announced that India and China had reached an agreement on patrolling arrangements along the Line of Actual Control (LAC). India-China LAC agreement aims to resolve the border issues that arose from Chinese transgressions in 2020. However, clouds of concerns remain over long-standing "legacy disputes" in eastern Ladakh at Demchok and Depsang. Despite this progress, challenges remain in the India China relations.

What are the Key aspects of the recent India-China LAC Agreement?

1. Patrolling Protocols- The agreement allows both nations to resume patrols along previously established routes. The agreement effectively aims to return to the status quo that existed before the tensions escalated in 2020.

2. Disengagement Process- The agreement also seeks to complete the disengagement process, which has been a focal point of negotiations over the past four years.

3. Reduction of Military Presence- According to the agreement, both India and China will slightly withdraw their forces from current positions to prevent confrontations. Regular monitoring and review meetings will be instituted to ensure compliance with the new protocols.

What are the implications of the agreement for India-China relations?

The recent agreement between India and China regarding the Line of Actual Control (LAC) has significant implications for India-China bilateral relations.

1. De-escalation of Tensions- The agreement marks a move towards de-escalation in a region where both countries have maintained heavy military presence. The agreement reduces the likelihood of confrontations like Galwan 2020 and fosters a more stable environment along the border.

2. Restoration of Diplomatic Relations- Successful implementation of the agreement could facilitate the resumption of higher-level diplomatic engagements in forum such as BRICS, SCO.

3. Economic and Trade Relations- The normalization of military interactions will pave the way for improved economic ties between India and China. **For Ex-** Resumption of Flights and increased Chinese investment in India.

4. Influence on Regional Stability- A stable India-China relationship could set a precedent for resolving other territorial disputes in Asia. **For ex-** Alteration of perceptions of China's border policies among neighbouring countries.

5. Path for Long-term Territorial Dispute Resolution- The LAC agreement will pave the way for resolution of 'legacy border issues' like Depsang and Demchok in future.

What are the challenges in resolving the India-China border dispute?

1. Historical Disagreements and 'Legacy Issues'- The India-China border dispute has a long and complex history that dates back to the 1962 border war. The presence of 'legacy issues', such as the disputes over Depsang Plains and Demchok, is a major challenge in the effective resolution of the India-China Border Dispute.

Figure 4.Source- The Tribune

2. Unilateral Chinese actions- China's attempts to unilaterally alter the status quo along the LAC, including military incursions into Indian territory, have significantly escalated tensions and complicated resolution efforts in the past.

3. Strategic concerns and nationalistic sentiments- The strategic importance of the disputed territory, coupled with nationalistic sentiments on both sides, makes it more difficult for either government to compromise or concede territory.

4. Military build-up and infrastructure development- The strengthening of military presence and infrastructure along the LAC by both India and China adds to the layer of complexity in the effective resolution of dispute.

5. Lack of trust and mutual suspicion- The deadly clashes in the Galwan Valley in 2020 have deeply impacted the level of trust between the two nations, leading to heightened suspicion and uncertainty. This lack of trust creates a volatile environment that is not conducive to long-term conflict resolution.

6. Imbalance in buffer zones- The establishment of buffer zones during the disengagement process has resulted in India losing more territory than China. This imbalance creates further tension and makes conflict resolution more difficult.

What should be the Way Forward?

1. Continued dialogue and negotiations- Both nations must continue high-level talks, keeping dialogue channels open to facilitate negotiation and mutual understanding. Military, political, and diplomatic conversations should be maintained to reduce tension along the LAC in future.

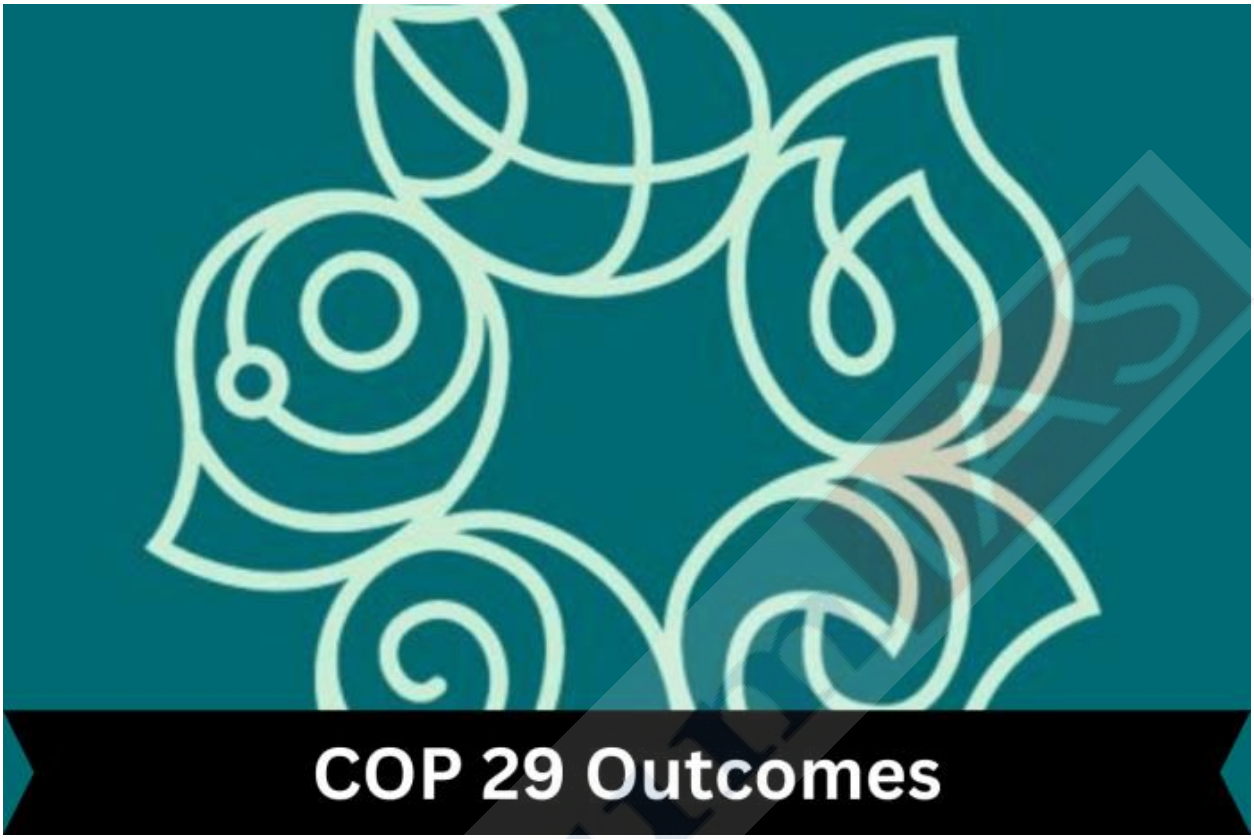
2. Establishment of trust- Both countries should actively avoid actions that could exacerbate the situation, such as unilateral attempts to alter the status quo, and work towards fostering an environment of mutual respect and understanding.

3. Resolve legacy issues- The legacy issues, including unresolved border claims, should be addressed as a future step in the LAC negotiations. This would ensure a comprehensive solution to the border dispute.

4. Balanced disengagement- Future disengagements should aim for a balance, ensuring neither side disproportionately loses territory in the creation of buffer zones. This will help to maintain the equilibrium and contribute to a long-term peaceful resolution.

Read More- The Indian Express
UPSC Syllabus- GS 2- International Relations

COP 29 Outcomes- Explained Pointwise



COP 29 which was held in Baku, Azerbaijan was billed as the 'finance COP'. The main goal of COP 29 was to finalize a new goal on finance- often termed as New Cumulative Quantitative Goal on Climate Finance (NCQG). The Paris Agreement 2015 (COP 21) had called for the finalization of NCQG before 2025. However, the agreement did not mention the year from which the new amount has to be mobilized.

The developing countries had asked for the NCQG to be set at 1.3 trillion dollars every year. However, the developed countries completely ignored the demands of the developing countries. The developed countries managed to force an agreement at COP 29, of putting together 300 billion dollars a year as part of the NCQG framework, that too from 2035. India vociferously opposed the climate finance commitment of the developed countries and called the amount 'abysmally poor' and 'paltry'.

What were the outcomes of COP 29?

New collective quantified goal on climate finance	Developed countries have committed to fund $300 bn a year for developing countries by 2035. This replaces the earlier goal of developed countries financing $100bn per year.
Carbon Markets (Under Article 6 of the Paris Agreement)	COP 29 operationalized the Paris Agreement Crediting Mechanism and finalized framework for country-to-country trading of carbon credits.
Centralised UN trading system for green credits	A centralized UN trading system was agreed to be launched for the operationalization of carbon markets. This will allow countries to trade in carbon credits.
Baku Adaptation Roadmap	Baku Adaptation Roadmap was launched to expedite National Adaptation Plans (NAPs).

Baku Workplan	Baku Workplan calls for strengthened role of Indigenous Peoples and local communities in climate change mitigation, and acknowledging their critical contributions in addressing climate crisis.
Extension of Lima Work Programme	Lima Work programme which emphasized on gender mainstreaming in climate actions, was extended by COP 29.
Enhanced transparency in Climate Reporting	Biennial Transparency Reports (BTRs) were submitted by 13 countries under the Enhanced Transparency Framework.

India's initiative in COP 29

LeadIT Summit	India co-hosted LeadIT Member Meet with Sweden. The summit focusses on decarbonization of heavy industry.
Solar Energy Leadership	India promoted solar adoption through International Solar Alliance (ISA). India has been targeting a 20-fold increase in global solar energy capacity by 2050.
SIDS Adaptation Finance	India has advocated finance unlocking and disaster-resilient support for SIDS.

What are the positive outcomes of COP 29?

1. Tripling Climate Finance for Developing Countries- A major achievement of COP29 was the agreement to triple climate finance to developing countries from the previous target of USD 100 billion annually to USD 300 billion by 2035.

2. Establishment of Carbon Market Mechanisms- COP29 successfully finalized agreements on the carbon market mechanisms outlined in Article 6 of the Paris Agreement, which had been unresolved for nearly a decade. This includes provisions for both bilateral carbon trading (Article 6.2) and a global crediting mechanism (Article 6.4).

3. Focus on National Adaptation Plans (NAPs)- A support program for implementing NAPs has been established at the COP 29 to address climate adaptation for least developed countries (LDCs).

4. Commitment to Transparent Climate Reporting- COP29 has reinforced the importance of transparent reporting on climate finance and adaptation efforts. Biennial Transparency Reports (BTRs) were submitted by 13 countries under the Enhanced Transparency Framework.

What are the shortcomings of COP 29?

1. Inadequate Financing- The finance commitment of developed countries to provide $300 billion annually by 2035, is 'too little, too distant' when compared to the estimated $1.3 trillion needed each year by the developing countries.

2. Overreliance on Loans Instead of Grants- The financial package agreed upon is being criticized for being heavily reliant on loans rather than grants. This approach of sanctioning loans instead of providing for grants, could exacerbate the debt burdens of developing nations already struggling with economic challenges.

3. Failure to Address Fossil Fuel Phase-Out- 'Transitioning away from fossil fuels' that was hailed as a historic breakthrough in the final decision of COP 28 in Dubai was not repeated in the mitigation outcome in COP 29.

4. Unmet Emission Goals- COP 29 saw insufficient pledges to meet the 1.5°C target. According to IPCC the global emissions have been rising in 2023.

5. Choice of Host Nation Concerns- The choice of Azerbaijan (Oil-rich economy and authoritarian governance) as the host nation has been criticised for contradicting the goals of a climate conference aimed at reducing fossil fuel dependence.

What Should be the Way Forward?

1. **Introduction of New Indicators-** New tangible indicators need to be identified to measure progress on each of the global goals established at COP 29.

2. **Establishment of Financial Mechanism-** Financial mechanism must be established for tracking the contribution of developed countries.

3. **Binding commitments**– Efforts must be taken to make the renewable energy pledges binding on all the member countries.

4. **Climate Justice-** Common but Differentiated Responsibility (CBDR) must remain the guiding light in upcoming climate negotiations.

Read More- The Hindu
UPSC Syllabus- GS 3- Climate Action and Climate Change, Conservation

Constitution@75- Explained Pointwise

The Constituent Assembly on November 26, 1949 finalized the India Constitution. It is the world's largest constitution, which has endured 75 years today. The endurance of the Indian constitution for 75 years outlasts the global average lifespan of constitutions, which has been around 17 years. The testament of the Indian constitution also lies in the fact that neighboring countries like Sri Lanka, Pakistan, and Nepal have replaced their constitutions multiple times. This longevity reflects the vision of India's founding fathers, establishing a unique democratic framework for the world's largest democracy. **Constitution@75**

What is the brief Historical Background of the Indian Constitution?

1. The Government of India Act, 1935- The Government of India Act, 1935 was an attempt by the Britishers to provide a constitutional framework for India. However, it was rejected by the Indian National Congress in 1936, as it was held as exploitative and intending to facilitate British control.

2. The Cabinet Mission Plan 1946- It proposed a Constituent Assembly comprising representatives from the Congress, Muslim League, and princely states.

3. Constituent Assembly- The Assembly's first session convened on December 9, 1946. It worked for nearly three years to draft the Constitution. Among its eight committees, the Drafting Committee, chaired by Dr. B. R. Ambedkar, played a pivotal role. The final draft included 243 articles and 13 schedules. Experts like B. N. Rau (constitutional adviser) and S. N. Mukherjee (chief draftsman) provided critical support.

What is the framework of the Indian Constitution?

The basic framework of the Indian Constitution are as follows-

Parliamentary System	The Indian constitution preferred the Parliamentary System over the presidential model due to its alignment with Indian traditions.
Federal Structure	The Indian Constitution provides for a federal structure. However, it balances powers with greater authority for the Union.
Comprehensive Design	Unlike unwritten conventions in the UK, India's Constitution has detailed the roles of the legislature, executive, and judiciary, recognizing the nation's diversity and lack of precedents.
Fundamental Rights and Directive Principles	The two chapters on fundamental rights and DPSP are pillars of the Indian Constitution. While the Fundamental rights safeguards individual freedoms, the DPSP provisions guide state policies toward socio-economic justice.

What are the key achievements of the Constitution at 75 years?

1. Foundation of Indian Democracy- The Constitution established India as a sovereign, socialist, secular, and democratic republic. The constitution laid down a framework for governance that emphasizes checks and balances among the executive, legislature, and judiciary.

2. Protection of Rights- The constitution enshrined Fundamental Rights that safeguard individual freedoms against state encroachment. This has been crucial in promoting social justice and ensuring equal opportunities for all citizens.

3. Social Transformation- The Constitution has served as a powerful tool for social change, enabling movements for equality and justice across various sectors of society. It has served as a tool for promoting affirmative action.

4. Constitutional responsibility and civic responsibility- The constitutional provisions have fostered a culture of constitutional literacy and civic responsibility among citizens. **For Ex-** Citizenship Amendment Act (CAA) and National Register of Citizens (NRC).

What are the threats to our constitutional Values?

1. Decline in the press freedom- Various civil society activists have pointed to the marked decline in the freedom of expression. According to the World Press Freedom Index 2024, India ranks 159 out of 180 in the world.

2. Disregard for Individual Rights- According to critics, liberty and dissent have been stifled, with weaponization of draconian laws like the Unlawful Activities (Prevention) Act (UAPA) against dissidents. The civil society activists cite the cases of Father Stan Swamy, G. N. Saibaba, and Umar Khalid which highlight the misuse of power.

3. Erosion of Democracy- Critics of the government have raised issues regarding the compromise of Constitutional morality. The labeling of dissent as anti-national and the reduction of the Institutions like the Election Commission and investigative agencies to tools of intimidation, has been hailed as major threats to constitutional values.

4. Decline of parliamentary debates- Critiques have also highlighted the reduction of parliamentary debate and judicial independence as major threats to the constitution.

5. Corporate-Driven Policies- Civil society activists have also highlighted the government's alignment with corporate interests such as the Emergency-era curtailment of workers' rights to serve capitalist demands, policies like the four labor codes, repression of farmers, and land acquisition from Adivasis as major threats to the constitution.

What should be the Way Forward?

Dr. Ambedkar viewed the Constitution as a safeguard against state overreach and majoritarianism. The following principles must be followed in letter and spirit for a flourishing democracy in the years to come.

1. Limitation of Power- Constitutions must restrain state authority and uphold individual freedoms.

2. Democracy Beyond Elections- True democracy lies in accountability, free speech, and adherence to constitutional processes. The meaning of democracy should not be merely reduced to electoral victories.

3. Directive Principles- The party in power must be bound by the Constitution's guiding principles like the DPSPs to prevent misuse of authority.

India's Constitution will endure as long as its principles are upheld by ordinary citizens. Indian republic's survival depends on its people, ensuring that the Constitution remains alive in their actions and aspirations.

Read More- The Indian Express
UPSC Syllabus- GS 2- Indian Constitution

Evolution of Preamble in India- Explained Pointwise

The Supreme Court of India (SC) dismissed the petitions which challenged the addition of the terms 'Socialist', 'Secular', and 'Integrity' to the Preamble by the 42nd Amendment Act, 1976. The petitioners challenged that these terms were undemocratically introduced during the Emergency. The original Preamble, which was

adopted on November 26, 1949, declared India as a sovereign, democratic, republic. Petitioners claimed the date of adoption in the Preamble precluded later additions and sought either their removal or relocation to a separate section.

What is the SC judgement on the petitions asking for the removal of the terms added by the 42nd CAA?

1. Essential to the Constitution's Basic Structure- The Court dismissed the challenges, affirming that 'socialist' and 'secular' are essential to the Constitution's basic structure. The court provided reference to the 1994 S.R. Bommai ruling, which affirmed secularism as basic structure of the constitution.

2. Rationale of the Constituent Assembly to avoid the terms-

a. SC held that the Constituent Assembly deliberately avoided the term 'socialist' to allow future generations the flexibility to define the country's economic framework.

b. SC also held that the word 'secular' was omitted as the framers of the Constitution had envisioned a secular India, emphasizing equality, religious freedom, and the right to belief and conscience as fundamental rights.

3. Explanation of Socialism and Secularism in present context

a. Socialism- SC held that socialism' reflects India's welfare state model, allowing private enterprise alongside state-driven welfare measures. India's initial post-independence years emphasized democratic socialism, with centralized planning and state-led industries. Economic liberalization post-1991 shifted the focus to a market-oriented economy, lifting millions out of poverty. Despite growth, rising inequalities persist, necessitating welfare measures like MGNREGA, subsidized food, and direct benefit transfers. The Court highlighted that socialism remains vital for addressing inequality.

b. Secularism- 'Secularism' in India ensures religious neutrality, protecting freedom of belief and equality for all faiths. The Court reaffirmed secularism as a basic feature of the Constitution, referencing its 1994 S.R. Bommai ruling. It clarified that India's version of secularism ensures the state remains neutral, neither supporting nor penalizing any religion, and treats all faiths equally.

4. SC response to the Amendment's Emergency Origins- The SC bench dismissed arguments that the terms' inclusion during the Emergency delegitimized their validity. It highlighted that the 44th Amendment debates in 1978 reaffirmed these terms through parliamentary discussion. It emphasized that the Constitution, as a living document, can be amended, including the Preamble.

What has been the evolution of legal interpretations of the preamble?

For decades, the question, of whether the Preamble is a part of the Indian Constitution, sparked debates within legal circles. The Supreme Court addressed this question in various cases, offering differing interpretations and perspectives on the matter.

Berubari Union Case, 1960	In Berubari Union Case, 1960, the Supreme Court recognized that the Preamble shows the general purposes behind several provisions in the Constitution and is thus a 'key to the minds of the makers of the Constitution'. Despite this recognition of the significance of the Preamble, the Supreme Court held that the Preamble is not a part of the Constitution.
Kesavananda Bharati Case, 1973	The Supreme Court in Kesavananda Bharati Case, 1973, rejected its earlier opinion (in the Berubari Case) and held that the Preamble is a part of the Constitution. The court observed that the Preamble is of extreme importance and that the Constitution should be read and interpreted in the light of the grand and noble vision expressed in the Preamble.
LIC of India Case, 1995	In the LIC of India Case, 1995, wherein the Supreme Court reaffirmed that the Preamble is an 'integral part' of the Constitution. Thus, the

	Preamble is a part of the Constitution but has no legal effect independently of other parts.

What is the Significance of preamble?

The significance of the Preamble to the Indian Constitution is multifaceted and profound.

1. Core value of the constitution- The Preamble serves as a repository of the fundamental philosophy and core values upon which the Constitution is built. As noted by Sir Ernest Barker, the Preamble acts as a "keynote of the Constitution." Thus, providing a measure by which the Constitution's worth can be assessed.

2. Testament to the Constituent assembly- The preamble stands as a testament to the grand and noble vision of the Constituent assembly and reflects the mind of the makers of the Constitution of India.

3. Goals to be pursued by the country- The Preamble also delineates the lofty objectives and socio-economic goals that are to be pursued through constitutional avenues.

4. Identity Card of the Constitution- The Preamble serves a practical function by acting as an aid during the interpretation of the Constitution, particularly in instances where the language may be ambiguous. As articulated by N.A. Palkhivala, it functions as the "identity card of the Constitution."

5. Collective will of the people of India- The Preamble also establishes that the 'source of power' of the Indian Constitution lies in the citizens of India. It begins with the words, "We, the people of India, having solemnly resolved to constitute India" – reflecting the aspirations and collective will of the people of India.

What are the Critiques of the Preamble?

1. Non-justiciable nature of the Preamble- Some argue that the 'lofty provisions' articulated within it remain as aspirational goals rather than legally binding obligations.

2. Non realization of preamble goals- Despite the professed goals of liberty, equality, and justice, it is contended that these ideals have not been fully realized in Indian society. This assertion is underscored by India's poor rankings in global indices such as the World Press Freedom Index of 2024 (159th), the Global Gender Gap Index of 2023 (127th), and findings from reports such as those issued by Oxfam.

3. Challenge to spirit of fraternity- The persistence of caste-based social hierarchies and recurrent communal riots highlight the continued struggle to in the Preamble.

4. Threat to Unity and Integrity- The nation grapples with various internal challenges like regionalism, left-wing extremism, insurgency in the Northeast, terrorism in Jammu and Kashmir, drug trafficking and separatist movements, all of which pose significant threats to the unity and integrity of the nation.

Conclusion

As the Constitution marks 75 years, the Supreme Court's verdict reiterates the enduring importance of the principles of secularism and socialism in shaping India's democratic and inclusive ethos.

Read More- The Hindu
UPSC Syllabus- GS 2 Indian Constitution

Yojana [November 2024 Summary] Constitutional Amendments in India- Explained Pointwise

The Constitution of India is the supreme law governing the Indian state. It reflects the nation's dynamic socio-political, cultural, and economic landscape. Several constitutional amendments have ensured its adaptability, enabling it to address the evolving needs of society while preserving its core principles.

What has been the history of evolution of Indian Constitution?

The foundations of the Indian Constitution were laid during British colonial rule. The evolution of Indian constitution has been marked by pivotal legislative developments.

Government of India Act 1858	It ended East India Company rule and established direct British governance in India.
Indian Councils Act 1861 and 1892	It Introduced limited representative governance by involving Indians in legislative processes through appointed councils.
Government of India Act 1909 (Morley-Minto Reforms)	It expanded legislative councils and introduced separate electorates for Muslims, initiating communal representation.
Government of India Act 1919 (Montagu-Chelmsford Reforms)	It established dyarchy, separating provincial and central functions, and allowed limited self-governance.
Government of India Act 1935	The Act created a federal structure, bicameral legislature, and reserved seats for minorities, serving as a precursor to the Indian Constitution.

What is the power of Parliament in Amending the constitution? What are the landmark Constitutional Amendments in India?

Article 368 empowers Parliament to amend the Constitution but excludes fundamental aspects like federalism and fundamental rights. However the Kesavananda Bharati Case (1973) introduced the doctrine of the basic structure, limiting Parliament's ability to alter core principles such as democracy, the rule of law, and individual freedoms.

Landmark Constitutional Amendments

First Amendment (1951)	It balanced individual freedoms with social justice by enabling restrictions on speech and addressing untouchability.
Seventh Amendment (1956)	It reorganized states on linguistic grounds and updated the Union List.
Forty-Second Amendment (1976)	Known as the "Mini-Constitution," it centralized power and added "Socialist" and "Secular" to the Preamble.
Forty-Fourth Amendment (1978)	It reversed undemocratic Emergency-era changes and safeguarded fundamental rights.
Fifty-Second Amendment (1985)	It introduced anti-defection laws to ensure political stability.
Sixty-First Amendment (1988)	It lowered the voting age from 21 to 18, increasing youth participation.
Seventy-Third and Seventy-Fourth Amendments (1992)	It strengthened local governance by creating Panchayats and Municipalities with reserved seats for marginalized groups.
Ninety-Ninth Amendment (2014)	Proposed the NJAC for judicial appointments but was struck down for violating judicial independence.
Hundred and First Amendment (2016)	Introduced the Goods and Services Tax (GST), unifying India's tax structure.

What is the necessity of Constitutional Amendments in India?

1. Maintain federal balance- The Indian Constitution, with its federal framework and strong unitary bias, has incorporated flexibility through constitutional amendments to maintain a balance of power between the Union and States.

2. Addressing Societal and Economic Changes- Amendments ensure that the Constitution remains relevant and effective in meeting the socio-economic and political needs of contemporary society. **For ex-** 73rd and 74th Constitutional Amendments (1992) empowered local self-governance through Panchayati Raj institutions and urban local bodies, promoting grassroots democracy.

3. Protection of Fundamental Rights- Constitutional amendments help expand or clarify fundamental rights to reflect evolving societal values. 86th Amendment (2002) made the Right to Education a fundamental right for children aged 6–14 under Article 21A.

4. Resolving Ambiguities and Conflicts- Some constitutional provisions require amendments to address legal ambiguities or conflicts arising during implementation. 42nd Amendment (1976) also known as the "Mini Constitution," it clarified the relationship between the Centre and states, expanded the Directive Principles of State Policy, and introduced fundamental duties.

5. Strengthening Governance and Democracy- Constitutional amendments improve the efficiency and accountability of institutions and processes. 61st Amendment 1989, lowered the voting age from 21 to 18, ultimately increasing youth participation in democracy.

6. Ensuring Social Justice and Equality- Constitutional amendments have aimed at addressing historic injustices and ensuring inclusivity for marginalized communities. 93rd Amendment 2005, enabled reservation for socially and economically backward classes in educational institutions, including private unaided institutions.

7. Responding to Judicial Interpretation- Certain amendments are necessary to override or clarify judicial interpretations of constitutional provisions. 24th Amendment 1971 affirmed Parliament's power to amend any part of the Constitution, including fundamental rights.

What are the criticisms of Constitutional amendments?

1. Undermining the Constitution's Stability- The 42nd Amendment 1976, was criticized for altering the basic structure of the Constitution. This raised concerns about the overreach of the ruling party and the undermining of constitution's stability.

2. Political Motivations- Many Constitutional amendments have been misused for partisan gains. The 39th Amendment 1975, which placed the election of the Prime Minister beyond judicial review, was widely viewed as a means to protect Indira Gandhi during the Emergency.

3. Weakening of Federalism- Certain amendments have been criticized for centralizing power which has undermined the federal structure of the country. The 42nd Amendment 1976, increased the powers of the Centre at the expense of state autonomy.

4. Lack of Wider Consultation- Some constitutional amendments have been criticized for being rushed through Parliament without adequate public or stakeholder consultation.

5. Risk of Overuse or Abuse- There is a concern that the ease of amending has led to excessive amendments, which in turn reduces the Constitution's resilience. India has seen over 100 amendments since 1950, compared to the United States, which has only 27 amendments in over 230 years.

Conclusion

The Indian Constitution is a dynamic document that evolves to address contemporary challenges while safeguarding its foundational principles. Constitutional amendments, guided by Parliament and judicial oversight, have shaped India's democratic and federal framework. Each amendment reflects the nation's commitment to justice, equality, and governance.

Read More- The Indian Express
UPSC Syllabus- GS 2 Indian Constitution

Natural Farming in India- Explained Pointwise

The Union Cabinet has launched the National Mission on Natural Farming (NMNF). NMNF is a standalone Centrally Sponsored Scheme under the Ministry of Agriculture & Farmers' Welfare, to promote chemical-free natural farming across India. The NMNF aims to revolutionize Indian agriculture by fostering chemical-free, eco-friendly farming practices, reducing input costs, improving soil health, and contributing to sustainable development.

In this article we will look at what is natural farming. We will delve into the process of natural farming. We will look at the benefits of natural farming and also the challenges associated with **natural farming in India**.

What is Natural Farming? What are the main pillars of Natural Farming?

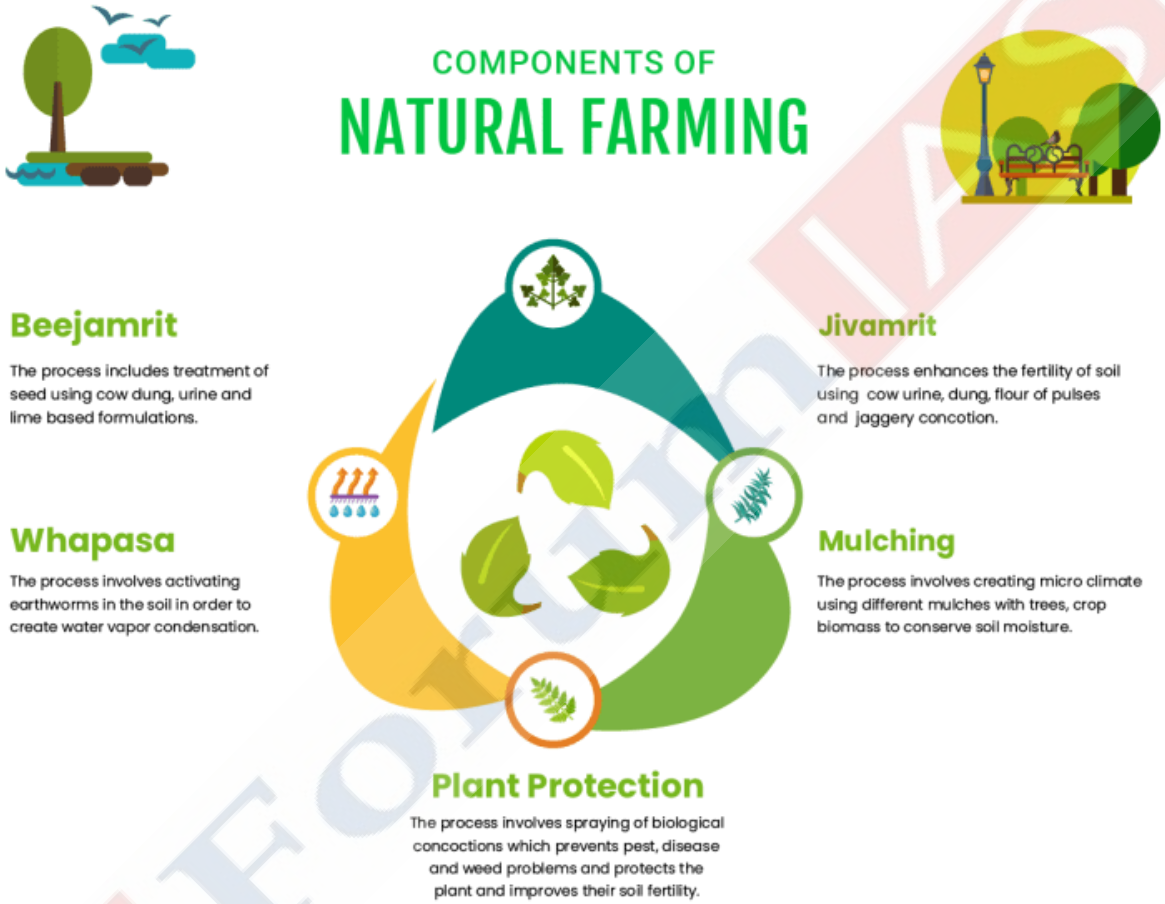
Natural Farming is a chemical-free traditional farming method that relies on minimal external inputs and emphasizes sustainability. It is considered as an agroecology based diversified farming system which integrates crops, trees and livestock with functional biodiversity. It is largely based on on-farm biomass recycling with major stress on biomassmulching, use of on-farm cow dung-urine formulations; maintaining soil aeration and exclusion of all synthetic chemical inputs.

It is gaining popularity in India due to its reduced cost, improved soil health, and eco-friendly practices. It has many indigenous forms in India, the most popular one is practiced in Andhra Pradesh called Zero Budget Natural Farming (ZBNF).

Four Pillars of Natural farming

Jivamrita & Ghanjivamrita	A cow dung-based bio-stimulant is prepared locally by fermenting dung with cow urine, jaggery and pulses flour. The fermented solution when applied to fields increases the microbial count in the soil, which supplies the plants with essential nutrients.

Bijamrita	Seeds are treated with cow dung-based stimulant which protects young roots from fungus and other soil and seed-borne diseases.
Whapsa	The fields are managed to have some green cover around the year to aid carbon capture by plants from the air and nurture the soil-carbon-sponge. This also keeps the microbes and other organisms like earthworms alive which helps the soil become porous and retain more water.
Acchadana or Mulching	During the cultivation of main crops, crop residues are used as mulch to retain soil moisture and prevent the growth of weeds.



Source- NITI Aayog

What are the similarities and Differences between Organic and Natural Farming?

Similarities between Organic and Natural Farming

Organic and Natural farming are both non-chemical systems of farming. These are based on diversity, on-farm biomass management and biological nutrient recycling. Diversity, rotation multiple cropping and resource recycling are the key similarities between Organic and Natural Farming.

Differences between Organic and Natural Farming

Organic farming	Natural farming
Organic farming is open for use of off-farm organic and biological inputs.	No external inputs is used in natural farming. On-farm inputs based on Desi Cow (Jeevamrit,

	Beejamrit, Ghanajeevamrit) and biomass recycling through mulching is done.
Organic Farming is open for micronutrient correction through use of minerals.	Use of compost/ vermicompost and minerals are not allowed in Natural Farming.
Organic farming is widely popular with the Global market at US$132 billion.	Natural farming is evolving with markets yet to be developed.

What are other government initiatives to promote natural Farming in India?

Bharatiya Prakritik Krishi Paddhati (BPKP)	It is a sub-mission under the Paramparagat Krishi Vikas Yojana (PKVY) which falls within the umbrella of the National Mission on Sustainable Agriculture (NMSA). The scheme aims to promote traditional indigenous practices, which give freedom to farmers from externally purchased inputs.
Natural Farming under Namami Gange	Natural farming in a five-kilometre belt along the Ganga River under the Namami Gange scheme.
State Government initiatives	Andhra Pradesh launched natural farming as a state policy in 2015. The state is now home to the largest number of farmers in India who have transitioned from chemical nutrients to applying locally prepared natural inputs. Further, Gujarat and Himachal Pradesh have adopted natural farming as part of the state policy.

Read More- **Zero Budget Natural Farming**

What is the significance of Natural Farming for India?

1. Reduction of India's fertilizer subsidy bill- India's fertilizer subsidy bill, driven by a spike in natural gas and other raw material prices, was around ₹1.3 trillion in 2021-22. Promoting natural farming can reduce these costs to the exchequer.

2. Improving small and marginal farmers' income- It is estimated that natural farming will reduce cost of cultivation by 60-70%. A study undertaken by Andhra University (which surveyed over 3500 natural and conventional farms) revealed that average net returns from natural farming were 50% higher than conventional farming.

3. Reduced dependence on credit- A panel survey of 260 farm households which were surveyed in 2018-19 and 2019-20, found that natural farming reduced the dependence on credit, freeing many farmers from exploitative and interlinked input and credit markets.

4. More flexible than organic farming- Organic farming is more about certification, while natural farming is a gradual process. But, there is relative flexibility in natural farming for adoption. This makes it easier for small farmers to transition.

5. Benefit to end consumers- At present, consumers are forced to purchase food with chemical residues in it. Certified organic food is more expensive, but the sheer cost savings in natural farming can ensure safe food at affordable prices.

6. Environmental and Health Benefits- Improved soil health, fertility, and biodiversity due to natural farming will increase resilience to climate risks like waterlogging, floods, and droughts.

7. Reduction of Ocean acidification- Since natural farming eliminates chemical fertilisers and pesticides, it reduces ocean acidification and marine pollution from land-based activities.

8. Health Benefits- Reduced exposure to harmful chemicals improves the health of farmers and prevents carcinogenic disease.

What are the challenges in adopting natural farming?

1. Lack of Awareness and Knowledge- Limited access to training and capacity-building programs hampers their ability to effectively adopt natural farming.

2. Lack of adequate budgetary support- There is limited support from the Central Government with India's National Mission on Sustainable Agriculture receiving only 0.8% of the agricultural budget.

3. Economic threats to India's crop protection industry- India's crop protection industry is valued at ₹18,000 crores. Promoting natural methods will threaten the very existence of their entire business ecosystem.

4. Lack of dedicated supply chains- Natural farming produce often lacks dedicated supply chains and certifications, making it hard to differentiate in the market.

5. Perceived Lower Yields- There are concerns about the perceived lower yields with the adoption of natural farming.

What should be done to promote natural farming?

1. Adoption of balanced approach while promoting natural farming- The experience of Sri Lanka must be kept in mind where the Government at once prohibited the use and import of chemical fertilizers leading to massive drop in production and shortage of food.

2. Adequate time and awareness campaigns- The government should provide adequate time, promote awareness campaigns. Civil Society Organizations can be engaged to promote farmer-to-farmer capacity building for sustainable agriculture. The Andhra model of widespread adoption of natural farming can be emulated.

3. Validation by scientific research- The Indian Council of Agricultural Research should design a curriculum on natural farming.

4. Shifting the National policy focus from food to nutrition security- Government should support the transition and bear short-term losses. Instead of input-based subsidies for fertilizer and power, the focus should be to incentivize outcomes like nutrition output, water conservation and desertification reversal.

Read More- The Indian Express
UPSC Syllabus- GS 3- Indian Agriculture

India-Bangladesh Relations-Explained pointwise

The arrest of Chinmoy Krishna Das, a Vaishnavite leader and one-time member of the International Society for Krishna Consciousness (ISKCON) in Bangladesh, by the Dhaka Metropolitan Police has prompted protests demanding his release in Dhaka's Shahbag neighbourhood and Chittagong. The arrest has added to the further slump in India-Bangladesh relations following the attack on minorities in the after math of fall of Sheikh Hasina's government. **India and Bangladesh Relations.**

Reasons Behind Sheikh Hasina's Exit

1. Peaceful Student demonstration evolving into a nationwide movement- The peaceful student protest against the freedom fighter reservation of 30% in civil services, galvanized into a nationwide movement due to Government's heavy-handed approach. The attack on students by Awami League's student wing, Bangladesh Chhatra League, imposition of a strict curfew with a 'shoot-on-sight' order and labelling the demonstrators as 'Razakars'(a term associated with collaborators during the 1971 war) further inflamed tensions.

2. Slowing down of economic Growth- Bangladesh made rapid economic progress under Sheikh Hasina's regime. The country's per capita income tripled in a decade, with the World Bank estimating that over 25 million people were lifted out of poverty in the last 20 years. However, the pandemic in 2020 and a slowing global economy, thereafter, hit the garment industry badly. This increased unemployment, inflation in the economy and discontent of Bangladeshi Population.

3. Eroding democratic values- The Parliamentary elections in 2014, 2018, and 2024 were controversial and non-participative as they were marred by low turnout, violence, and boycotts by opposition parties.

4. Reliance on Hard Power to maintain Control- Hasina's government increasingly relied on hard power to maintain control. This created a climate of fear and repression. **For ex-** The Digital Security Act 2018, became a potent weapon for the government and ruling party activists to silence critics and stifle freedom of online expression.

5. Increasing economic inequality- The proliferation of Bank scams and an expanding list of defaulters, coupled with rampant corruption, fuelled public discontent despite the overall economic progress. **For ex–**

Companies like CLC Power, Western Marine Shipyard, and Remex Footwear topped the list of defaulters, with bad loans ranging from 965 crore to 1,649 crore Bangladeshi Taka.

What challenges has the exit of Sheikh Hasina created in the India-Bangladesh Relations?

1. Attacks on minorities across both the borders- The ethnic attacks on Bangla-speaking Hindus in Bangladesh and the attacks on Bangladeshi's in India have strained the India-Bangladesh relations.

2. Resurfacing of security challenges- The are risks of emergence of security challenges by the anti-India groups as encountered during the earlier BNP-Jamaat years. With the continuing tensions on the border with Pakistan, Indian Army's long standoff with the PLA in eastern Ladakh, has created a security-nightmare for India.

3. Threat to India's connectivity with the North-east- A further deterioration in Indo-Bangladesh has restricted India's access to the Northeast. This region's connection to mainland India will only remain through the narrow "Chicken's Neck". With the Myanmar border remaining extremely volatile, the source of unrest in India's Northeast will increase.

4. Jeopardized the Bilateral trade and FTA- Sheikh Hasina's exit has jeopardized the growing bilateral trade ties between India and Bangladesh. There has also been stagnation of talks in the potential free trade agreement (FTA) between the two countries.

5. Deterioration of people-people ties- There are real risk of blowback from the Bangladeshi people and the new power centres in Dhaka- some of whom will carry past grudges against India.

6. Geopolitical challenges- Pakistan and China will see the political change in Bangladesh as an opportunity to challenge India's presence in the country and try to tar it with a pro-Hasina brush.

What are the other Challenges in India-Bangladesh Relations?

1. Sharing of Transboundary River Waters- India and Bangladesh share 54 common rivers, but only two transboundary river water sharing treaties have been signed, so far- Ganga Waters Treaty and The Kushiyara River Treaty. **For Ex-** Major point of contention is the Teesta river water dispute. Bangladesh seeks equitable distribution of Teesta waters, which has not been agreed by India and its state of West Bengal.

2. Deportation of Rohingyas- India and Bangladesh have mutual but conflicting interests in deportation of Rohingyas to mainland Myanmar. India seeks to give primacy to deportation from its mainland first and then later facilitate deportation from Bangladesh to Myanmar.

3. Cross-Border terrorism and infiltration- Cross-border terrorism and infiltration through the Bangladesh border have raised additional threats to internal security of India. Armed Dacoity in border districts, fake money transfer, cattle smuggling and prostitution have also raised internal security concerns in India.

4. Drug Smuggling & Trafficking- According to 2007 International Narcotics Control Board (INCB) report, the drugs trafficking through India from Bangladesh, remains a prime transit point of trafficking heroin from South Asia to Europe.

5. Growing Chinese Influence in Bangladesh– Bangladesh is an active partner in the Belt and Road Initiative (BRI). China has made substantial investments in Bangladeshi infrastructure by building 12 highways, 21 bridges and 27 power and energy projects. China's increasing involvement with Bangladesh potentially undermines India's regional standing and impede its strategic aspirations.

What is the significance of Bangladesh for India?

1. Geo-strategic- Bangladesh holds significant geostrategic importance for India as India's eastern neighbour. Bangladesh provides India with access to the Bay of Bengal and an important route for trade and connectivity with Southeast Asia.

2. **Geo-political-** A stable and friendly Bangladesh is crucial for India's security. Geo-political cooperation on issues such as counter-terrorism and border security is vital for maintaining peace in the South Asian region. Support of Bangladesh is crucial in India's bid for UNSC permanent membership.

3. Economic- Bangladesh is a critical economy for India's exports and bilateral trade. Deepening of India-Bangladesh economic relationship is crucial for India achieving its goal under the new foreign trade policy and of becoming a $5 trillion economy.

4. Cultural and civilisational- Bangladesh has large number of Hindu Bengali population and has large number of religious-cultural sites associated with India such as Ranir Bunglow Temple, Bhoj Vihara.

5. International cooperation- Active cooperation between India and Bangladesh is crucial to success of regional forums such as the BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation), SAARC (South Asian Association for Regional Cooperation) and COPs to UNFCCC.

How did India- Bangladesh Relations prosper Under Sheikh Hasina's Regime?

Sheikh Hasina's tenure has fostered a healthy relationship between New Delhi and Dhaka. The India-Bangladesh relations deepened during her 15 years in power.

1. Eradication of anti-India Terror Groups- The anti-India terror groups and their benefactor, the Jamaat-e-Islami Bangladesh, which operated out of safe havens in Bangladesh during the BNP-Jamaat rule in 2001-06 were eradicated after Sheikh Hasina's return to power.

2. Increase in Bilateral Trade- India-Bangladesh bilateral trade relations deepened during Sheikh Hasina's regime. India-Bangladesh bilateral trade in FY 2023–24 amounts to $13 billion, with Bangladesh being India's biggest trade partner in the subcontinent, and India being Bangladesh's second-biggest partner in Asia after China. India provided duty-free quota access to Bangladesh on all tariff lines, except tobacco and alcohol, under South Asian Free Trade Area (SAFTA) since 2011.

3. Increased Connectivity projects- India and Bangladesh developed a slew of infrastructure and connectivity projects during the Sheikh Hasina's regime. Some of the completed ones are-
a. Inaguration of the Akhaura-Agartala cross-border rail link and Khulna-Mongla Port rail line in November 2023.
b. Five operational bus routes between India and Bangladesh, including connections from Kolkata, Agartala and Guwahati to Dhaka.
c. Agreement for the usage of the Chittagong and Mongla ports to ease the movement of cargo between mainland India and the Northeast.
d. India's extension of three lines of credit to Bangladesh since 2016 amounting to $8 billion for the development of road, rail, shipping and port infrastructure.

4. Discussions on FTA- India and Bangladesh had begun negotiations for a free trade agreement which would be beneficial for both the countries under Sheikh Hasina's regime. An FTA would reduce or eliminate customs duties on goods traded between India and Bangladesh, and ease norms to help promote further trade and investments.

5. Land Boundary Agreement (2015)- India and Bangladesh swapped the disputed islands and allowed the inhabitants to choose their country of residence. This solved a major long-standing dispute between India and Bangladesh.

6. Energy cooperation- The energy cooperation between India and Bangladesh deepened during Sheikh Hasina's regime. Bangladesh nearly imports 2,000 megawatts of electricity from India. The India-Bangladesh Friendship Pipeline, connecting Siliguri in West Bengal and Parbatipur in Bangladesh, will transport one million Metric Tonnes Per Annum (MMTPA) of High-Speed Diesel to Bangladesh.

7. Defence Cooperation- India- Bangladesh border of 4096.7 km is the longest land boundary that India shares with any of its neighbours. India and Bangladesh conduct Joint Exercises like Exercise Sampriti (Army) and Exercise Bongosagar (Navy).

8. Tourism sector- Bangladeshis make up a large portion of tourists in India. In 2017, the number of tourists from Bangladesh outnumbered all the tourists arriving from Western Europe.

9. Medical Cooperation- Bangladesh accounts for more than 35% of India's international medical patients and contributes to more than 50% of India's revenue from medical tourism.

What Should be India's approach to deal with the Bangladesh Crisis?

1. Raising the attacks on Minorities- India must raise its concerns on the attacks on Hindu minorities by raising it bilaterally and multilaterally through UN mechanism.

2. Support to popular expression- India as a vibrant multi-party democracy, should be seen as supporting the expression of popular will in a sensitive neighboring country. **For ex-** India's support to people's movement in Nepal in 2006 against the dictatorial monarchical rule and restoration of multi-party democracy.

3. Expression of readiness to expand the bilateral ties- India should express its readiness to expand the bilateral economic engagement with a successor government. The temptation to brand the ongoing political change as anti-India or anti-Hindu should be avoided.

4. Cautiousness and Discreteness- India should be cautious and discreet in its reactions. India should keep the door open for the continuance of close and mutually beneficial ties, as India has adopted in the case of hostile regime in Maldives under Mohamed Muizzu.

5. Establishment of Joint Task Forces and Smart Border Management- There is a need to establish joint task forces comprising law enforcement agencies from both countries to effectively combat cross-border drug smuggling, human trafficking and Illegal immigration.

6. Establishment Digital Connectivity Corridor- There is a need to establish a digital connectivity corridor between the two countries, focusing on high-speed internet connectivity, digital services, and e-commerce. This can create new avenues for trade, collaboration, and technological exchange.

7. Early conclusion of India-Bangladesh Free Trade Agreement (FTA)- Bangladesh is set to lose its Least Developed Country (LDC) status after 2026, thereby losing its duty-free and quota-free market access in India. Hence India finalise a Free Trade Agreement (FTA) with Bangladesh at the earliest. India must also ensure that the FTA is not misuded by China to dump goods in India through RCEP agreement (Bangladesh is also a member of RCEP agreement).

Read More- The Hindu
UPSC Syllabus- GS 2- India and its neighbourhood Relations