

Forum IAS

7 PM COMPILATION

16th to 30th April, 2023

Features of 7 PM compilation

- ❖ Comprehensive coverage of a given current topic
- ❖ Provide you all the information you need to frame a good answer
- ❖ Critical analysis, comparative analysis, legal/constitutional provisions, current issues and challenges and best practices around the world
- ❖ Written in lucid language and point format
- ❖ Wide use of charts, diagrams and info graphics
- ❖ Best-in class coverage, critically acclaimed by aspirants
- ❖ Out of the box thinking for value edition
- ❖ Best cost-benefit ratio according to successful aspirants

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Recognition of National Party status in India – Explained, pointwise

Introduction

The Election Commission of India recently made significant changes in the political landscape by **recognizing the Aam Aadmi Party (AAP) as a national party** and revoking the national party status of Trinamool Congress (TMC), Nationalist Congress Party (NCP), and the Communist Party of India (CPI). TMC is now considering legal options to challenge the EC's decision. The decision impacts each party's visibility, influence, and resources, reflecting the evolving dynamics of India's political scenario.

What are the most recent modifications to political party status made by the election commission?

The Election Commission recently conducted a periodic review, upgrading the Aam Aadmi Party (AAP) to a national party. This decision was based on AAP's strong performance in Delhi, Punjab, Gujarat, and Goa.

In contrast, the Nationalist Congress Party (NCP) and Trinamool Congress (TMC) lost their national party status. However, they were recognized as state parties in Nagaland and Meghalaya, respectively, due to their performance in recent assembly elections.

Additionally, parties like Rashtriya Lok Dal in Uttar Pradesh and Revolutionary Socialist Party in West Bengal had their state party status revoked. Furthermore, the Lok Janshakti Party (Ram Vilas) was recognized as a state party in Nagaland, the Tipra Motha Party as a state party in Tripura, and the Voice of the People Party as a state party in Meghalaya.

About the history of national parties in India

Early History of National Parties in India: In 1951-52, during the first general elections, there were 14 national parties, including the Indian National Congress, the Communist Party of India, and the All India Bharatiya Jan Sangh.

After the first general elections, only four parties retained their national status: the Congress, the Praja Socialist Party, the Communist Party of India, and the Jana Sangh.

Over the years, many parties have merged or ceased to exist, such as the Praja Socialist Party, which later merged with other parties to form the Janata Party.

The Bharatiya Janata Party (BJP) was founded in 1980 and has become one of the major national parties in India. **The Bahujan Samaj Party (BSP)**, which focuses on the upliftment of marginalized communities, emerged as a national party in 1984. **The Communist Party of India (Marxist)** became a national party in 1964, advocating for socialism, secularism, and democracy.

The Aam Aadmi Party (AAP), founded in 2012, was recognized as a national party in 2023 due to its electoral performance in several states.

Currently, there **are six national parties in India:** the BJP, the Congress, the CPI (Marxist), the AAP, the BSP, and the National People's Party (NPP).

How does the EC recognize parties as either national or state parties?

The Election Commission (EC) recognizes political parties as either national or state parties based on criteria laid down in the Representation of People Act 1951 and the Election Symbols (Reservation and Allotment) Order, 1968.

Parties that have been newly registered, or have not contested an election since being registered, or have not secured the requisite votes/seats in a state or general election are categorised as registered unrecognised political parties (RUPPs). They don't enjoy all the benefits extended to recognized parties. The recognised party status is reviewed periodically by the EC.

Criteria to be recognized as National Party:

Read here: [After Gujarat results, AAP set for upgrade: What it takes to become a 'national party' in India](#)

Criteria to be recognized as State Party:

Read here: [JJP gets State party status](#)

When can a political party lose its national Party tag in India?

A political party in India can lose its national party tag if it fails to meet the criteria specified under the Representation of People Act 1951 and the Election Symbols (Reservation and Allotment) Order 1968. A party must fulfil at least one of the following three conditions to maintain its national party status:

Lok Sabha Seats: The party must win at least 2% of seats in the Lok Sabha from a minimum of three different states.

Example: If a party wins less than 2% of Lok Sabha seats or fails to win seats in at least three different states, it may lose its national party status.

General Election Performance: The party must secure at least 6% of votes in four states and win a minimum of four Lok Sabha seats in a general election.

Example: If a party's vote share falls below 6% in four states or it wins less than four Lok Sabha seats, it risks losing its national party tag.

State Party Recognition: The party must be recognized as a state or regional party in four or more states.

Example: If a party loses its state party recognition in multiple states, reducing its presence to less than four states, it may lose its national party status. In recent events, the TMC, NCP, and CPI have lost their national party status because they failed to meet these criteria.

What is the significance of obtaining National Party status?

Reserved Symbol: National parties are granted an exclusively reserved symbol for their candidates to use across the country, making it easier for voters to identify their preferred party on the ballot.

National Presence: National party status allows a party to fight elections throughout India, fielding candidates in any state and thereby expanding its base, influence and nationwide presence.

Single Proposer: Candidates from national parties need only one proposer when filing nomination papers, simplifying the nomination process and providing easier access to the voter list.

Star Campaigners: National parties can have up to 40-star campaigners, whose expenditures are not included in the party candidate's election expenditure, allowing for more prominent figures to campaign without burdening the candidate's budget.

Government Land Allocation: National parties receive government land allocation in New Delhi for their national president and office space at subsidized rates.

Free Airtime on Public Broadcasters: National parties benefit from free airtime on public broadcasters like Doordarshan and All India Radio during general elections, helping them reach a wider audience and convey their message.

Sources: The Hindu ([Article 1](#), [Article 2](#) and [Article 3](#)), [Indian Express](#), [Livemint](#), Deccan Herald, [Economic Times](#) and [Financial Express](#)

Syllabus: GS 2: Indian Constitution and Polity – Formal/informal associations and their role in the Polity

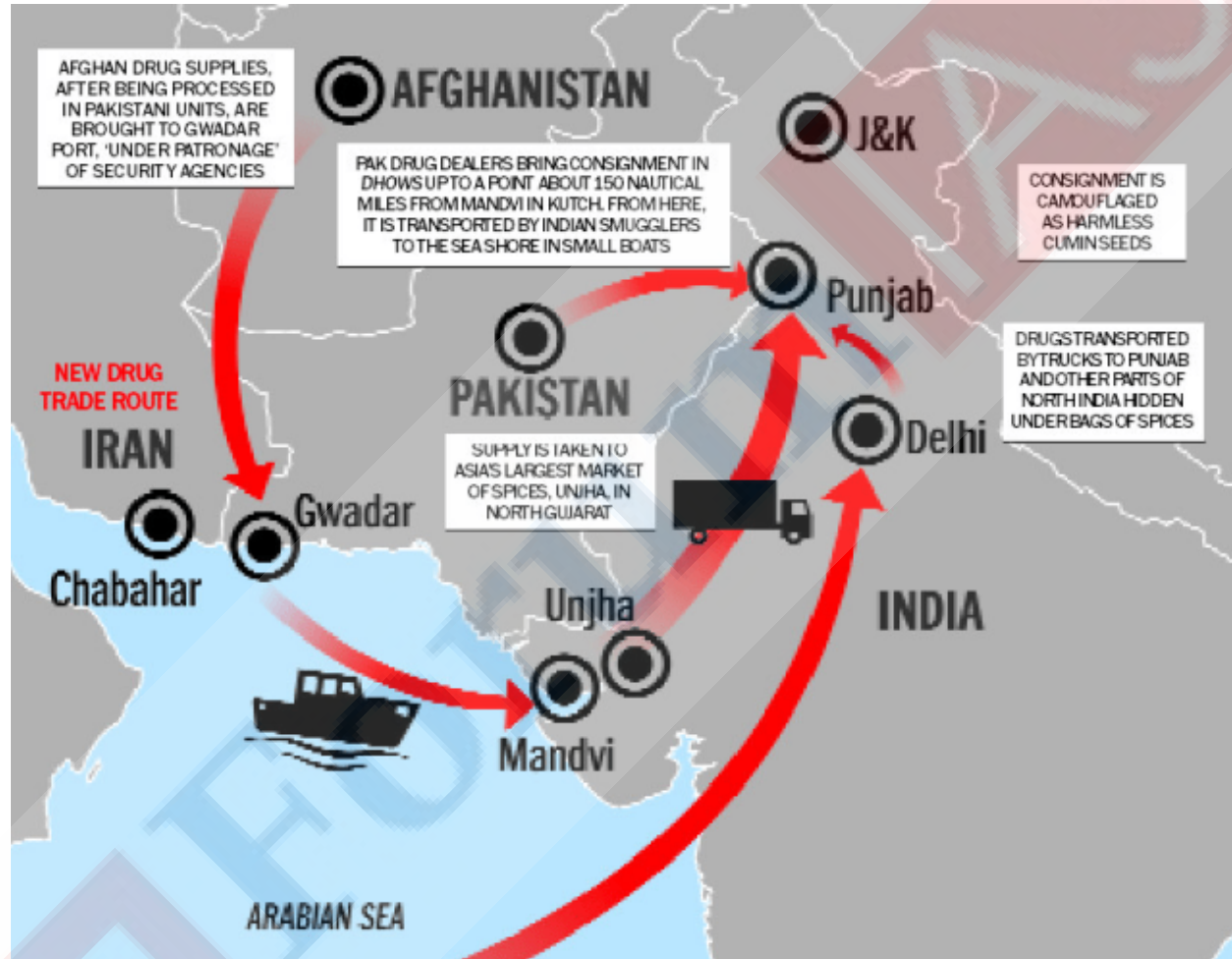
Drug trafficking in India: emerging challenges – Explained, pointwise

Introduction

Drug trafficking in India is a serious issue that poses challenges to the social, economic, and political fabric of the country. The illegal trade of drugs has been a persistent problem, and it continues to evolve and become more sophisticated with new technologies and methods.

The emergence of darknet markets and increased use of maritime routes has posed new challenges in the fight against drug trafficking in India. It is important to address these emerging challenges with innovative solutions to ensure the well-being and safety of society.

About the status of Drug trafficking in India



Source: Tribune

According to the Narcotics Control Bureau (NCB)'s latest annual report, **drug trafficking through sea routes in the Arabian Sea and the Bay of Bengal accounts for around 70% of the total illegal drugs smuggled into India.** The use of maritime routes by international drug syndicates based in Pakistan and Afghanistan is expected to increase.

The UN Office on **Drugs and Crime's World Drug Report 2022** revealed that **India is one of the world's largest opiate markets in terms of users and is vulnerable to increased supply from Afghanistan.** Punjab and Himachal Pradesh are leading in India's epidemic of opioid users, while Gujarat is now the third worst state in terms of drug overdose deaths.

A survey report by the Ministry of Social Justice & Empowerment (MoSJE) in 2019 showed that **drug consumption in India has increased compared to the survey report in 2004.**

Over 60% of the darknet is being used for illegal drug trade due to its anonymity and low risks. The use of cryptocurrency payments and courier services for doorstep delivery has made darknet transactions more appealing than traditional drug markets.

Read more: [India home to largest number of opiate users: UN report on drugs](#)

What are the reasons behind Drug trafficking in India?

There are several reasons behind drug trafficking in India, some of which are:

Geographical location: India's location between the "Golden Crescent" and "Golden Triangle" regions, which are major drug-producing areas, makes it vulnerable to drug trafficking.

Example: Drugs like heroin, opium, and hashish are produced in the Golden Crescent, which includes Afghanistan, Iran, and Pakistan, and are smuggled into India through the northwest border.

Porous borders: India shares borders with several countries that are known for drug production and trafficking, and these borders are often poorly guarded and easily penetrated by smugglers. For instance, the North-East States that share borders with Bangladesh, Nepal, Myanmar, China, and Bhutan are the hot-spots for drug smuggling.

High demand: India has a large population, and there is a high demand for drugs, both for recreational and medicinal purposes.

For example, drugs like marijuana and cocaine are in high demand in metropolitan cities like Mumbai and Delhi.

Lack of awareness: There is a lack of awareness among people about the dangers of drug abuse, and many people do not know how to identify drug abuse or how to get help.

Example: Young people who are not educated about the risks of drug abuse are particularly vulnerable to falling prey to drug traffickers.

Corruption: Corruption among law enforcement agencies and government officials allows drug traffickers to operate with impunity.

Example: Some drug traffickers are able to bribe officials at border crossings to allow them to smuggle drugs into the country without being caught.

What are the various initiatives undertaken to regulate Drug trafficking in India?

Domestic initiatives:

National Policy on Narcotic Drugs and Psychotropic Substances (NDPS): It was introduced in 1985 to regulate drug trafficking and the use of narcotic drugs and psychotropic substances in India.

Narcotics Control Bureau (NCB): It is the nodal agency for drug law enforcement in India. It was established in 1986 to coordinate drug law enforcement efforts across the country.

National Narcotics Coordination Portal: The multiplicity of stakeholders in Drug Law Enforcement has necessitated coordination between various agencies on real time basis.

The Ministry of Home Affairs has constituted a four tier coordination mechanism for increasing coordination amongst the nationwide stakeholders from grass root level to apex level and effectively combating the menace of drugs. The Apex NCORD, Executive NCORD, State NCORD and District CORD are four pillars of mechanism.

Integrated Rehabilitation Centers for Addicts (IRCA): The MoSJE provides financial assistance to NGOs and voluntary organizations for the maintenance of Integrated Rehabilitation Centers for Addicts (IRCA). These centers offer comprehensive rehabilitation services to individuals with substance abuse disorders.

National Action Plan for Drug Demand Reduction (NAPDDR): The MoSJE launched the NAPDDR for 2018-2025. The Plan aims at reduction of adverse consequences of drug abuse through a multi-pronged strategy.

The activities under the NAPDDR, inter-alia, include awareness generation programmes in schools/colleges/ Universities, workshops/seminars/ with parents, community based peer led interactions intervention programmes for vulnerable adolescent and youth in the community, provisioning of treatment facilities and capacity building of service providers.

Nasha Mukht Bharat Abhiyaan/Drugs-Free India Campaign: It was flagged off on 15th August 2020 (Independence Day) for 272 districts across 32 State/Union Territories that have been identified as the most vulnerable in terms of usage of drugs in the country. It is operational with the involvement of more than 500 voluntary organizations across the country, which are assisted financially under the NAPDDR scheme.

Read more: [CBI launches 'Operation Garuda' against illicit drug trafficking](#)

International collaborations and treaties:

Bilateral Agreements and Conventions: India has signed several bilateral agreements and conventions with other countries to regulate drug trafficking, including the UN Single Convention on Narcotics Drugs 1961, The Convention on Psychotropic Substances, 1971 and The Convention on Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988.

Mutual Legal Assistance Treaties (MLATs): India has signed various MLATs with other countries to cooperate in the investigation, prosecution, and extradition of drug traffickers. These MLATs provide a legal framework for the sharing of information and evidence between the signatory countries.

Participation in international organizations: India is a member of the United Nations Office on Drugs and Crime (UNODC) and the International Narcotics Control Board (INCB), which work to coordinate international efforts to prevent drug trafficking.

Joint Operations and Information Sharing: India cooperates with other countries through joint operations and sharing of intelligence to prevent drug trafficking.

For example, The Indian Coast Guard (ICG), in conjunction with the intelligence agencies, has been making big seizures frequently. ICG has developed a good synergy not only with the security agencies but also with the coast guards of Sri Lanka, Maldives and Bangladesh.

Read more: [BIMSTEC conference on drug trafficking](#)

What are the challenges in regulating Drug trafficking in India?

Technological Advancements: Drug traffickers are increasingly using technology to evade law enforcement agencies. For instance, they use the darknet to sell drugs, untraceable internet-based technology for drug-related communications, and drones to transport drugs from across the border.

Insufficient Law Enforcement Apparatus: Despite efforts to improve law enforcement, there is a perceived lack of coordination among different agencies. This has led to the failure to effectively tackle drug trafficking and abuse.

Lack of Social Awareness: Drug abuse and addiction are often stigmatized in Indian society, which hinders efforts to create awareness and promote prevention measures.

Inadequate Rehabilitation Facilities: There is a need to develop more rehabilitation facilities for drug addicts in India. The available facilities are often insufficient to cater to the needs of the large number of people struggling with addiction.

Political Interference: Political interference often hampers the work of law enforcement agencies and hinders their ability to tackle drug trafficking effectively.

Read more: [The menace of drug trafficking](#)

What is should be done?

Strengthening law enforcement: The government should take measures to strengthen the law enforcement agencies involved in drug control, including Customs, the Narcotics Control Bureau, and state police forces. This can include providing them with better training, technology, and resources.

Creating public awareness: The government can create public awareness campaigns to educate people about the dangers of drug abuse and the importance of preventing drug trafficking.

Tackling drug addiction: The government can provide more support for drug addiction treatment and rehabilitation, including setting up more treatment centres and providing more funding for existing ones.

Increasing international cooperation: The government can work with other countries to increase international cooperation and sharing of information and intelligence on drug trafficking networks.

Addressing socio-economic issues: Socio-economic factors like poverty, unemployment, and lack of education can contribute to drug abuse and trafficking. Therefore, the government can address these issues through poverty reduction measures, employment generation schemes, and increasing access to education.

Strengthening laws and regulations: The government can strengthen laws and regulations related to drug trafficking and impose stricter penalties for offenders.

Reducing demand: Reducing demand for drugs can be done through community-based prevention programs, education, and awareness campaigns.

Improving border control: The government can improve border control by increasing surveillance, using advanced technology and equipment, and strengthening border security forces.

By taking a multi-faceted approach, India can overcome the issue of drug trafficking and make progress towards a drug-free society.

Sources: Indian Express ([Article 1](#) and [Article 2](#)), [The Wire](#), [The Hindu](#), [AIR](#), [Hindustan Times](#) and [The Hindu Businessline](#)

Syllabus: GS – 3: Security Issues – linkages of organized crime with terrorism.

Heat strokes in India: Reasons and Impacts – Explained, pointwise**Introduction**

In India, heat strokes in India are becoming more frequent and intense due to climate change. Recently, thirteen people have died from an apparent heatstroke while attending a government award function in an open space in Navi Mumbai. This is possibly the biggest-ever heatwave-related death toll from a single event in the country.

Some areas like Gangetic West Bengal, coastal Andhra Pradesh, and Bihar are currently affected, and heat strokes are becoming a significant public health issue. These rising temperatures can impact public health, social and economic conditions, and even the overall development of India.

What are heat strokes?

SWEATING IT OUT THIS SUMMER

The heat wave in the state is yet to start, but residents are already feeling the pinch



SYMPTOMS OF HEAT EXHAUSTION

● Confusion	● Dark-coloured urine (a sign of dehydration)	● Fainting
● Fatigue	● Dizziness	● Nausea, vomiting, or diarrhoea
● Headache		
● Muscle or abdominal cramps		

SITUATION IN STATE



- Telangana is in core heat wave zone of India
- There is no harm to the human body if the environmental temperature remains at 37°C
- Whenever the environmental temperature increases above 37°C, the body starts gaining heat
- If humidity is high, a person can suffer from heat stress disorders even with temp at 37°C or 38°C



WHAT IS A HEAT WAVE

Heat wave is a period of abnormally high temperatures, more than the normal maximum temperature. Heat waves typically occur between March to June, and in some rare cases even extend till July

Source: TOI

Heat strokes, also known as sunstrokes, are severe heat-related illnesses that occur when the body overheats due to exposure to high temperatures and humidity or from continuous physical activity in those conditions. Heat stroke is considered a medical emergency and requires immediate treatment.

During a heat stroke, the body's temperature-regulating mechanisms fail, causing the body temperature to rise rapidly. Symptoms of heatstroke include high body temperature, rapid heartbeat, confusion, nausea, vomiting, and seizures.

Must read: [Winter Heatwaves – Explained, pointwise](#)

How can heat strokes be fatal?



Ministry of Health and Family Welfare
Government of India

NATIONAL HEALTH PORTAL
Gateway to authentic health information
www.nhp.gov.in
NHP Helpline (Toll Free): 1800-180-1104




Heat Stroke


What you need to know


SYMPTOMS




NO SWEATING
HOT / RED SKIN




VOMITING



RAPID HEARTBEAT




UNCONSCIOUSNESS




DIZZINESS & HEADACHE


PREVENTION




NO ALCOHOL




DON'T WEAR THE THICK CLOTHES




LIMIT OUTDOOR TIME




WEAR PROTECTION



USE SUNSCREEN AND UMBRELLA



DRINK ENOUGH WATER



COOL SHOWERING

Website: <http://www.nhp.gov.in/> Toll Free no.: 1800-180-1104

Source: NDMA

High temperature in itself is not fatal. The combination of high temperature and high humidity is referred to as the wet bulb temperature. This makes heat waves deadly.

High moisture content in the atmosphere makes it difficult for sweat to evaporate and bodies to cool down. This increases internal body temperature and is often fatal. When the body temperature reaches 104°F (40°C) or higher, it can lead to dehydration, organ damage, and even death if left untreated.

Must read: [Wet Bulb Temperature: Explained: India Heatwaves and the role humidity plays in making them deadly](#)

What are the reasons for increasing heat stroke events in India?

HEAT-LINKED DEATHS	
Year	Deaths
2010	269
2011	12
2012	729
2013	1,433
2014	548
2015	2,040
2016	1,111
2017	384
2018	25
2019	226
2020	4
2021	4
2022	33

Compiled from Ministry of Earth Sciences, NDMA and Ministry of Health

Source: Indian Express

Reasons for Increasing Heat Strokes in India

Climate Change: Global warming and climate change contribute to rising temperatures in India, making heat waves more intense and frequent. For instance, in recent years, temperature records have been broken in various parts of India, leading to more cases of heat strokes as people are exposed to extreme heat.

El Nino effects: The end of the La Nina phase is expected to make this year's summer very hot. El Nino, which has the opposite effect, may begin by May to July, increasing heat further. This could also potentially reduce rainfall during India's monsoon season.

Urban Heat Island Effect: Concrete structures and lack of greenery in urban areas trap heat, raising the temperature in cities. For example, Delhi, a densely populated city with limited green spaces, experiences higher temperatures than its surrounding rural areas. This increases the risk of heat strokes for its residents.

Lack of Awareness and Preparedness: Many people are not aware of the risks associated with heat strokes or how to prevent them, leading to an increase in heat stroke cases. For instance, during the recent Mumbai event, almost a million people gathered on uncovered ground, leading to heat stress for over 120 people, resulting in 13 deaths and 18 hospitalizations.

Inadequate Infrastructure: Lack of access to cooling facilities like air conditioning or proper ventilation in buildings can exacerbate the risk of heat strokes.

Read more: [Do not let increasing heatwaves sap worker productivity in India](#)

What are the various initiatives undertaken to mitigate heat strokes?

Initiatives to Mitigate Heat Strokes

Heat Action Plans: Governments and local authorities implement heat action plan to raise awareness and prepare communities for heat waves. For example, Ahmedabad introduced a heat action plan that includes sending heatwave alerts, opening cooling centers, and training healthcare workers to deal with heat stroke cases.

Preparation of national guidelines for heat-wave management: In 2016, the National Disaster Management Authority (NDMA) issued comprehensive guidelines to prepare national-level key strategies for mitigating the impact of heatwaves.

Public Awareness Campaigns: Governments and NGOs run campaigns to educate people about the risks of heat strokes and how to prevent them. Example: A local NGO in Hyderabad conducted workshops in schools to teach children about the importance of staying hydrated, wearing appropriate clothing, and seeking shade during hot weather.

Urban Greening Initiatives: Planting trees and creating green spaces in urban areas help reduce the urban heat island effect and provide shade. For example, the city of Bengaluru initiated a project to plant one million trees across the city to increase green cover and reduce temperatures, thus decreasing the risk of heat strokes.

Access to Cooling Facilities: Governments and organizations work to provide access to cooling facilities, such as air conditioning or public cool spaces, for vulnerable populations.

Building Design and Policies: Incorporating heat-resilient building designs and enforcing policies to ensure adequate ventilation and insulation can help prevent heat strokes. The government introduced building codes requiring better insulation and ventilation in new constructions, reducing indoor temperatures and the risk of heat strokes.

Read more: [Without action plans, India's poorest will continue to bear brunt of heatwaves: study](#)

What are the challenges in heat stroke mitigation?

Challenges in Heat Stroke Mitigation include,

Limited Awareness: Many people are not aware of the risks, prevention measures, and treatments associated with heat strokes, leading to insufficient preparedness. For example, in rural areas, lack of awareness may cause farmers to work during peak heat hours, increasing their risk of heat stroke.

Inadequate Infrastructure: Inadequate urban planning and infrastructure, like the lack of green spaces and poorly designed buildings, contribute to higher temperatures in cities. For instance, Slums in Mumbai often lack proper ventilation and shade, making residents more vulnerable to heat strokes.

Insufficient Healthcare Facilities: Limited healthcare facilities and trained professionals in rural and remote areas make it difficult to provide prompt treatment for heat stroke victims.

Climate Change: Increasing global temperatures and extreme weather events due to climate change are exacerbating the frequency and severity of heat waves, making heat stroke mitigation more challenging.

For example, unprecedented heatwaves in recent years have strained the capacity of communities and healthcare systems in India to effectively respond to heat stroke cases.

Climate-related injustice: Poverty, lack of access to resources, and limited education can hinder individuals' ability to take preventive measures against heat strokes. Example: Low-income families in urban areas may not be able to afford proper cooling solutions or take time off work during peak heat hours, increasing their risk of heat strokes.

What should be done?

Actions to Combat Heat Strokes include

Need for Climate Literacy: Educate people on the risks, prevention measures, and treatments related to heat strokes through campaigns, workshops, and public service announcements. Example: Government agencies can run campaigns in local languages to reach a wider audience and improve awareness about heat stroke prevention.

Improve Infrastructure: Design urban spaces and buildings to be more resilient against heatwaves, by promoting green spaces and using heat-resistant construction materials. Such as encouraging the planting of trees in urban areas to create shaded spaces and reduce the overall temperature.

Enhance Healthcare Facilities: Ensure the availability of healthcare facilities, especially in rural and remote areas, and train medical professionals to handle heat stroke emergencies.

Such as, allocating funds to establish health centers in vulnerable areas and provide training to local healthcare workers on managing heat stroke cases.

Implement Heat Action Plans: Develop and implement heat action plans at local and national levels to improve preparedness and response during heatwaves.

Address Climate Change: Take active steps to reduce greenhouse gas emissions and mitigate the effects of climate change that contribute to extreme heat events. For instance, implement policies that promote renewable energy sources, such as solar and wind power, to reduce the country's carbon footprint and help combat climate change.

Support Vulnerable Communities: Focus on providing resources and assistance to socio-economically disadvantaged populations to help them take preventive measures against heat strokes. Such as establishing cooling centers in low-income neighborhoods or providing subsidies for energy-efficient cooling solutions to reduce the financial burden on vulnerable families.

Other initiatives: The Labour department on its part should sensitise and encourage employers to shift outdoor workers' schedules away from peak afternoon hours during heat alert. Efforts should be made to ensure all amenities to children appearing for examinations in addition to prioritising maintenance of power to all critical facilities like hospitals and drinking water supply schemes.

Must read: [Marine heatwaves and its ecological impact](#)

Source: Indian Express ([Article 1](#) and [Article 2](#)), [The Hindu](#), [The New Indian Express](#), [Financial Express](#), [NDTV](#) and [Livemint](#)

Syllabus: GS 3: Disaster Management: Disaster and disaster management.

Quantum computing technology and associated applications – Explained, pointwise

Introduction

Quantum computing technology has emerged as a revolutionary field, holding the potential to transform numerous industries and applications. With the Indian Union Cabinet's approval of the ₹6,003 crore National Quantum Mission, India is set to join the global race in developing cutting-edge quantum computing, communication, and sensing technologies.

As the world's leading nations continue to invest heavily in quantum research and development, this rapidly evolving domain promises to unlock extraordinary capabilities, reshaping the future of computing and its associated applications.

What is Quantum computing and how it is different from classical computing?

Quantum computing is a revolutionary approach to computation that leverages the principles of quantum mechanics to process information. It differs significantly from classical computing, which is based on classical physics and uses bits to represent data as either 0 or 1.

The main differences between quantum computing and classical computing are as follows:

Fundamental units: While classical computing uses bits as its fundamental units of data, quantum computing uses quantum bits, or qubits. Qubits can represent data as 0, 1, or both 0 and 1 simultaneously, thanks to a quantum phenomenon called superposition.

Superposition: Classical bits can only exist in a single state at any given time, either 0 or 1. Qubits, however, can exist in a superposition of states, meaning they can be in multiple states at once. This property allows quantum computers to perform complex calculations and solve problems that are infeasible for classical computers.

Entanglement: Another key difference between quantum and classical computing is the concept of entanglement. In quantum computing, qubits can become entangled, meaning the state of one qubit is directly related to the state of another, even when they are far apart. Entanglement allows for faster and more efficient information processing, as changes in one qubit can instantaneously affect the entangled qubits.

Parallelism: Due to superposition and entanglement, quantum computers can perform multiple calculations simultaneously. This inherent parallelism allows them to solve certain problems much faster than classical computers, which process data sequentially.

Problem-solving capabilities: Quantum computing has the potential to solve complex problems in areas such as cryptography, optimization, materials science, and drug discovery that are currently intractable for classical computers.

However, quantum computers are not intended to replace classical computers but rather complement them by tackling specific types of problems.

Read more: [Quantum computing](#)

What is the need for developing quantum computing?

Limitations of Classical Computing: Classical computers struggle to handle complex problems and large data sizes. Quantum computing promises to address these challenges, allowing us to solve problems that are beyond the capabilities of classical computers.

Irregular Growth and Progress: The need for quantum computing development is to ensure continued growth and progress in multiple domains. As the world becomes increasingly reliant on technology and computation, quantum computing can help meet the demands and keep up with the rapid pace of change.

Complex global issues: Quantum computing is needed to address complex global issues like climate change, disease outbreaks, and resource management, as it can process vast amounts of data and provide timely solutions.

Insecure communications: Current encryption methods may become vulnerable with the advent of quantum computing. Developing quantum technologies is necessary to ensure secure communication and protect sensitive information. Advancing scientific research: Quantum computing is needed to simulate quantum systems accurately, which can help unlock new discoveries in areas like physics, chemistry, and biology.

Uncompetitiveness: As other nations invest heavily in quantum technology, it is essential for countries to develop their own capabilities to remain competitive and maintain their strategic edge.

Unknown future challenges: Investing in quantum computing today is necessary to build a strong foundation for tackling unknown challenges and opportunities that may emerge in the future.

How India is developing quantum computing technologies?

India's Approach to Developing Quantum Computing Technologies:

National Quantum Mission: The Indian Union Cabinet approved the ₹6,003 crore National Quantum Mission, an eight-year project aimed at developing quantum computing, quantum communication, and quantum sensing technologies, bringing India on par with global leaders like the US and China.

Research and Development: India is investing in quantum computing research through various institutions, including the Indian Institute of Science (IISc), the Tata Institute of Fundamental Research (TIFR), and the Indian Institutes of Technology (IITs), where projects such as quantum cryptography and quantum simulations are being explored.

Government support and funding: The Indian government has allocated significant funds (in 2020 budget) to support quantum technology research and development, such as the ₹8,000 crore National Mission on Quantum Technologies and Applications (NMQTA), which will fund projects across academia, research institutions, and industry.

Research Institutions and Industry Collaboration: Indian research institutions like the Indian Institute of Science (IISc), Indian Institutes of Technology (IITs), and the Raman Research Institute collaborate with the Indian Space Research Organisation (ISRO) and the industry to advance quantum computing technologies.

Quantum startup ecosystem: India is witnessing the growth of quantum computing startups, such as QNu Labs and QuScTec, working on developing quantum algorithms, hardware, and software solutions to tackle real-world problems.

Skill development and education: Indian universities and research institutions, like IIT Madras, are focusing on developing quantum expertise by offering specialized courses and degrees in quantum computing and related fields, preparing the next generation of quantum scientists and engineers.

Military applications: The Indian Army has established a quantum research facility in Madhya Pradesh, focusing on the development of quantum technologies for military applications, such as secure communication and advanced sensing capabilities.

How other countries are developing quantum computing technologies?

United States: The US has a strong focus on quantum computing research, with companies like IBM, Google, and Rigetti Computing leading the way. The US government has also established the National Quantum Initiative to support and coordinate quantum research and development.

China: China is investing heavily in quantum computing research, with the Chinese Academy of Sciences and leading universities collaborating on projects. In 2020, China achieved a major milestone by demonstrating quantum supremacy with its Jiuzhang quantum computer. The country has also made significant progress in quantum communication with the launch of the world's first quantum satellite, Micius.

European Union: The European Union has launched the Quantum Technologies Flagship, a €1 billion initiative to support quantum research and development across Europe. Key players in the region include companies like IQM Quantum Computers and research institutions like the Max Planck Institute for Quantum Optics.

Canada: Canada is also a significant player in the field of quantum computing, with the University of Waterloo's Institute for Quantum Computing and companies like D-Wave Systems and Xanadu contributing to advancements in the technology.

What are the potential applications of quantum computing?

Secure Communication: Quantum computers can enable ultrasecure communication using quantum encryption, making it nearly impossible for hackers to intercept sensitive information.

New Medicines: Quantum computing can help simulate complex molecular interactions, allowing researchers to discover new drugs and optimize existing ones.

Improved Climate Predictions: Quantum computers can process vast amounts of data, leading to more accurate climate models and better-informed policies for environmental preservation.

Enhanced AI Models: Quantum computing can dramatically improve machine learning algorithms, enabling more efficient and accurate AI models for various applications.

Logistics and Supply Chains: Quantum computing can find optimal solutions for complex optimization problems, such as routing and scheduling, to improve efficiency in logistics and supply chains.

Better Investment Strategies: Quantum computing can analyze complex financial data, allowing for improved risk assessment and investment strategies in the financial sector.

What are the challenges in developing quantum computing technology?

Developing practical and reliable QCs faces significant challenges:

Engineering larger quantum processors: A practical QC needs at least 1,000 qubits. Currently, the largest quantum processor has 433 qubits. Engineering barriers need to be overcome to create larger processors.

Maintaining specific conditions: Qubits require extremely low temperatures, radiation shielding, and protection against physical shock to maintain their superposition states.

Error-correction: Quantum error-correction is tricky due to the no cloning theorem, which states that a qubit's state cannot be perfectly cloned. Error-correction requires entangling each qubit with thousands of physical qubits.

Error amplification: Researchers must develop QCs that don't amplify errors when more qubits are added. Keeping error rates below a certain threshold is crucial, as more qubits could otherwise increase informational noise.

What are the challenges in developing quantum computing technology in India?

Limited Facilities: India faces challenges in establishing advanced research facilities and providing adequate resources for quantum computing development.

Insufficient Funds: Securing funding for research and development in quantum computing remains a challenge, with limited private and public investment compared to global competitors.

Talent Shortage: India faces a shortage of skilled professionals and researchers in the field of quantum computing, making it difficult to build a strong talent pool.

Weak Partnerships: Lack of strong collaborations between academic institutions, research organizations, and industries can slow down the progress of quantum computing development in India.

IP Protection: India needs to improve its intellectual property (IP) protection and technology transfer mechanisms to encourage innovation and safeguard researchers' work in quantum computing.

What should be done?

Invest in Facilities: The government and private sector should invest in building state-of-the-art research facilities and providing resources for quantum computing development.

Increase Support: Both public and private entities should increase funding and investment in quantum computing research, development, and innovation.

Education and Training: India should focus on enhancing education and training programs in quantum computing, including specialized courses and workshops to build a strong talent pool.

Promote Partnerships: Encourage collaborations between academic institutions, research organizations, and industries to create a robust ecosystem for quantum computing development.

Government Policies: The government should develop policies that support and encourage the growth of the quantum computing sector, including incentives for research and development, and the establishment of quantum computing hubs.

Read more: [Quantum Computing: Uses, Challenges and India's Initiatives – Explained, pointwise](#)

Source: [PIB](#), The Hindu ([Article 1](#), [Article 2](#) and [Article 3](#)), [Indian Express](#), [ORF](#) and [Deccan Herald](#)

Syllabus: GS – 3: Science and Technology – Indigenization of technology and developing new technology.

State of World Population (SWP) Report 2023 and India's population – Explained, pointwise**Introduction**

The State of World Population (SWP) Report 2023 by UNFPA reveals that India has just surpassed China as the most populous country, with a population of 142.86 crores compared to China's 142.57 crores. This milestone marks a significant demographic shift and highlights the need to address the challenges and opportunities that come with India's growing population, in areas such as healthcare, education, and economic development.

About the State of World Population report

The State of World Population Report is an annual publication by UNFPA, released every year since 1978. A recent report highlights emerging issues in sexual and reproductive health and rights. By bringing these topics to the forefront, the report explores the challenges and opportunities they offer for global development. The report aims to create awareness and encourage conversations around these critical subjects in order to promote better understanding and informed decision-making.

Note: *UNFPA is formally named the United Nations Population Fund. The organization was created in 1969, the same year the United Nations General Assembly declared "parents have the exclusive right to determine freely and responsibly the number and spacing of their children."*

UNFPA is the United Nations sexual and reproductive health agency. Its mission is to deliver a world where every pregnancy is wanted, every childbirth is safe and every young person's potential is fulfilled.

What are the key findings of the State of World Population report?

Women lacked reproductive rights: 44% of women can't make choices about their reproductive health, contraception and whether to have sex.

Climate crisis and migration: The report takes into account newer developments such as the climate crisis and the impact on population trends, as well as the growing number of migrants who are becoming permanent immigrants.

Eight countries driving growth: By 2050, eight countries will account for half of the projected global population growth: the Democratic Republic of Congo, Egypt, Ethiopia, India, Nigeria, Pakistan, the Philippines, and Tanzania.

Low fertility countries: Two-thirds of people live in countries with low fertility rates. Europe is the only region expected to experience an overall population decline between now and 2050.

High fertility countries: African countries have the highest fertility rates, including Niger, Chad, DR Congo, Somalia, Mali, and the Central African Republic.

Lowest birth rates: Territories with the lowest birth rates are Hong Kong, South Korea, Singapore, Macau, San Marino, Aruba, and China.

Read more: [State of World Population Report, 2023: India's population to edge ahead of China's by mid-2023, says U.N.](#)

What are the findings of the State of World Population report on India's Population?

The key findings of the UN Population Fund's report on India are:

Most populous country: India's population is projected to reach 142.86 crores by mid-2023, slightly surpassing China's 142.57 crore population.

Slowing population growth: India's population growth has slowed down significantly in the past 10 years, with the total fertility rate (TFR) declining to 2 in 2020-2021 from about 3.4 in the early 1990s. A TFR of 2.1 is necessary for a country to attain population stability.

Population projections: India's population is forecast to grow to 1.67 billion in 2050 and peak at 1.7 billion in 2064 before settling at 1.53 billion in 2100, according to UN estimates.

Potential demographic dividend: Two-thirds of India's total population are between the ages of 15 and 64, which presents a potential demographic dividend if education, skill development, and opportunities are provided, particularly for youth from disadvantaged sections and women.

India population anxieties: The report highlights that population anxieties have seeped into large portions of the general public, and in some cases, coercive methods have been introduced in family planning policies in certain states.

The report emphasizes the importance of empowering women, investing in education and healthcare, and creating opportunities for skill development to take advantage of the demographic dividend. It also cautions against coercive family planning measures and underscores the need for democratic institutions to address challenges and debates arising from population dynamics.

What are the opportunities created by a rising population?

A rising population, particularly a young one like India's, creates numerous opportunities that can contribute to economic growth and social development. Some of these opportunities include:

Demographic dividend: With a large working-age population (15-64 years), India can leverage its demographic dividend to drive economic growth and enhance productivity.

Human capital: India's population presents a vast pool of human resources that can be nurtured to develop critical thinkers, innovators, and leaders, shaping the country's growth story in the coming decades.

Innovation and entrepreneurship: A young population can lead to increased innovation and entrepreneurship, with more startups and unicorns emerging in various sectors like healthcare, education, agriculture, and financial services.

STEM graduates: India has a large pool of STEM graduates, including a high percentage of women, providing the country with a skilled workforce that can contribute to scientific and technological advancements.

Skill development: Investments in skill development can help create a demand-driven ecosystem that addresses market needs and increases employment opportunities.

Increased consumption: A larger, skilled workforce with better paying jobs leads to higher consumption, boosting the economy and contributing to overall development.

Financial inclusion: As more people join the formal workforce, the reach of financial services will expand, further strengthening India's financial inclusion and digital payments ecosystem.

Women's empowerment: With an increased focus on women-led development, India can benefit from higher female labor force participation rates, leading to improved economic and social outcomes.

Climate action and sustainability: A young and educated population can drive sustainable development by prioritizing climate action and adopting environmentally friendly practices.

Global influence: India's rising population, combined with its position as the world's largest democracy and a major economy, can help it become a global manufacturing hub, startup capital, and exporter of skilled manpower.

To fully capitalize on these opportunities, India needs to invest in health, nutrition, education, skill development, and financial inclusion for its young population, while also prioritizing climate action and sustainability.

What are the adverse implications of the current population trend in India?

Read here: [The UN World Population Prospects Report and Population Issues in India – Explained, pointwise](#)

How can India effectively manage the rising population?

Education and awareness: Invest in education and awareness campaigns to promote family planning, reproductive health, and gender equality. For example, expanding access to sexual education and contraceptive resources can help couples make informed decisions about family planning.

Empowering women: Empower women by promoting gender equality, education, and economic opportunities. For instead, ensuring equal access to education and job opportunities can help women become financially independent and make informed decisions about their reproductive health.

Healthcare improvements: Improve access to quality healthcare services, particularly maternal and child health services. For example, expanding access to prenatal and postnatal care can help reduce infant mortality rates and improve overall family health.

Economic development: Promote economic development and job creation to provide a stable environment for families. Such as, investing in infrastructure and supporting small businesses can create job opportunities and help lift families out of poverty.

Skilling and employment: Focus on skill development and employment opportunities for the youth to capitalize on the demographic dividend. For example, creating vocational training programs and partnering with industries can help prepare young people for the job market.

Sustainable development: Implement sustainable development policies to manage resources and reduce environmental impacts. Such as, promoting renewable energy and sustainable agriculture practices can help meet the needs of a growing population without depleting natural resources.

Urban planning: Improve urban planning and infrastructure to accommodate the growing population. For instead, investing in public transportation, housing, and sanitation systems can help support a growing urban population while maintaining a high quality of life.

Migration management: Develop policies and systems to support and manage internal and external migration. For example, providing support services for migrant families, such as access to education and healthcare, can help ensure their well-being and integration into society.

Source: Indian Express ([Article 1](#) and [Article 2](#)), [The Hindu](#), [UNFPA](#), [Times of India](#) and [Livemint](#)

Syllabus: GS 1: Population and associated issues.

[Yojana April 2023 Summary] Startup India Action Plan Foundation of Indian Startup Ecosystem – Explained, pointwise

Introduction

Innovation and entrepreneurship are essential for achieving self-reliant and sustainable growth in India. As the country moves towards becoming a developed nation, it must focus on fostering innovation and supporting entrepreneurs.

What is the growth story of India's startup ecosystem?

India has experienced tremendous growth in its startup ecosystem, with the number of recognized startups increasing from 500 in 2016 to over 92,000 in February 2023. This growth is evident in every state and UT, spanning over 660 districts and more than 55 sectors. The inclusiveness and diversity of the ecosystem are evident, with 47% of recognized startups having at least one woman director.

What are the steps taken by the Indian government for the development of the startup ecosystem in India?

Startup India Action Plan: The Indian government launched the Startup India Action Plan in 2016, which aimed to address the various stages of a startup's lifecycle, recognizing that a one-size fits-all approach would not work. The plan consists of 19 action items that focus on simplification, funding support, incentives, and industry-academia partnerships.

Executing the Startup India Initiative: The Department for Promotion of Industry and Internal Trade (DPIIT) adopted a multi-fold strategy for executing the Startup India initiative. This included institutionalizing the right team, introducing reforms for ease of doing business, and activating a completely digital policy and scheme implementation regime.

Startup India Hub: The DPIIT established the Startup India Hub, a one-stop online portal to execute action plans. The hub functions as a hub-and-spoke model, enabling end-to-end digital program execution for all stakeholders in the startup ecosystem.

Funding Schemes for Startups: To address funding needs, DPIIT is implementing the [Fund of Funds for Startups \(FFS\)](#), [Startup India Seed Fund Scheme \(SISFS\)](#), and [Credit Guarantee Scheme for Startups \(CGSS\)](#). These schemes provide funding support to startups throughout their business lifecycle.

The SISFS provides funding in form of grants or debt for startups in the early stages of their growth, FFS mobilises private equity capital for high-growth startups and CGSS promotes collateral-free debt funding for mature startups.

National Startup Awards (NSA): The DPIIT launched the National Startup Awards. The NSA identifies the depth, quality, and spread of innovation, inclusivity, and diversity in the country, showcasing exceptional innovations emerging from smaller cities, indicating that innovation is thriving beyond the metros.

National Startup Advisory Council (NSAC): The DPIIT introduced the (NSAC) to develop policies and programs in collaboration with stakeholders. The NSAC, chaired by the Minister of Commerce and Industry, includes members from various ministries, departments, organizations, and non-official members from the startup ecosystem.

It plays an essential role in identifying intervention areas, ideating, and implementing national programs under the Startup India initiative, serving as a stakeholder-driven public policy example.

Programmes such as MARG National Mentorship Program, Incubator Capacity Development Program, Startup India Investor Connect portal, Adoption of NavIC Grand Challenge, Startup Champions 2.0, etc. are all ideated and incubated by this Council.

Read more: [\[Yojana April 2023 Summary\] Opportunities for Youth in Startup Ecosystem – Explained, pointwise](#)

How do States and UTs contribute to the development of the startup ecosystem in India? States and Union Territories (UTs) play a vital role in fostering the growth of the startup ecosystem in India. They help in spreading the spirit of innovation and entrepreneurship across the nation.

States' Startup Ranking Framework (SRF): It was launched by the Department for Promotion of Industry and Internal Trade (DPIIT). This framework encourages States and UTs to adopt best practices, learn from each other, and create a favourable policy landscape for startups.

Capacity Building Initiatives: States and UTs also participate in capacity-building measures throughout the year. Initiatives like Startup India Yatra to nurture the culture of entrepreneurship among students, while regional and international exposure visits provide valuable insights to startup nodal officers and teams.

Supporting Local Innovations: By promoting local innovations and providing resources, States and UTs enable startups to thrive, contributing to the overall growth and development of India's startup ecosystem.

How can India's G20 Presidency impact the growth of the startup ecosystem globally?

India's G20 Presidency offers a unique opportunity to showcase its thriving startup ecosystem on a global stage, influencing the growth of startups worldwide.

Promoting Unity and Collaboration: With the theme 'One Earth, One Family, One Future,' India's G20 Presidency aims to unite nations in supporting entrepreneurship and fostering innovation across borders.

Startup20 Engagement Group: The institutionalization of the Startup20 Engagement Group within G20 enables India to lead from the front, facilitating collaboration and knowledge-sharing among G20 countries to bolster their respective startup ecosystems.

Global Exposure for Indian Startups: India's G20 Presidency also provides a platform for Indian startups to gain international recognition, attract investments, and establish partnerships, further enhancing their growth and contribution to the global economy.

Read more: [\[Kurukshetra January Summary\] Agri-startups and Enterprises – Explained, pointwise](#)

Conclusion

The startup ecosystem is evolving rapidly, driving India's growth through digital transformation, private investment, clean energy, and innovative solutions. Collaborative efforts are essential for developing an enabling ecosystem that empowers Indian thinkers and innovators to transition from job seekers to job creators.

Source: Yojana

Syllabus: GS 3: Economic development – Changes in industrial policy and their effects on industrial growth.

50 years of Basic Structure Doctrine – Explained, pointwise

Introduction

The 50 Years of Basic Structure Doctrine marks a significant milestone in India's constitutional history. The doctrine was established in 1973 through the landmark Kesavananda Bharati case, this doctrine has helped preserve the core principles of the Indian Constitution. Over the past five decades, the Basic Structure Doctrine has played a crucial role in maintaining a balance of

power between different branches of government and safeguarding citizens' fundamental rights. However, over the years, this doctrine has faced various challenges and debates, such as the extent of judicial intervention and the definition of its components.

About the Kesavananda Bharati case

The Kesavananda Bharati case was a landmark judgment by the Supreme Court of India in 1973. It involved a Hindu monastery head, Kesavananda Bharati, who challenged the Kerala government's land reform acts that would cause his monastery to lose its land. This case led to a historic ruling which established the Basic Structure Doctrine, stating that Parliament cannot amend the basic structure of the Constitution.










The Supreme Court's decision was made by a slim majority of 7 to 6 judges. The Doctrine allowed the judiciary to review constitutional amendments and strike down any that violated the basic structure. This ruling helped maintain a balance of power between the branches of government and protected citizens' fundamental rights.

The case marked a significant power struggle between the Parliament and the Supreme Court, with the government appointing judges who were expected to favor Parliament. Despite the tense atmosphere and various challenges, the Kesavananda Bharati case remains a crucial milestone in Indian constitutional history, ensuring the Constitution's integrity and democratic principles are preserved.

What is the Basic Structure Doctrine?

Must read: [Basic Structure Doctrine](#)

How did the Basic Structure Doctrine evolve over time?

Live Law.in		
The Basic Structure Doctrine: A History		
1951	Shankari Prasad v. Union of India Parliament's power of amending the Constitution under Article 368 held to include the power to amend Part III containing the Fundamental Rights.	
1965	Sajjan Singh v. State of Rajasthan Parliamentary supremacy & its power to amend any part of the Constitution upheld again. Importantly, Mudholkar and Hidayatullah JJ dissent.	
1967	Golaknath v. State of Punjab In a complete reversal, the court rules that Fundamental Rights could not be amended by Parliament, unless another constituent assembly is formed.	
1971	24th Constitutional Amendment Articles 368 and Article 13 modified to allow Parliament to unilaterally amend Fundamental Rights, overturning the Golaknath ruling.	
1973	Keshavananda Bharati v. State of Kerala Court rules all parts of the Constitution, including Fundamental Rights, can be amended keeping its 'basic structure' intact.	
1975	39th Constitutional Amendment Election of president, vice president, prime minister and speaker placed beyond the scope of judicial review, in the backdrop of the Emergency.	
1975	Indira Gandhi v. Raj Narain Applying the 'basic structure' doctrine for the first time, the court strikes down the Amendment. Free & fair elections held to be part of basic structure.	
1976	42nd Constitutional Amendment Constitutional amendments protected against being called in question by any court. Parliament's constituent power to amend declared as limitless.	
1980	Minerva Mills v. Union of India Modifications rejected by the court, which clarified that Parliament's power to amend the constitution is limited by the Constitution itself.	

Source: Livelaw

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Read here: [Tracing the evolution of basic structure doctrine in India highlights its salient features](#)

What is the significance of the Basic Structure Doctrine?

Protecting Democracy: The Basic Structure Doctrine ensures that India remains a democratic nation by preventing any political party from altering the democratic principles enshrined in the Constitution. For instance, in the 2020 Bihar state assembly elections, the Doctrine played a crucial role in upholding democratic values when the Election Commission of India conducted the elections amid the COVID-19 pandemic, ensuring free and fair elections while adhering to safety protocols. The Doctrine thus continues to guard democratic principles, even during unprecedented situations, maintaining the integrity of India's democratic system.

Safeguarding Secularism: The Doctrine maintains the secular nature of the Indian state, protecting the freedom of individuals to practice and profess any religion of their choice. A recent example is the 2019 Supreme Court verdict on the Ayodhya land dispute case. The court ruled in favor of constructing a Ram temple at the disputed site while allocating an alternative piece of land for the construction of a mosque. This decision highlighted the secular nature of the Indian Constitution, as the court aimed to ensure a balanced outcome respecting the religious sentiments of both Hindu and Muslim communities.

Preserving Federalism: The federal character of the Indian Constitution is protected by the Doctrine, which prevents any amendments that would jeopardize the balance of power between the central government and the states. In 2019, the abrogation of Article 370, which granted special status to Jammu and Kashmir, was challenged in the Supreme Court. The court's decision to uphold the abrogation demonstrated that it did not violate the Basic Structure Doctrine, ensuring that federalism was maintained.

Upholding Fundamental Rights: The Basic Structure Doctrine helps to secure citizens' fundamental rights, such as the right to life, liberty, and equality, by preventing Parliament from amending these rights in a manner that would undermine the Constitution's basic structure. In 2018, the Supreme Court decriminalized homosexuality by striking down Section 377 of the Indian Penal Code, thereby upholding the rights to equality and personal liberty.

Ensuring Judicial Independence: The Doctrine plays a crucial role in preserving the independence of the judiciary, as it prevents any amendments that would compromise the separation of powers between the legislature, the executive, and the judiciary. In 2018, the Supreme Court struck down the 99th Constitutional Amendment and the National Judicial Appointments Commission (NJAC) Act, asserting that these provisions would undermine the independence of the judiciary by giving the executive an undue influence over the appointment of judges. This decision demonstrated the importance of the Basic Structure Doctrine in preserving the separation of powers and maintaining judicial independence.

Preventing Authoritarianism: By limiting the power of the Parliament to amend the Constitution, the Basic Structure Doctrine acts as a safeguard against the rise of authoritarianism, ensuring that the government remains accountable to the people. The 2020 nationwide protests against the Citizenship Amendment Act showcased the importance of the Doctrine in protecting citizens' rights to express dissent and hold the government accountable.

Promoting Constitutional Stability: The Doctrine contributes to the stability of the Indian Constitution by ensuring that the basic features and principles enshrined in the document remain consistent and enduring, allowing for continuity and coherence in governance. In the 2017 Right to Privacy case, the Supreme Court declared the right to privacy a fundamental right, which is now protected under the Basic Structure Doctrine, demonstrating its role in maintaining constitutional stability.

Read more: [The significance of Doctrine of Basic Structure of the Indian Constitution](#)

What are the major concerns of experts on the Basic Structure Doctrine?

Major Concerns of Experts on the Basic Structure Doctrine

Ambiguity: The Doctrine lacks a clear definition of the basic structure, which can lead to differing interpretations and confusion. A recent example is the 2020 debate on the Citizenship Amendment Act (CAA), where the question of whether the CAA violates the basic structure of the Constitution remains contentious. The ambiguity surrounding the Doctrine has led to differing opinions on the matter, further fueling the debate.

Judicial Overreach: Some experts argue that the Basic Structure Doctrine allows the judiciary to exercise excessive control over the legislative process. For instance, in the 2019 National Judicial Appointments Commission (NJAC) case, the Supreme Court's decision to strike down the NJAC Act raised concerns of judicial overreach and interference with the Parliament's power to amend the Constitution in order to reform the appointment process for judges.

Unequal Power Distribution: Critics contend that the Doctrine could disrupt the balance of power between the three branches of government. The 2019 Sabarimala case, where the Supreme Court's verdict allowed women of all ages to enter the temple, led to concerns about the judiciary's disproportionate influence over constitutional matters and its interference with the legislative domain on matters of religious customs and practices.

Infringement on Parliamentary Sovereignty: The Basic Structure Doctrine has raised concerns about the erosion of parliamentary sovereignty, as it limits the Parliament's ability to amend the Constitution. The 2018 Triple Talaq Act debate saw critics arguing that the judiciary's involvement in assessing the constitutionality of the Act might undermine the democratic principle of a representative government, thus questioning the Parliament's role in addressing social issues.

Difficulty in Amending the Constitution: The Doctrine might make it more difficult to amend the Constitution, even when such amendments are necessary to address changing societal needs or correct perceived flaws in the document. For example, the debate surrounding the Uniform Civil Code has been hindered by concerns about violating the basic structure.

Subjectivity in Decision-Making: The lack of a definitive list of elements that constitute the basic structure can lead to subjectivity in the judiciary's decision-making process. The 2018 verdict on Section 377 of the Indian Penal Code, which decriminalized consensual same-sex relations, illustrates the potential for subjectivity and unpredictability in the application of the Doctrine.

Potential for Political Bias: Since the determination of the basic structure is left to the judiciary, there is a risk that judges' personal beliefs or political inclinations could influence their decisions. The 2019 Ayodhya verdict, where the Supreme Court ruled in favour of constructing a Ram Temple at the disputed site, raised concerns about the potential for political bias in the judiciary's decision-making process.

Does the Basic Structure Doctrine essential in future?

Essentiality of the Basic Structure Doctrine in the Future

Preserving Constitutional Integrity: The Basic Structure Doctrine helps maintain the core values and principles of the Constitution. By safeguarding the fundamental elements, it ensures that the Constitution's essence is not compromised, even as it evolves over time.

Judicial Review: The Doctrine plays a crucial role in enabling the judiciary to review and, if necessary, strike down amendments that violate the Constitution's basic structure. This power of judicial review is essential in preserving the sanctity of the Constitution and preventing potential abuses of power.

Balancing Power: By limiting the Parliament's ability to make sweeping constitutional amendments, the Basic Structure Doctrine helps maintain a balance of power among the branches of government. This balance is vital for the proper functioning of a democratic system.

Adaptability: While the Basic Structure Doctrine limits the scope of constitutional amendments, it also provides flexibility for the judiciary to interpret the basic structure in the context of changing societal needs. This adaptability allows the Constitution to remain relevant and effective in addressing future challenges.

Upholding Democratic Principles: By preserving the basic structure of the Constitution, the Doctrine helps uphold democratic principles, such as the rule of law, the separation of powers, and the protection of individual rights. These principles are essential for the continued functioning of a healthy democracy.

Promoting Constitutional Stability: The Basic Structure Doctrine contributes to the stability of the Constitution by preventing radical or arbitrary changes that could disrupt the nation's political and legal systems. This stability is important for maintaining public trust in the Constitution and fostering a stable political environment.

Sources: [The Hindu](#), Indian Express ([Article 1](#), [Article 2](#), [Article 3](#) and [Article 4](#)), [Hindustan Times](#), [Outlook India](#), and [Livelaw](#)

Syllabus: GS 2: Indian Constitution and Polity: Indian Constitution—historical underpinnings, evolution, features, amendments, significant provisions and basic structure.

De-dollarisation of trade: Opportunities and challenges – Explained, pointwise

Introduction

The global dominance of the US dollar in international trade and finance has long been a topic of discussion among policymakers and economists. In recent years, there has been a growing trend towards “De-dollarisation of global trade”, where countries seek to reduce their dependence on the US dollar in international transactions. This shift is driven by a desire to reduce exposure to currency risk and increase economic autonomy. While there are opportunities associated with de-dollarisation, such as increased trade and financial independence, there are also significant challenges, including the potential for increased currency volatility and geopolitical tensions.

What is the De-dollarisation of global trade?

De-dollarization of trade refers to the process of reducing dependence on the US dollar for international transactions, trade settlements, and financial operations. This can be achieved by using alternative currencies or assets, such as the Euro, Chinese Yuan, or even cryptocurrencies. The primary goal of de-dollarization is to diversify the global economy, minimize risks associated with the US dollar's dominance, and reduce the impact of US monetary policy and political decisions on other countries.

What is the need for the De-dollarisation of global trade?

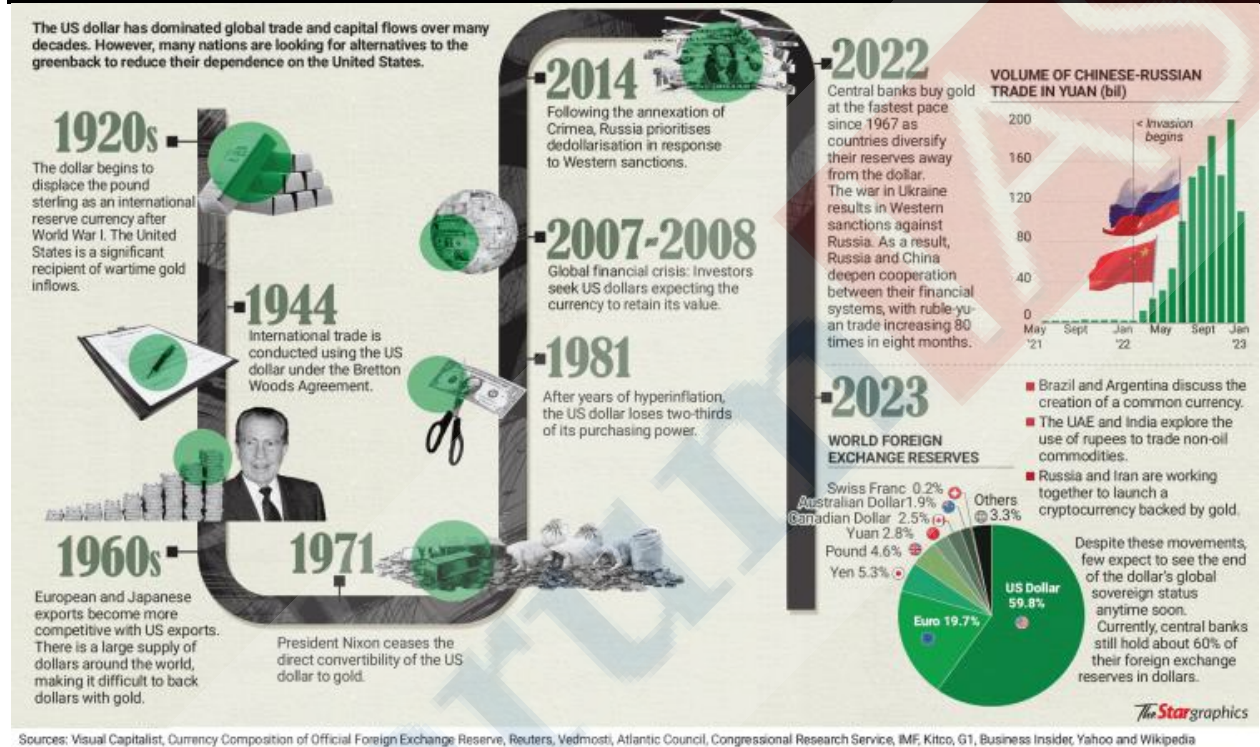
The weaponization of trade: Countries need to reduce their reliance on the US dollar to protect their economies from sudden policy changes or geopolitical tensions that result from US monetary policies and sanctions. This necessity is evident in Russia's push for de-dollarisation due to the impact of US sanctions on its economy.

Monetary Sovereignty breach: There is a need for countries to establish greater control over their monetary policies and enhance their financial autonomy. This can be achieved through de-dollarisation, as demonstrated by China promoting the use of the yuan in international trade to increase its economic influence and independence.

Global Financial Instability: The need for de-dollarisation arises from the desire to create a more diverse global reserve currency system, reducing the risks associated with overreliance on a single dominant currency like the US dollar. The European Union's efforts to increase the international use of the euro are driven by this need for greater financial stability.

Exposure to Currency Fluctuations: Dollarisation has increased countries' exposure to currency fluctuations resulting from the US dollar's volatility. For example, countries with high levels of dollar-denominated debt can be severely affected by fluctuations in the US dollar's value, leading to increased debt servicing costs and financial instability.

What are the global efforts towards the De-dollarisation of trade?



Source: Elements

Aftermath of the 2022 Russia-Ukraine conflict: As the US and its allies imposed strict economic sanctions on Russia, including cutting off its access to the SWIFT payment system, Russia had to find alternative ways to conduct international trade and financial transactions. In response, Russia has been accelerating its de-dollarization efforts, increasing the use of alternative currencies like the Euro and Chinese Yuan for international trade, and developing its own payment systems like the System for Transfer of Financial Messages (SPFS) and the Mir payment card system.

China's Cross-Border Interbank Payment System (CIPS): Launched in 2015, CIPS is a payment system that facilitates cross-border transactions in the Chinese yuan.

SDR-like basket currency for BRICS nations: BRICS nations (Brazil, Russia, India, China, and South Africa) have displayed increased cooperation and intent to change the dollar-dominated financial system.

African Continental Free Trade Area (AfCFTA): AfCFTA, which started its operational phase in July 2019, aims to create a single market for goods and services across the African continent. One of the key objectives is to promote intra-African trade using local currencies, which can help reduce the reliance on the US dollar for trade settlements among African countries.

European Central Bank's TARGET2 System: Launched in 2007, the TARGET2 (Trans-European Automated Real-time Gross Settlement Express Transfer System) is a payment system for the real-time processing of cross-border transfers within the European Union. This system enables EU member countries to conduct trade and financial transactions in euros, reducing their reliance on the US dollar.

How is India pursuing the de-dollarisation of trade?

Promoting Bilateral Trade Settlements in Indian Rupees: In this respect, the Reserve Bank of India (RBI) has permitted banks from 18 countries to open Special Vostro Rupee Accounts for settling payments in Indian rupees. This allows partner countries to bypass the US dollar and use Indian rupees for trade transactions, reducing reliance on the US currency and promoting the use of local currencies in international trade. Bangladesh has become the 19th country to settle bilateral trade with India using Indian rupees and Bangladeshi taka.

Strengthening Trade Pacts with Partner Countries: India has been working on finalizing trade pacts with several partner countries, such as the UAE and Australia, to facilitate the use of Indian rupees in bilateral and global trade. By negotiating trade agreements with countries like the UK and the European Union, India is making efforts to establish the Indian rupee as a more prominent currency in international trade, furthering the de-dollarization process.

Establishing Currency Swap Agreements: India has also been entering into currency swap agreements with different countries to facilitate trade and investment. For instance, the Reserve Bank of India (RBI) has signed an agreement to extend up to a USD 200 million currency swap facility to Maldives Monetary Authority (MMA) under the SAARC Currency Swap Framework.

Expanding Local Currency Settlement Frameworks: India has been working towards expanding its local currency settlement frameworks with other countries to promote de-dollarization. In 2020, India and Japan expanded their Bilateral Swap Arrangement (BSA) to include local currency settlement, enabling trade settlements in Indian rupees and Japanese yen.

Encouraging Regional Financial Integration: India has been actively participating in regional financial integration initiatives to promote the use of local currencies in trade. For example, India is a member of the South Asian Association for Regional Cooperation (SAARC) and has been working towards promoting the use of local currencies within the SAARC region.

Promoting Cross-Border Digital Payments: India has been investing in cross-border digital payment systems to facilitate trade and financial transactions in local currencies. For instance, India and the United Arab Emirates (UAE) launched a Remittance Facility, which allows instant money transfers between the two countries in Indian rupees and UAE dirhams.

Strengthening Economic Ties with Emerging Economies: India has been focusing on strengthening its economic ties with emerging economies like Brazil, Russia, China, and South Africa (BRICS) to diversify its trade partners and reduce its reliance on the US dollar. India, along with other BRICS countries, is exploring the possibility of creating a new development bank and a common currency for settling trade transactions among the member countries.

What are the opportunities provided by the de-dollarisation of global trade?

Diversification of Risks: De-dollarization helps countries diversify their risks by reducing dependence on a single currency, the US dollar. By using alternative currencies, countries can better manage the impact of fluctuations in the dollar's value and minimize the effects of US monetary policies on their economies. For instance, during the US-China trade war, China increased its use of the Yuan in international transactions to reduce the impact of tariffs and the dollar's fluctuation on its economy. Increased

Monetary Policy Autonomy: De-dollarization allows countries to exercise greater autonomy in their monetary policies, as they become less influenced by the US Federal Reserve's decisions.

For example, Russia's efforts to de-dollarize its economy since 2014 have allowed it to maintain more control over its monetary policy, even amid economic sanctions imposed by the US and its allies.

Strengthening Regional Currencies: De-dollarization can strengthen regional currencies by encouraging their use in international trade and finance, boosting their credibility and attractiveness to investors. Such as the promotion of the Chinese Yuan in the Belt and Road Initiative has led to its increased use in international trade and finance, raising its profile as a global currency.

Encouraging Regional Cooperation: De-dollarization can foster greater regional cooperation among countries by promoting the use of regional currencies, leading to stronger trade ties and economic integration. For example, the BRICS nations (Brazil, Russia, India, China, and South Africa) have been exploring the possibility of using their national currencies for trade settlements and creating a new global reserve currency as an alternative to the US dollar.

Reducing Sanctions' Impact: De-dollarization can help countries insulate themselves from the effects of economic sanctions imposed by the US or other entities, by enabling them to conduct trade and financial transactions through alternative channels. For instance, Iran has been increasingly using barter arrangements, local currencies, and cryptocurrencies to bypass US sanctions and maintain its international trade.

What are the challenges associated with the de-dollarisation of global trade?

Currency volatility: De-dollarisation can lead to increased currency volatility as countries transition to using new currencies for trade. This can create uncertainty for businesses and investors.

Limited acceptance of local currencies: Local currencies may not be widely accepted outside of their home countries, which can create difficulties for international trade. Lack of liquidity: Local currencies may have limited liquidity compared to the US dollar, which can create challenges for large transactions.

Limited use in financial markets: Local currencies may not have the same level of use in global financial markets as the US dollar, which can limit their usefulness for international trade.

Resistance from established players: Established players in the global financial system, such as the US and other Western powers, may resist de-dollarisation efforts, which can create geopolitical tensions.

Implementation challenges: There may be challenges in implementing de-dollarisation, including developing new payment systems and addressing legal and regulatory barriers.

Read more: [Why 'de-dollarisation' is imminent?](#)

Should India focus on the de-dollarisation of trade?

Yes, India should focus on the de-dollarisation of trade, this can be done through:

Reducing Dependence on a Single Currency: De-dollarisation will reduce India's dependence on the US dollar as a global reserve currency, which will help insulate the Indian economy from any potential negative impacts of global events. For instance, in recent years, India has faced difficulties due to the impact of global events like US sanctions on Iran and Russia, and the COVID-19 pandemic. De-dollarisation can help minimize the risks associated with these events.

Promoting Regional Trade: De-dollarisation can promote regional trade and cooperation, particularly with BRICS nations, which will help India reduce its dependence on Western powers. For example, India has been exploring the idea of using the Indian rupee in bilateral trade with oil-exporting countries and has created a multi-agency task force to compile a list of countries where India could trade in rupees. This will promote regional trade and reduce dependence on the US dollar.

However, de-dollarisation comes with challenges, including the need for infrastructure to support new payment systems and potential currency volatility. India will need to carefully navigate these challenges to successfully implement a de-dollarisation strategy.

Sources: [Indian Express](#), [The Times of India](#), [Organiser](#), [Indiatimes](#), [Firstpost](#), [The Hindu](#) and [ORF](#)

Syllabus: GS 3: Indian Economy – Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

[Kurukshestra April 2023 Summary] Groundwater Water Management through Panchayats – Explained, pointwise

Introduction

Water is an essential natural resource for sustaining life and livelihoods, especially in rural areas. However, it is increasingly becoming a scarce commodity due to over-exploitation and insufficient natural replenishment. With the mounting pressure of population growth and water-consuming sectors, sustainable water management has become vital in rural areas. Panchayati Raj Institutions (PRIs), National Water Policy, and local bodies play a significant role in addressing water management challenges.

About Groundwater Status in India

India is the world's largest user of groundwater, catering to 85% of the rural and 45% of the urban domestic water supply. However, overexploitation and poor recharge have led to groundwater depletion, with 17% of blocks being overexploited, 5% at a critical stage, and 14% at a semi-critical stage. This situation poses threats to livelihoods, food security, and climate-driven migration.

What are the roles and responsibilities of PRI in groundwater water management?

PRIs play a critical role in rural water governance and management. They deliver basic services, develop infrastructure, and ensure the smooth functioning of water management systems. The Gram Panchayats (GPs) and Gram Sabhas, along with Pani Samitis or Village Water and Sanitation Committees (VWSCs), collaborate to plan, implement, operate, and maintain village drinking water security.

The key responsibilities of GPs, Gram Sabhas, and VWSCs include:

Developing water supply schemes: GPs and Gram Sabhas are responsible for determining the estimated demand for drinking water, identifying appropriate water sources, and deciding on the type of water supply scheme.

Approving investment plans and budgets: The Gram Sabha approves village plans, annual budgets, and user-fee charges after thorough deliberation. Ensuring community participation: The Gram Sabha comprises the larger community and is responsible for key decision-making processes.

Implementing demand-side management strategies: Pani Samitis work to curb the wastage of water at domestic and community levels.

Promoting water quality and cleanliness: Pani Samitis create awareness about the importance of clean and safe water.

Monitoring water quality: VWSCs are responsible for regular monitoring, sampling, and analysis of groundwater drinking sources to prevent water-borne diseases and other health issues.

Coordinating with health centers: VWSCs liaise with Primary Health Centers and NRHN workers (ASHA) to monitor the incidence of water-borne diseases.

Collaborating with District Water and Sanitation Missions: GPs and VWSCs receive support from District Water and Sanitation Missions to finalize water plans and set priorities.

Working with Block Resource Centers: Block Resource Centers assist communities in preparing and implementing plans by providing motivation, training, and technical support.

Read more: [Water Management needs a Hydro Social Approach](#)

What are the various government initiatives for groundwater water management in India?

National Water Policy (2012): The policy aims to provide a framework for sustainable water management in India, involving local bodies in the planning of water resource projects for better impact and efficiency.

Atal Bhujal Yojana (ABY): Launched in 2019, this comprehensive scheme aims to improve groundwater management in critical areas through community involvement, water budgeting, and preparation of water security plans at the gram panchayat level.

Pradhan Mantri Krishi Sinchayee Yojana (PMKSY): Started in 2015, PMKSY focuses on accelerating supply-side and demand side management in the agricultural sector, with measures such as increasing on-farm water use efficiency, watershed development, and repair, renovation, and restoration of water bodies.

Jal Jeevan Mission (JJM): This ambitious mission aims to provide tap water supply to every rural household in India by 2024, with implementation largely carried out by state governments and technical and financial assistance provided by the central government.

Command Area Development and Water Management (CAD&WM) program: This program, a component of PMKSY, supports the creation of Water User Associations (WUAs) for participatory irrigation management at the local level, involving farmers in water distribution and the collection of water charges.

These initiatives are just a few examples of the numerous efforts made by the Indian government to address the country's water management challenges. By involving local communities and institutions in decision-making and implementation, these programs aim to promote sustainable water use and conservation, ensuring that water resources are available for future generations.

Read more: [New CAG report exposes wide gap between India's groundwater management regulations & implementation](#)

How does "water user association" (WUA) play a crucial role in groundwater water management in India?

Note: *Water User Associations (WUAs) are community-based organizations that share a common interest of well performing irrigation systems.*

Water User Associations' Role in Water Management in India include,

Equitable Water Distribution: Water User Associations (WUAs) ensure an efficient and equitable distribution of water among farmers, helping to prevent conflicts and promote fair access to this vital resource. For example, In Bakaram Jagir Gram Panchayat, Telangana, the local government has made efforts to provide equitable water distribution to all households. By constructing an Over Head Tank (OHT) in 1998, an underground water tank in 2005, and a second OHT in 2008, the village has ensured that all its 580 households have access to water through pipes and public stand posts.

Infrastructure Maintenance: WUAs are responsible for the maintenance and management of irrigation systems, including canals and structures, which is essential for sustainable water usage in agriculture. For example, to address the need for safe drinking water, Bakaram Jagir Gram Panchayat took the initiative to set up a Reverse Osmosis (RO) plant in 2016. This treated water is accessible to everyone in the village at a minimal cost. The Gram Panchayat collaborated with the Rotary Club of Hyderabad for financial support and ensured proper operation and

maintenance of the RO plant. As a result, nearly all households now consume safe and treated drinking water, with free access provided to the primary school and the Aanganwadi for children's well-being.

Financial Management: WUAs coordinate the recovery of irrigation water rates from beneficiary farmers, helping to maintain the financial sustainability of water management efforts. For instance, the Pappala Gram Panchayat efficiently managed funds from various sources to implement waste management and water supply initiatives. They utilized funds from the MREGA to construct two new Haudis for rainwater collection and storage. Additionally, they utilized Swachh Bharat Mission-Grameen funds to construct septic tanks for toilets. By effectively managing these financial resources, the Panchayat was able to address the waste and water management issues faced by the villagers.

Crop Pattern Recommendations: WUAs provide guidance on the best cropping patterns and agricultural practices for minimizing water use and enhancing water efficiency, promoting sustainable farming methods in their regions.

Community Engagement: By involving local farmers and stakeholders, WUAs foster a sense of ownership and responsibility among community members, which is crucial for the long-term success of water management initiatives.

Capacity Building and Training: WUAs organize training programs for farmers on topics such as conjunctive water use, community lift irrigation, and other water-saving techniques, helping to improve the overall water management skills within the community.

Through these roles and responsibilities, Water User Associations play a vital role in the management of water resources in India. By engaging local communities and stakeholders, WUAs contribute to the overall sustainability and effectiveness of water management efforts across the country.

Must read: [\[Kurukshetra July Summary\] Equitable Water Resources Management - Explained, pointwise](#)

How to achieve sustainable groundwater water management in rural areas?

Community Participation: Involving local communities in groundwater management can lead to better decision-making and sustainable practices. For example, in Rajasthan, the Tarun Bharat Sangh organization has successfully engaged local communities in constructing traditional water harvesting structures, which has helped replenish groundwater levels and improve water security.

Rainwater Harvesting: Promoting rainwater harvesting in rural areas can help recharge groundwater levels. For instance, in Tamil Nadu the government has made it mandatory for every household to install rainwater harvesting systems, leading to significant improvements in groundwater levels.

Artificial Recharge Techniques: Implementing artificial recharge techniques like percolation tanks, check dams, and recharge wells can help increase groundwater levels. In Gujarat the Sardar Patel Participatory Water Conservation Program has constructed numerous check dams, which have recharged groundwater and benefited local farmers.

Water Conservation Practices: Encouraging water conservation practices, such as drip irrigation and mulching, can help reduce groundwater extraction. In Maharashtra, the Paani Foundation has trained farmers in water conservation techniques, resulting in increased agricultural productivity and reduced groundwater exploitation.

Groundwater Monitoring: Establishing a robust groundwater monitoring system can help track changes in groundwater levels and inform sustainable management decisions. In Andhra Pradesh, the government has implemented the AP Drought Mitigation Project, which includes a comprehensive groundwater monitoring network to guide water management strategies.

Legal Framework and Regulation: Developing and enforcing legal frameworks and regulations can help control excessive groundwater extraction. In India, the Central Ground Water Authority has been established to regulate and manage groundwater resources, issuing guidelines for sustainable groundwater extraction and promoting water conservation measures.

Read more: [Nature-based, people-centred solutions for water](#)

Conclusion

To ensure sustainable water resource management in India, Panchayats must act as both service providers and observers. Appropriate planning, supported by people's participation, is imperative for maintaining water quality and availability in the future. Engaging communities in the water management process creates awareness and a sense of ownership, driving water projects towards success and creating lasting societal impacts.

Source: Kuruksheetra

Syllabus: GS 2: Human and Economic Geography – Geographical features and their location-changes in critical geographical features (including water-bodies and ice-caps) and in flora and fauna

India's nuclear liability law and associated issues – Explained, pointwise

Introduction

India's nuclear liability law, the Civil Liability for Nuclear Damage Act (CLND) 2010, outlines the legal framework for handling liability in the event of a nuclear accident. It governs compensation for victims and holds nuclear facility operators responsible for any damage caused. While this law aims to protect citizens and the environment, it has also faced challenges and controversies.

What is nuclear liability?

Nuclear liability refers to the legal responsibility of an operator or supplier of a nuclear facility for any damages or injuries caused as a result of a nuclear incident. This liability typically includes compensation for loss of life, personal injury, property damage, and environmental damage caused by the release of radioactive materials or the occurrence of a nuclear accident. In most countries, nuclear liability laws establish a framework to ensure that adequate compensation is available to the affected parties and that the financial burden is fairly distributed among the responsible entities, such as the operator or supplier of a nuclear power plant.

Must read: [Nuclear Energy: Status, Advantages and Concerns – Explained, pointwise](#)

What is the need for nuclear liability law in India?

Improper compensation structures for victims: A nuclear liability law is needed to establish a legal framework that guarantees victims of nuclear accidents are compensated fairly and promptly. For example, in the case of a nuclear accident, the law would ensure that affected individuals or communities are compensated for damages to health, property, and the environment.

Low investment in the nuclear sector: The law is necessary to encourage investment in the Indian nuclear sector by providing a clear and predictable liability regime, which minimizes uncertainties for investors, operators, and suppliers. For instance, foreign suppliers may be hesitant to invest in the Indian nuclear industry without a clear understanding of their potential liabilities in case of an accident, so a well-defined liability law helps to alleviate their concerns.

Incompatibility with international standards: India needs a nuclear liability law to align its domestic regulations with international standards and facilitate cooperation with other countries in the nuclear field. For example, by adopting a liability law consistent with international norms,

India can more easily engage in collaborative projects, such as importing advanced nuclear technology or exporting domestically developed technology to other countries.

Legal accountability: A nuclear liability law is essential to create a system that holds operators and suppliers legally accountable for their actions, encouraging adherence to safety measures and fostering a culture of responsibility. For instance, if an operator fails to follow safety regulations and an accident occurs, the liability law would hold them accountable for the consequences, which could include financial penalties or legal action.

Lack of negligence: The law is necessary to deter potential negligence by establishing a clear legal and financial liability framework for the nuclear power sector, which ultimately leads to safer operations. For example, if an operator knows that they will be held financially responsible for any damages resulting from a nuclear accident due to negligence, they will be more likely to prioritize safety and avoid cutting corners.

Increasing focus on nuclear power: India currently has 22 reactors, all of which are operated by the NPCIL. Apart from this, it has 10 reactors that are at various stages of construction and 10 more have been sanctioned. All of these are expected to start functioning by 2031 so a comprehensive law is essential.

Read more: [Nuclear Fusion Technology: Evolution, Challenges and Future Potential – Explained, pointwise](#)

What is India's Civil Liability for Nuclear Damage Act and its key provisions?

India's Civil Liability for Nuclear Damage (CLND) Act was passed in 2010 to establish a legal framework addressing liability and compensation in the event of a nuclear accident. The Act outlines the responsibilities of nuclear plant operators, suppliers, and the government, ensuring prompt and fair compensation for affected individuals and communities.

Here are some of the key provisions of the Act:

Operator liability: The Act designates the nuclear plant operator as the primary entity responsible for compensating victims in case of a nuclear accident. This "strict liability" means that the operator is liable regardless of whether or not they were at fault.

Financial cap on liability: The Act sets a financial cap on the operator's liability at INR 1,500 crore (approximately USD 205 million) for each nuclear incident. If the compensation amount exceeds this cap, the central government is responsible for providing additional funds up to the rupee equivalent of 300 million Special Drawing Rights (SDRs), which is approximately INR 3,300 crore (USD 450 million).

Right of recourse: The Act addresses supplier liability in Section 17, which grants the operator a right of recourse against the supplier under certain conditions. This right of recourse can be invoked if **(a)** the contract between the operator and supplier contains such provisions, **(b)** the nuclear incident occurs due to the supplier's negligence, or **(c)** the supplier provided defective equipment or services that caused the incident. This provision aims to ensure accountability among suppliers and share the burden of liability in case of a nuclear accident.

Claims Commission: The Act provides for the establishment of a Nuclear Damage Claims Commission to adjudicate claims arising from nuclear accidents. This commission ensures a streamlined process for victims to seek compensation and resolves disputes between operators, suppliers, and affected individuals or communities.

Time limits for claims: The CLND Act sets a time limit for filing claims for compensation. Claims related to personal injury or death must be filed within 20 years of the nuclear incident, whereas claims for damage to property must be filed within 10 years.

Mandatory insurance: The Act requires nuclear plant operators to obtain insurance or financial security to cover their liability. This ensures that funds are available for compensation in the event of an accident.

Read more: [\[Yojana October Summary\] Energy Security: Nuclear Power – Explained, pointwise](#)

What are the advantages of India's nuclear liability law?

Some of the key advantages are:

Victim protection: The CLND Act prioritizes the protection of victims by ensuring that they receive prompt and adequate compensation in the event of a nuclear incident. By channelling liability exclusively to the operator and setting clear time limits for compensation claims, the Act simplifies the compensation process for victims.

Operator accountability: The Act holds the operators of nuclear installations strictly liable for any damages caused by a nuclear incident at their facility, regardless of fault or negligence. This promotes safety and encourages operators to maintain high safety standards to minimize the risk of accidents.

Supplier accountability: The Act provides operators with a right to recourse against suppliers in certain cases, such as when the nuclear incident results from the supplier's negligence or defective equipment. This provision holds suppliers responsible for the quality of their products and services, promoting a culture of safety within the supply chain.

Financial security: By mandating that operators obtain insurance coverage or financial security to cover their liability for nuclear damage, the CLND Act ensures that operators have the necessary resources to compensate victims in the event of an accident.

Government support: The Act outlines the role of the Indian government in providing additional compensation if the operator's liability limit is exceeded, or in exceptional circumstances such as acts of terrorism or natural disasters. This provision demonstrates the government's commitment to protecting its citizens and supporting the nuclear industry.

Legal clarity: The CLND Act establishes a clear legal framework for liability and compensation in the event of a nuclear incident, reducing uncertainties and ambiguities in the process. This clarity benefits both operators and victims by outlining their respective rights and responsibilities.

International compatibility: The Act aligns India's nuclear liability regime with international standards and conventions, such as the Convention on Supplementary Compensation for Nuclear Damage (CSC), which India joined in 2016. This compatibility fosters cooperation and collaboration with other countries in the field of nuclear energy.

What are the challenges associated with India's nuclear liability law?

Inadequate Liability Cap for Operators: The liability cap on the operator may not be sufficient to compensate victims in the event of a major nuclear disaster. Compared to other countries, this cap is relatively low and may prevent India from accessing an international pool of funds for compensation purposes.

Uncertainty over Private Operators: The cap on the operator's liability may not be necessary if all nuclear plants are owned by the government. It is unclear whether the government intends to allow private operators to manage nuclear power plants, creating uncertainty around liability concerns.

Potential Conflict of Interest: The government is responsible for notifying the extent of environmental damage and economic loss. This could create a conflict of interest in cases where the government is also the party liable to pay compensation, possibly affecting the compensation process.

Non-compliance with International Agreements: The right of recourse against the supplier provided in the Act may not be compliant with international agreements that India may wish to sign, potentially limiting India's ability to cooperate with other countries on nuclear matters.

Limited Timeframe for Compensation Claims: The ten-year time limit for claiming compensation may be inadequate for those suffering from nuclear damage, as some health effects or damages may not become apparent until after this period.

Ambiguity in Applicable Laws: The Act allows operators and suppliers to be liable under other laws, but it is not clear which specific laws apply. Different interpretations by courts could either constrict or unduly expand the scope of such a provision, leading to inconsistencies in the application of liability rules.

Challenges faced by India Nuclear Insurance Pool (INIP): It faces several challenges, including the collection of adequate funds to cover the mandated liability amount under the Civil Liability for Nuclear Damage Act (CLNDA). The current INIP funds are insufficient, amounting to only half of the required INR 1,500 crores. Furthermore, limited reinsurance support hampers the ability of insurance companies to contribute fully. Finally, experts question the adequacy of the capped liability amount to cover all nuclear installations in India, potentially leaving some without proper insurance coverage.

Read more: [Atom-Nirbhar India: Nuclear energy is critical for the future. The civil liability clause deters foreign participation](#)

What should be done to ensure proper nuclear liability?

Strengthen the India Nuclear Insurance Pool (INIP): Increase the funds collected by INIP to meet the required liability amount under the CLNDA. Encourage more insurance companies to participate and contribute to the pool, ensuring a more robust risk transfer mechanism.

Review liability caps: Reevaluate the current liability caps for operators and suppliers to determine if they are adequate to cover potential damages in the event of a nuclear incident. Comparing the liability caps with international standards and practices can help inform this assessment.

Improve reinsurance support: Develop mechanisms to enhance reinsurance support for nuclear risk liability. This may include working with international reinsurance markets to provide additional coverage and encouraging domestic reinsurers to participate in nuclear risk coverage.

Enhance regulatory oversight: Strengthen the role of regulatory bodies, such as the Atomic Energy Regulatory Board (AERB), to ensure strict compliance with safety standards and guidelines in nuclear power plants.

Clarify legal provisions: Address ambiguities in the CLNDA by providing clear guidelines on the application of the Act to suppliers and operators. This could include specifying the extent of liability and the applicable laws in case of nuclear damage.

International cooperation: India should actively engage in international forums and work with other countries to share best practices, technical expertise, and strategies to address nuclear liability issues. This includes participation in treaties and conventions, such as the Convention on Supplementary Compensation for Nuclear Damage (CSC).

Public awareness and transparency: Increase transparency in the nuclear sector and enhance public awareness about nuclear liability, safety measures, and emergency preparedness plans. This would help build trust and confidence in India's nuclear power program.

Sources: The Hindu ([Article 1](#), [Article 2](#) and [Article 3](#)), [TOI](#), [Aljazeera](#), [The Diplomat](#), [Indian Express](#),

Syllabus: GS 2: Governance – Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

[Kurukshetra April 2023 Summary] Human Development through Panchayati Raj Institution – Explained, pointwise

Introduction

Decentralized governance has gained importance in the development paradigm with over 123 countries, including India, amending their legislations. This involves transferring authority and responsibility for public functions from central government to subordinate organisations.

India has a historical background of decentralised governance, but the legal framework was established through the 73rd and 74th Constitutional Amendments in 1992. The 73rd Amendment made it mandatory to establish a three-tier Panchayat system in rural areas. This is expected to enhance human development and improve the welfare of the rural population through administrative and political devolution.

What is human development?

Human development refers to the process of improving people's lives by expanding their freedoms, opportunities, and capabilities, enabling them to lead lives they value. It encompasses a wide range of factors such as health, education, economic growth, gender equality, social inclusion, and environmental sustainability.

The goal of human development is to create an environment where people can fully realise their potential and participate in the decision-making processes that affect their lives.

How is Human Development brought within the ambit of Panchayati Raj Institutions (PRIs) in India?

Panchayati Raj Institutions (PRI) was first recommended by the Balwantrai Mehta committee in 1957, and their role in rural development has been emphasized in subsequent government plans and committees. The 73rd Constitutional Amendment formalized PRI as a three-tier system in rural areas and mandated citizen participation in the planning process.

PRI is also responsible for implementing plans related to economic development, social justice, service delivery, infrastructure development, and livelihood development for rural people. The 11th Schedule of the Constitution specifies 29 subjects to be placed under the purview of PRI. This decentralization of power to PRI has helped to promote participatory governance in rural areas and improve human development indicators. PRI can also play a crucial role in addressing climate change and disaster risk management in rural areas.

Read more: [\[Kurukshetra April 2023 Summary\] Groundwater Water Management through Panchayats – Explained, pointwise](#)

How do Panchayati Raj Institutions contribute to decentralized governance?

Public Participation in Decision-Making: Panchayati Raj Institutions (PRIs) foster public participation in decision-making processes at the local level. By involving community members in planning, monitoring, and evaluating various schemes and service delivery programs, PRIs ensure that governance becomes more responsive to the needs and priorities of the people.

Promoting Social Equity and Inclusiveness: PRIs promote social equity and inclusiveness through the reservation of seats for women and weaker sections of society. This ensures that traditionally underrepresented groups have a voice in local governance, contributing to more equitable and inclusive decision-making. In the case of Madhya Pradesh, the involvement of PRIs in managing education led to a narrowing of the gender gap in primary school enrollment.

Empowering Local Communities: PRIs empower local communities by transferring responsibilities and decision-making authority from higher levels of governance to the grassroots level. This allows for better-tailored policies and services that address the specific needs and concerns of rural populations.

Addressing Climate Change and Disaster Risk Management: PRIs can play a crucial role in addressing climate change and disaster risk management at the local level. As immediate providers of public services and natural connectors to local communities, PRIs can raise awareness about climate change, foster disaster preparedness, and help train communities in adaptive and mitigation strategies. This approach to community preparedness can sometimes be more effective than costly public investments in disaster risk reduction.

What is the role of PRI in human development, particularly in rural areas?

In India, PRI plays an important role in enhancing human development, like

Improvement in education: Panchayats play a vital role in improving access to quality education in rural areas. They collaborate with Village Education Committees to monitor and enhance educational services at the village level. For instance, in Madhya Pradesh, the transfer of school management responsibilities to Panchayati Raj Institutions led to increased enrollment, especially for girls and disabled children, between 2003-04 and 2006-07.

Healthcare and Social Welfare: Panchayats contribute to the improvement of healthcare and social welfare services in rural areas. They participate in the implementation of health and family welfare programs, such as maternal and child health initiatives, which directly impact human development outcomes. Panchayats also support the implementation of social welfare schemes targeting marginalized communities, including scheduled castes and tribes.

Livelihood Enhancement and Poverty Alleviation: Panchayats are involved in implementing livelihood enhancement and poverty alleviation programs, such as the National Rural Livelihood Mission (NRLM) and Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS). These programs aim to provide self-employment and wage employment opportunities, helping to improve the economic well-being of rural populations.

Community Participation and Empowerment: Panchayats encourage community participation and empower local communities by organizing Gram Sabha and Ward Sabha meetings. These spaces enable villagers to voice their concerns, influence policies, and hold local authorities accountable. For example, studies have shown that Gram Sabha meetings in South India allowed disadvantaged groups to influence resource allocation in their favor.

How do PRIs contribute to education in rural areas?

Decentralization of School Management: PRIs have enabled the decentralization of school management in rural areas, empowering communities to make education more responsive to their needs. In Madhya Pradesh, the management of school education was transferred to Panchayati Raj Institutions, leading to the creation of Standing Committees on Education and Parent-Teacher Associations with administrative and financial powers.

Increased Enrollment: The involvement of PRIs in education management has led to a significant increase in enrollment, particularly for girls and disabled children. In Madhya Pradesh, girl enrollment at the primary stage rose from 46.6% in 2003-04 to 47.5% in 2006-07, demonstrating the impact of PRIs on education accessibility.

Community Participation: PRIs encourage community participation in school management, fostering local ownership and accountability. Through Village Education Committees and Parent-Teacher Associations, community members can provide valuable input on how to improve educational outcomes in their area.

Addressing Out-of-School Children: Despite the progress made through PRIs, challenges remain, such as the issue of out-of-school children. However, PRIs are well-positioned to identify and address the barriers that prevent children from attending school, ensuring that no child is left behind in their pursuit of education.

Read more: [\[Kurukshehra March 2023 Summary\] Inclusive Development in Education – Explained, pointwise](#)

What role can PRIs play in addressing climate change and disaster risk management in rural areas?

Adapting Rural Development Strategies: PRIs can help adapt rural development strategies to address climate change and its impacts on natural resources and livelihoods. They can contribute to the planning and implementation of policies that enhance ecosystem services, such as water, biodiversity, and clean air.

Building Awareness: PRIs are well-placed to build awareness about climate change and disaster preparedness in rural communities. By engaging with citizens, they can promote sustainable practices and educate community members on how to prepare for and mitigate the effects of climate change.

Community Training: PRIs can play a crucial role in organizing community training related to climate change and disaster preparedness. They can coordinate with local and national agencies to develop and deliver training programs that help communities become more resilient in the face of climate change and natural disasters.

Local Disaster Risk Reduction: PRIs can provide leadership in implementing local disaster risk reduction programs. Their involvement ensures that political support and momentum are maintained, and external stakeholders are engaged in the process. Community preparedness, facilitated by PRIs, can sometimes be more effective than costly public investments in disaster risk reduction.

Read more: [\[Kurukshehra February 2023 Summary\] Powering Growth in Agriculture Sector – Explained, pointwise](#)

How has the shift towards decentralized governance impacted India's rural development strategies?

Increased Participation: Decentralized governance through PRIs has led to greater community participation in the planning, monitoring, and evaluation of various schemes and service delivery programs, resulting in improved service quality tailored to local needs.

For instance, in the state of Madhya Pradesh, Village Education Committees were established at the Gram Panchayat level, promoting community involvement in managing school education and leading to a significant increase in enrollment rates.

Enhanced Accountability and Transparency: The shift towards decentralized governance has promoted better accountability and transparency in local decision-making processes, ensuring that public resources are utilized effectively and efficiently for rural development.

A prime example is the creation of Parent-Teacher Associations (PTAs) in Madhya Pradesh, which were granted administrative and financial powers to manage schools, leading to more effective resource allocation and improved educational outcomes.

Empowering Women and Marginalized Groups: The reservation of seats for women and marginalized groups in PRIs has helped increase their representation in decision-making processes, giving them a voice in shaping policies that directly affect their lives.

In Kerala, the Kudumbashree initiative empowered women by involving them in PRI activities, which led to improved access to resources and increased economic opportunities for women.

Local-Level Planning and Implementation: Decentralization has facilitated local-level planning and implementation of development projects, enabling PRIs to address specific needs and priorities of rural communities more effectively. In the context of climate change and disaster risk management, PRIs have been instrumental in raising awareness and promoting community preparedness.

For example, in Odisha, PRIs played a crucial role in disaster management during Cyclone Phailin, which helped save countless lives and minimize property damage

Source: Kurukshetra

Syllabus: GS 2: Social Justice – Issues relating to development and management of Social Sector/Services relating to Health, Education, and Human Resources.

