

7 PM COMPILATION

June, 2026

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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Issues Related to Prisons & Prison Reforms – Explained Pointwise

Recently, the National Crime Records Bureau released the **Prison Statistics India (PSI) 2024** report, providing a comprehensive overview of the country's prison administration, inmate population, infrastructure, and correctional systems. The report indicates a marginal improvement in prison overcrowding, with the national occupancy rate declining from 120.8% in 2023 to 112.7% in 2024. However, it also highlights persistent challenges such as a high proportion of undertrial prisoners, staff shortages, and inadequate correctional facilities, underscoring the need for deeper judicial and prison reforms in India.

ISSUES RELATED TO PRISONS & PRISON REFORMS

KEY ISSUES

- Overcrowding**
Many prisons operate beyond their capacity, leading to inhumane living conditions.
- High Undertrial Population**
A large proportion of prisoners are undertrials, reflecting delays in investigation and trial.
- Staff Shortage**
Inadequate number of prison staff affects security, supervision and rehabilitation efforts.
- Inadequate Infrastructure**
Poor living conditions, lack of basic amenities, healthcare, sanitation and outdated facilities.
- Mental Health Concerns**
High incidence of mental health issues among inmates with limited access to counseling and psychiatric care.
- Low Rehabilitation Outcomes**
Limited skill development, education and reintegration support lead to high recidivism.
- Human Rights Concerns**
Cases of custodial violence, abuse and lack of grievance redressal mechanisms persist.

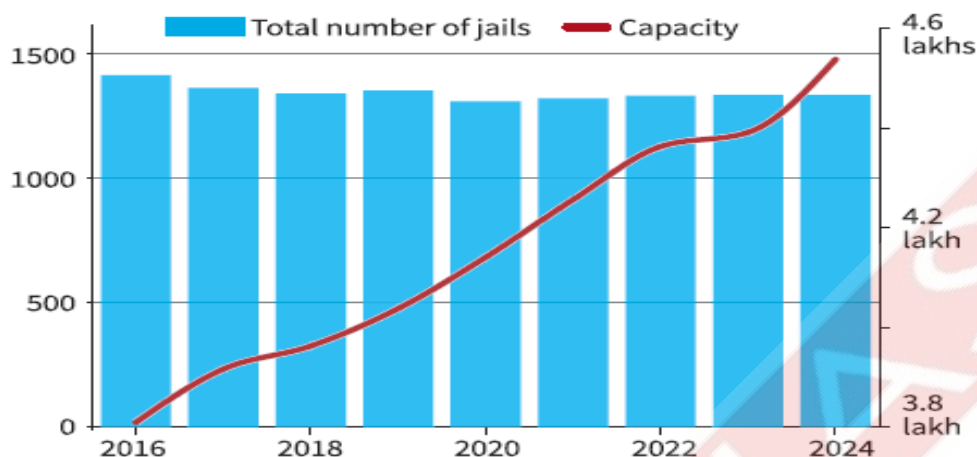
“The true measure of a society can be found in how it treats its prisoners.”

PRISONS SHOULD NOT JUST PUNISH, BUT REFORM AND REINTEGRATE.
Effective reforms can build safer communities and a more just society.

What are the issues associated with Prisons in India?

1. Overcrowding: Although the occupancy rate in Indian prisons has declined to **112%**, according to the latest Prison Statistics Report, overcrowding continues to remain a persistent challenge. Till 2021, the occupancy rate of prisons stood at **130%** in 2021. More than half of the States/UTs had an occupancy rate of over 100% in 2024 despite a modest increase in capacity. A Parliamentary Committee report, titled '**Prison- Conditions, Infrastructure and Reforms**', noted that overcrowding strains resources, compromises living standards, increases tensions among inmates and limits their access to healthcare and rehabilitation facilities.

Chart 1: The total number of jails (left axis) and available capacity (right axis) at the end of each year



Source: The Hindu

2. Rising Undertrials: The number of undertrials in prisons has reached 73% in 2024. The proportion has consistently increased from 64% in 2011 to 73% in 2024. On the other hand, the share of convicts in prisons reduced from about 32% in 2016 to **26.6%** in 2024. Prolonged incarceration without trial is violative of basic rights.

Chart 3: Types of prison inmates in jails between 2016 and 2024. Undertrials disproportionately form a higher share of inmates

Convicts Undertrials Detenues Others

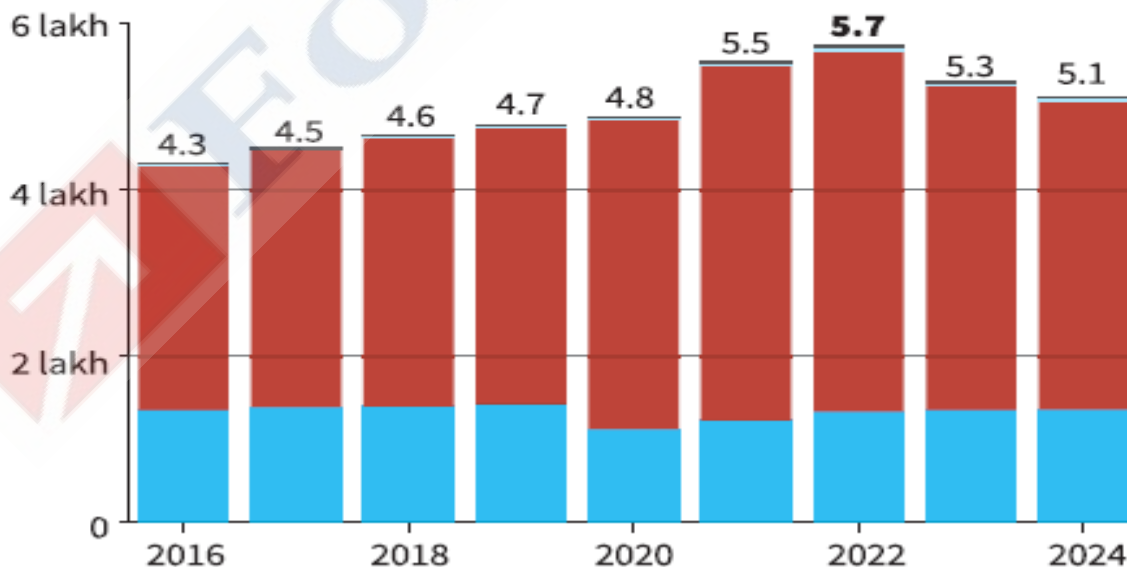
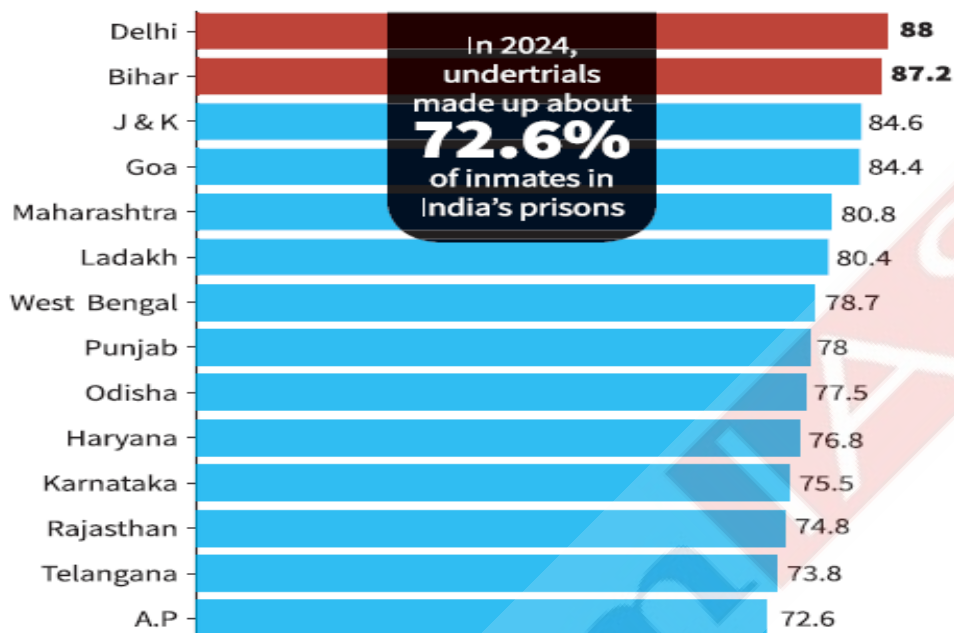


Chart 4: Undertrials as a share of the total population of inmates in 2024. The chart shows only select States in which the share of undertrials exceeded the national average



Read More: [Issue of Undertrials in India – Explained, pointwise](#)

Rising proportion of undertrials is a major factor in overcrowding of prisons. Moreover, as highlighted by the NCRB data, people from disadvantaged sections have higher proportion in jails compared to more affluent sections. Legislations such as the Habitual Offenders Act and Beggary Laws allow the police to target SCs/STs for reported crimes.

3. Mistreatment and Torture: The prisoners, including undertrials, are forced to do hard work without pay or for very meagre compensation against the law. Many prisoners are subjected to torture. The cases of deaths while in custody are also increasing. Women inmates face harassment. Instances of custodial violence, physical abuse, and corruption by jail authorities remain a significant human rights concern.

3. Shortage of Staff: There is a massive gap between the sanctioned strength and the actual number of prison staff (including jailors, guards, and medical personnel), often leaving jails heavily understaffed. According to one estimate, ~33% of the total requirement for jail authorities remains unfilled. The number of prison staff to prisoners is about 1:7. (i.e., one prison officer for every 7 prisoners). In the UK, there are 2 prison officers for every 3 prisoners. Without enough prison staff, overcrowding in the prisons leads to incidence of violence and other illegal activities.

4. Poor Hygiene: Most prisons tend to be dirty and unhygienic. There is lack of adequate medical facilities. Women inmates face further challenge due to poor hygiene and lack of adequate facilities. Overcrowded and

poorly ventilated cells create a breeding ground for infectious diseases like tuberculosis, skin infections, and water-borne illnesses.

5. Psychological Issues & Mental Health Crisis: Prolonged incarceration without trial can lead to depression in undertrials. Convicts lodged in overcrowded cells may suffer from panic attacks, stress, anxiety and claustrophobia among others. The psychological toll of isolation, combined with a lack of recreational or counseling avenues, leads to high rates of depression and anxiety. Suicides remain the leading cause of unnatural deaths inside Indian prisons.

6. Inter-gang Rivalries and Violence: Due to the inability to properly segregate hardened, habitual criminals from first-time or petty offenders, violent clashes, extortion, and radicalization occur within prison walls.

7. Lack of Reformative and Rehabilitation Focus: The ultimate goal of modern penal systems is to reintegrate individuals into society, but Indian prisons often fail at this. Without proper societal reintegration frameworks, released prisoners often face intense stigma, leading to joblessness and a high risk of recidivism (falling back into crime).

International Covenants Related to Prisons/Prisoners

✓ The Universal Declaration of Human Rights (1948)

It lays down principles of administration of justice.

- No one should be subjected to torture or to cruel, inhuman or degrading treatment or punishment.
- No one shall be subjected to **arbitrary arrest, detention or exile**.
- Everyone charged with a penal offence has the right to be **presumed innocent until proved guilty according to law** in a public trial at which he has had all the guarantees necessary for his defence.

✓ The International Covenant on Civil and Political Rights (ICCPR)

- It is the core international treaty on the protection of the rights of prisoners.
- India ratified it in 1979 and is bound to incorporate its provisions into domestic law and state practice.

✓ The International Covenant on Economic, Social and Cultural Rights (ICESR)

- It states that prisoners have a right to the highest attainable standard of physical and mental health.
- It sets civil, economic, social and human rights for the prisoners.

✓ Declaration on Protection from Torture (Adopted by the UNGA, 1975)

- This declaration acts in tandem with the human rights principles of an individual and protects that person from any kind of torture, or inhuman and cruel behaviour.

✓ General UN directives

- The Body of Principles for the Protection of All Persons under Any Form of Detention or Imprisonment (1988) and the the Basic Principles for the Treatment of Prisoners (1990).

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What has been the Judicial view regarding Prison Reforms?

The Higher Judiciary has played a significant role in ensuring safety and security of the inmates and the people in custody.

<p><i>Sunil Batra v. Delhi Administration (1978)</i></p>	<p>The Supreme Court held that prisoners are entitled to all fundamental rights which are consistent with their incarceration. Emphasizing the need for humane treatment of prisoners and protection of their basic human rights, the Supreme Court in Sunil Batra II (1983), observed: (a) “Fundamental rights do not flee the persons as he enters the prison although they may suffer shrinkage necessitated by incarceration.”; (b) The SC outlined the substantive and procedural rights to which the prisoners are entitled; (c) “Pushing the prisoner into a solitary cell, denial of necessary amenities, transfer to a distant prison where visits or society of friends or relations may be snapped, allotment of degrading labour, assigning him to a desperate or tough gang and the like, may be punitive in effect. Every such affiliation or abridgment is an infraction of liberty or life in its wider sense and cannot be sustained.”</p>
<p><i>Hussainara Khatoon v. State of Bihar (1979)</i></p>	<p>Considered the bedrock of legal aid in India, this case brought to light the plight of thousands of undertrials rotting in Bihar jails for periods longer than the maximum sentence of their alleged crimes. The Court established that the Right to a Speedy Trial is an integral part of Article 21.</p>
<p><i>Rudal Shah v. State of Bihar (1983)</i></p>	<p>It was held that, if the trial against a prisoner concludes into acquittal the prisoner is entitled as a matter of right to be released forthwith. After an order of acquittal, the person cannot be detained behind the prison walls.</p>
<p><i>Sheela Barse v. State of Maharashtra (1983)</i></p>	<p>The SC (on a complaint of custodial violence to women prisoners in jails) directed that those helpless victims of prison injustice should be provided legal assistance at the state cost and protected against torture and maltreatment.</p>
<p><i>Sanjay Suri v. Delhi Administration (1988)</i></p>	<p>The SC held that the prison authorities should change their attitude towards prison inmates and protect their human rights.</p>
<p><i>DK Basu v. State of West Bengal (1997)</i></p>	<p>It was held that, the information of arrest is required to be given to the friend or relative of accused immediately, while he is arrested. The purpose is very clear that, by this communication the relative or friends of accused can start the efforts to know the facts of accused, to obtain the legal advice and take the defense against an application for remand and do the necessary preparation for bail.</p>

<i>Dharambir v. State of U.P (2010)</i>	The SC directed the State Government to allow family members to visit the prisoners and for the prisoners at least once a year, to visit their families under guarded conditions.
<i>Re Inhuman Conditions in 1382 Prisons (2016)</i>	The Counsel for the Petitioner filed before the Supreme Court of India under Article 32 of the Indian Constitution to address the status of Prison reforms in India and to issue directions for prison reforms. The SC delivered a landmark judgment which regard to the legal and constitutional rights of prisoners in India especially the undertrial prisoners. The Prisoners are no less human than others and therefore must be treated with dignity. In compliance of the SC's directions, the Model Prison Manual 2016 provides for establishment of Under-trial Review Committee among others.

What are the challenges to Prison Reforms?

1. **State Subject:** Prisons are a state subject, this creates difficulty in having uniform prison management. The Union Government can only frame models for the States to incorporate and help in coordinating between States, encouraging them to adopt best practices. However, ultimately it is the obligation of State Governments to undertake the reforms. Because prison reform does not carry significant political weight or electoral value, states often deprioritize it, leading to highly uneven progress across the country.
2. **Low Budget Allocation:** Budgetary allocations for prisons are among the lowest within the state home departments, with the lion's share of the existing budget spent purely on basic food, staff salaries, and essential security infrastructure.
3. **Punishment over Reformation:** Prisons in India are still governed by the **Prisons Act, 1894**. It is a colonial legislation which treats prisoners as sub-par citizens, and **provides the legal basis for punishment to be retributive, rather than rehabilitative**. Also, the administrative machinery and the public largely view prisons through a lens of retribution (punishing the wrongdoer) rather than restoration (reforming the individual).
4. **Colonial Subculture:** Much of the lower-level prison staff is trained under a culture of strict control, hierarchy, and subordination dating back to the 19th century. Shifting this mindset toward empathy and rehabilitation requires massive re-training, which is rarely undertaken.
5. **Failure of Legal Aid:** Although Section 12 of the Legal Services Authorities Act guarantees free legal aid to prisoners, the quality of state-appointed legal defense is often very poor. Many public defenders rarely visit jails to meet their clients, leaving poor undertrials languishing indefinitely.
6. **Lack of Transparency:** Civil society organizations, independent journalists, and human rights activists face heavy bureaucratic red tape when trying to access prisons to audit conditions, monitor custodial violence, or assess reform programs.

What are the various Committees and Recommendations regarding Prison Reforms?

<p>Justice Mulla Committee (1983)</p>	<p>The All-India Committee on Jail Reforms, headed by Justice Anand Narain Mulla, is widely considered the bedrock of modern prison reform in India. It was the first to comprehensively advocate shifting from a punitive system to a reformative one.</p> <p>Key recommendations:</p> <ol style="list-style-type: none"> 1. National Prison Policy: It recommended drafting a National Policy on Prisons to bring uniformity across different states. 2. Segregation of Inmates: It urged the strict separation of first-time offenders from hardened criminals, and political prisoners from routine convicts. 3. Condition of Women: It recommended setting up separate jails exclusively for women inmates, staffed entirely by female personnel. 4. All-India Prison Service: To professionalize jail management, it suggested creating an “All-India Prison Service” cadre (similar to IAS/IPS).
<p>Justice V. R. Krishna Iyer Committee on Women prisoners (1987)</p>	<ol style="list-style-type: none"> 1. Specialized Infrastructure: It recommended that women should not be kept in ordinary police lock-ups or standard jails. Instead, exclusive women’s prisons with female custodial staff should be mandatory. 2. Restorative Handling: It emphasized a humane approach to handling women inmates, focusing on their reproductive health, menstrual hygiene, and psychological well-being. 3. Children of Inmates: It laid down guidelines for young children living with incarcerated mothers, emphasizing their right to nutrition, healthcare, and basic education inside or near the jail premises.
<p>All-India Committee on Prison Administration (1995)</p>	<ol style="list-style-type: none"> 1. Drafting a Model Bill: It strongly advocated replacing the archaic, colonial Prisons Act of 1894. 2. Expansion of Open Prisons: It recommended that “Open Jails” (minimum-security facilities where well-behaved inmates can work and live with semi-freedom) should be set up in every state to ease overcrowding and aid social reintegration.
<p>Committee under the Chairmanship of Director General, Bureau of Police Research and Development (BPR&D) (2005)</p>	<ul style="list-style-type: none"> ● It used the reports of Justice Mulla Committee Report and Justice Krishna Iyer Committee and made several additional and new recommendations. ● It also drafted a National Policy on Prison Reforms and Correctional Administration, 2007.

<p>Justice Amitava Roy Panel on Prison Reforms (2018-2020)</p>	<p>The panel was appointed by the Supreme Court in 2018. The Committee submitted its report on February 2020.</p> <ol style="list-style-type: none"> 1. Overcrowding: <ol style="list-style-type: none"> a. Special fast-track courts should be set up to deal with petty crimes; b. Lawyers – Prisoners Ratio: There should be at least one lawyer for every 30 prisoners; 2. Understaffing: <ol style="list-style-type: none"> a. The Supreme Court should pass directions to start the recruitment process against vacancies; b. There should be use of video-conferencing for trials; 3. Prisoners: <ol style="list-style-type: none"> a. Every new prisoner should be allowed a free phone call a day to his family members to see him through his first week in jail; b. Alternative punishments should be explored.
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What should be the approach to Prison Reforms going ahead?

1. **Addressing the Root Cause: Overcrowding and De-congestion:** Jails cannot be reformed if they are physically overwhelmed. The focus must shift from managing overcrowded spaces to actively reducing the inmate population:
 - a. **Strict Implementation of the Arnesh Kumar Guidelines:** Police forces must be strictly penalized for conducting arbitrary, routine arrests for offenses carrying sentences under 7 years.
 - b. **Institutionalizing Section 436A of the CrPC/BNSS:** Undertrials who have served half of their maximum potential prison term must be released automatically on personal bonds. Modern jail management software should be programmed to flag these cases automatically to State Legal Services Authorities (SLSA).
 - c. **Expanding Open and Semi-Open Prisons:** Rajasthan’s successful model of open prisons—where well-behaved convicts live with their families and work in the community—should be scaled across every state. This significantly reduces the fiscal burden on the state and practically eliminates recidivism.
2. **Adopting the Model Prisons Act, 2023 across States:** Since “Prisons” is a State subject, the central government must incentivize states to adopt the **Model Prisons Act, 2023** to replace the archaic 1894 legislation. The Center should tie modernization grants and police-funding allocations directly to a state’s progress in updating its State Prison Manual.
3. **Universalizing Legal Aid:** The inability to navigate the legal system keeps thousands of poor citizens trapped in jail. Legal counsel should be made available at the very first stage of production before a magistrate, ensuring that bail applications are moved immediately for petty or first-time offenders.
4. **Smart Security:** Utilizing advanced biometric tracking, AI-driven CCTV surveillance, and non-bypassable mobile phone jammers will neutralize internal gang networks and reduce corruption without requiring a massive influx of physical guards.
5. **Market-Relevant Vocational Training:** Prisons should move away from traditional, low-skill crafts (like weaving or basic carpentry) and partner with private industries or NGOs to provide certified training in digital literacy, mechanics, hospitality, or advanced agriculture.

6. **Adopting Global Standards:** The UN's Nelson Mandela Rules are serving as a blueprint, emphasizing the inherent dignity of prisoners. Training programs for prison staff on these rules are being conducted across states, focusing on ethical custodial practices and mental health support.

Read More: [The Need for a Bail Law – Explained, pointwise](#)

Conclusion:

The status of prisons in India remains dismal on multiple counts. The Supreme Court has pronounced some progressive judgments on the issue of rights of prisoners. Multiple committees have provided some effective recommendations to undertake prison reforms. However, the lack of political will by Union and State Governments has stalled the process. While Judiciary can also play a role in reducing the number of undertrials, broad prison reforms have to be undertaken by the Governments. The trend of rising proportion of undertrials and overcrowding of prisons indicate that the process of reforms can no longer be delayed.

Syllabus: GS II, Important aspects of Governance, Accountability.

Source: [The Hindu](#), [The Hindu](#), [The Hindu](#), [Lok Sabha Reference Note](#), [The Hindu](#)

Summer Air Pollution – Causes & Consequences – Explained Pointwise



Summer air pollution has emerged as a growing environmental and public health concern in many Indian cities. Contrary to the common perception that air quality deteriorates only during winter, several urban centres now experience frequent pollution episodes during the summer months due to factors like disproportionate rise in PM10 levels & extreme heat.

In March, the Commission for Air Quality Management (CAQM) in the National Capital Region and adjoining areas lifted all restrictions under the Graded Response Action Plan (GRAP), marking the end of Delhi's winter

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pollution season. However, with temperatures rising, the authority reinstated Stage I of GRAP in April to address worsening summer air pollution.

How is summer air pollution different from that in winter?

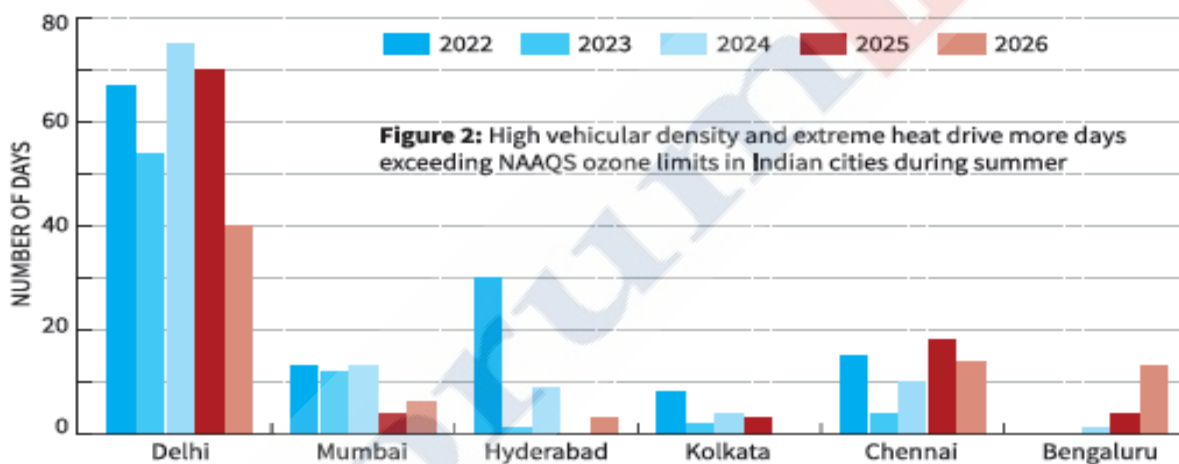
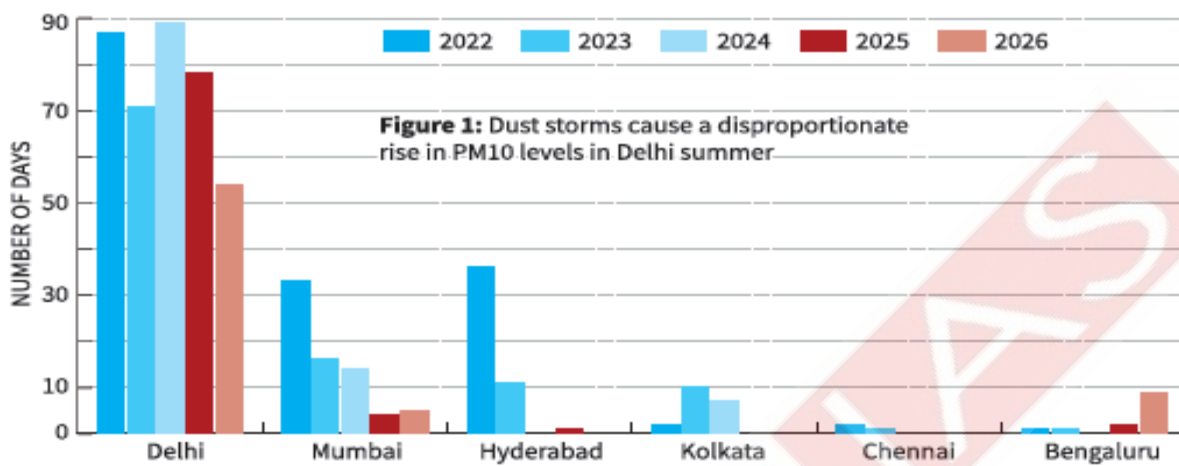
	Summer Air Pollution	Winter Air Pollution
Primary Pollutant	Summer pollution is driven by sunlight and heat. It is primarily composed of coarse particulate matter (PM10) and ground-level ozone .	Winter pollution is driven by combustion and stagnant air. It is heavily dominated by fine particulate matter (PM2.5) and toxic gases like Sulfur Dioxide (SO ₂).
Atmospheric Cause	Intense summer sunlight and high temperatures act as an energy source, driving a complex reaction between NO _x and VOCs – which leads to the formation of Ground-level ozone (O₃) .	Winter introduces a meteorological phenomenon called a thermal inversion . This creates a layer of extremely cold, dense air at the surface & a warmer layer of air sits above it (like a lid) – because of which pollutants get trapped very close to the surface.
Peak Times	Mid-afternoon to early evening	Early morning and late evening

Why are cities experiencing pollution episodes during the summer season?

- Massive Spikes in Coarse Pollutants (PM10):** Summer pollution is caused by PM10 (coarse particulate matter) rather than the fine smoke (PM2.5) seen in winter. This is driven by two summer realities:
 - Drying Ground and Wind Storms:** Intense summer heat completely dries out the soil. Strong pre-monsoon winds or localized thunderstorms (such as the *Andhi* or *Loo* storms in South Asia) easily kick up massive amounts of loose soil and carry it directly into urban centers.
 - The Construction Boom:** In many cities, strict winter pollution bans on construction and demolition are lifted when spring arrives. Construction activities ramp up aggressively just as the ground is at its driest, sending massive plumes of unregulated dust into the city air.
- Ground-level Ozone:** The primary culprit of summer urban smog is **ground-level ozone (O₃)**. Cities are densely packed with vehicles and industrial facilities that pump out Nitrogen Oxides (NO_x) and Volatile Organic Compounds (VOCs). When intense summer sunlight and soaring temperatures hit these emissions, they act like a catalyst, rapidly cooking these chemicals into ozone.
- The Urban Heat Island (UHI) Effect:** Cities are 1-3°C hotter than surrounding rural areas due to asphalt, concrete, and lack of trees. This extra city heat alters local urban chemistry & supercharges the ozone chemical reaction right where people live.

The summer burden

Dust, heat, and urban emissions continue to drive pollution episodes across Indian cities even during summer



Note: The data for 2026 is from 1 April to 31 May 2026. For other years, the data is from 1 April to 30 June.
SOURCE: CEEW ANALYSIS OF CAAQMS DATA

Source: The Hindu

What are the adverse effects of summer air pollution?

Health Impact	<ol style="list-style-type: none"> Airway Inflammation: Ground-level ozone is a powerful oxidant. Breathing it in chemically irritates and damages the cells lining your respiratory tract, causing a sensation akin to a sunburn inside your lungs. This leads to coughing, chest tightness, and a scratchy throat. Severe Asthma and COPD Flare-ups: Summer ozone and coarse dust (PM10) act as aggressive triggers for respiratory conditions. ER visits for asthma attacks and Chronic Obstructive Pulmonary Disease (COPD) spike significantly during summer hot spells.
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	<p>3. Reduced Lung Function: Even in healthy adults, breathing summer smog makes it harder to take deep, full breaths. For children who spend summers playing outside, prolonged exposure can permanently stunt lung development and reduce overall lung capacity.</p>
Impact on Agriculture	<p>1. Stunted Plant Growth: Ozone enters plants through their microscopic breathing pores (stomata). Once inside, it damages chlorophyll and impairs photosynthesis.</p> <p>2. Reduced Crop Yields: Summer smog severely stunts the yield of essential staple crops, including wheat, soybeans, cotton, and rice.</p> <p>3. Vulnerability to Disease: Weakened by ozone exposure, crops and forests become significantly more vulnerable to diseases, harsh droughts, and insect infestations.</p>
Structural Damage	<p>1. Damage to Materials: Ozone is highly corrosive. In the presence of intense summer heat, it accelerates the cracking and degradation of rubber, plastics, nylon, and paint. This shortens the lifespan of building materials, car tires, and outdoor infrastructure.</p> <p>2. Acid Rain Precursors: The nitrogen oxides (NO_x) and sulfur dioxides (SO₂) that cook into summer smog also mix with summer moisture (like humidity and thunderstorms), contributing to acid rain that damages forest canopies and acidifies lakes.</p>
Socio-Economic Impact	<p>1. Plummeting Outdoor Productivity: For industries reliant on outdoor labor—such as construction, agriculture, and gig-economy delivery services—the combination of extreme heat and toxic air drastically reduces worker efficiency and increases workplace medical emergencies.</p> <p>2. The “Greenhouse” Feedback Loop: High summer pollution forces residents to stay indoors with windows shut and air conditioning blasting. This massive spike in energy demand forces fossil-fuel power plants to work overtime, emitting even more pollution into the summer air.</p> <p>3. Reduced Solar Efficiency: The fine particulate matter that accompanies summer ozone (called PM_{2.5}) deposits on solar panels. In smoggy summer cities, solar panel efficiency drops by 10-25% unless panels are cleaned weekly.</p>

What can cities do to combat summer air pollution?

1. **Massive Urban Greening:** Planting extensive networks of street trees, pocket parks, and “green roofs” (roofs covered in vegetation) directly combats the Urban Heat Island effect. Shaded concrete can be up to 20°C cooler, drastically reducing the ambient heat that bakes emissions into ozone.
2. **Cool Pavements and Roofs:** Cities like Los Angeles and Tokyo have pioneered coating roofs and roads with highly reflective white or light-gray sealants. These “cool pavements” reflect sunlight back into space rather than absorbing it, lowering surface temperatures.
3. **Targeting Volatile Chemical Products (VCPs):** Since everyday products like paints, industrial solvents, printing inks, and even certain cleaning supplies evaporate into VOCs rapidly in summer heat, cities are enacting stricter regulations on “low-VOC” or “zero-VOC” consumer and industrial products.

4. **Shifting Construction Hours:** To manage the massive spikes in coarse dust (PM10) from summer building booms, cities can mandate that dust-heavy activities (like excavation and concrete mixing) happen during cooler nighttime or early morning hours, paired with strict misting/water-spraying requirements to keep dust grounded.
5. **Manage Traffic Emissions:** Optimize public transportation routes and schedules. Cities can encourage the transition to electric vehicles (EVs), establish low-emission zones, and run anti-idling campaigns (e.g., "Red Light On-Gaadi Off").
6. **Mechanical Road Sweeping:** Deploy fleets of vacuum-assisted sweeping trucks on arterial city roads to pick up loose silt before high winds kick it into the breathing zone.
7. **Low-Emission Zones:** Establish zero-emission vehicle zones in dense commercial centers, restricting older, polluting diesel vehicles from entering during peak daylight hours.

UPSC GS-3: Environment

Read More: [The Hindu](#)

Adoption of EVs: Challenges and Solutions – Explained Pointwise

The Government is pushing hard for transition to Green Economy. One vital aspect of this transition is transition to Green Mobility. Enhancing the share of Electric Vehicles in transportation is necessary to ensure green mobility. As India strives to achieve its net-zero emissions target by 2070 and reduce dependence on imported fossil fuels, EVs are emerging as a key pillar of the nation's sustainable and clean mobility transition. However, the adoption of EVs still faces several hurdles. Addressing these challenges is necessary to ensure greening and decarbonisation of the transportation sector.



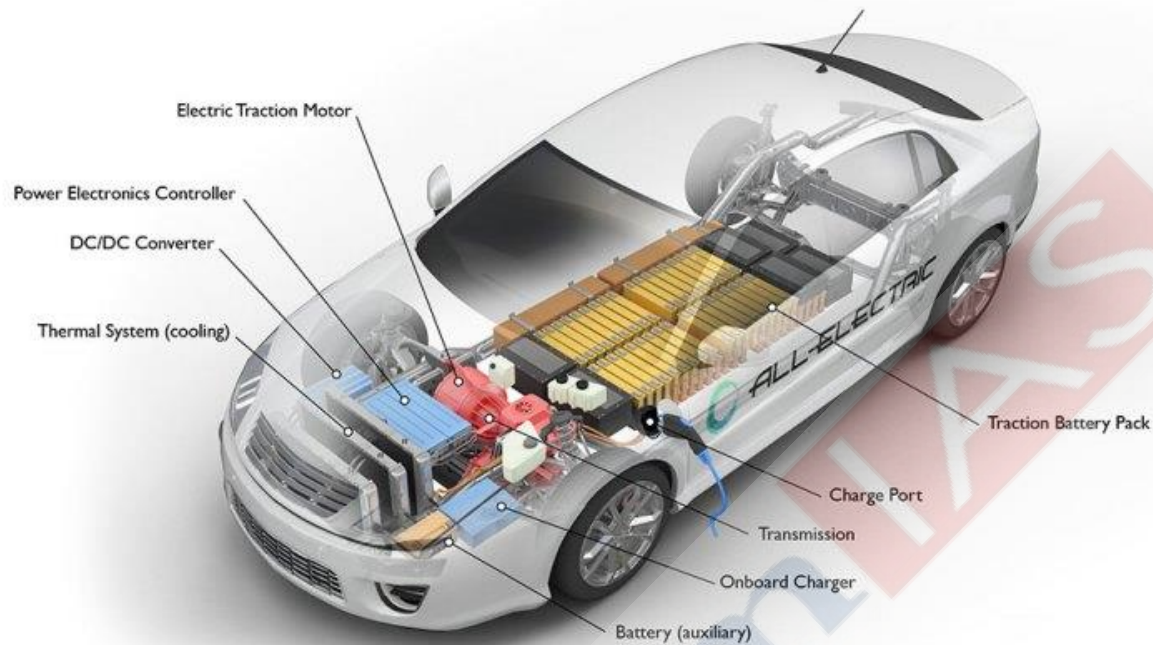
What are EVs and their benefits?

- Electric Vehicles (EVs) have an electric motor instead of an Internal Combustion Engine (ICE). ICE-based vehicles work on fossil fuels. EVs use a **large traction battery pack to power the electric motor**. The power to run the vehicle is provided by the motor (instead of fuel-engine in ICE vehicles).
- Because an EV runs on electricity, the vehicle emits **no exhaust from a tailpipe**.
- An EV does not contain the typical liquid fuel components, such as a fuel pump, fuel line, or fuel tank.

Types of EVs:

Type	How It Works	Power Source
BEV (Battery Electric Vehicle)	100% electric. It has no gas engine and relies entirely on a battery pack.	Electricity (Plug-in)
PHEV (Plug-in Hybrid Electric Vehicle)	Has both an electric motor and a gas engine. It can drive on pure electricity for short distances and switches to gas when the battery drains.	Electricity (Plug-in) + Gasoline
HEV (Hybrid Electric Vehicle)	Uses a gas engine alongside an electric motor. The battery is small and self-charges through braking; you cannot plug it in.	Gasoline Only
FCEV (Fuel Cell Electric Vehicle)	Uses a fuel cell to generate electricity on board, usually by mixing hydrogen with oxygen	Hydrogen

All-Electric Vehicle



afdc.energy.gov

Key Components of an All-Electric Car

Battery (all-electric auxiliary): In an electric drive vehicle, the auxiliary battery provides electricity to power vehicle accessories.

Charge port: The charge port allows the vehicle to connect to an external power supply in order to charge the traction battery pack.

DC/DC converter: This device converts higher-voltage DC power from the traction battery pack to the lower-voltage DC power needed to run vehicle accessories and recharge the auxiliary battery.

Electric traction motor: Using power from the traction battery pack, this motor drives the vehicle's wheels. Some vehicles use motor generators that perform both the drive and regeneration functions.

Onboard charger: Takes the incoming AC electricity supplied via the charge port and converts it to DC power for charging the traction battery. It also communicates with the charging equipment and monitors battery characteristics such as voltage, current, temperature, and state of charge while charging the pack.

Power electronics controller: This unit manages the flow of electrical energy delivered by the traction battery, controlling the speed of the electric traction motor and the torque it produces.

Thermal system (cooling): This system maintains a proper operating temperature range of the engine, electric motor, power electronics, and other components.

Traction battery pack: Stores electricity for use by the electric traction motor.

Transmission (electric): The transmission transfers mechanical power from the electric traction motor to drive the wheels.

Source: Department of Energy, US

Benefits of EVs:

1. **Lower running costs:** The running cost of an electric vehicle is much lower than an equivalent ICE vehicle. Electric vehicles use electricity to charge their batteries instead of using fossil fuels like petrol or diesel.

2. **EVs are more efficient:** According to one estimate, EVs can convert ~60% of the electrical energy from the grid to power the wheels, but petrol or diesel cars can only convert 17%-21% of the energy stored in the fuel to the wheels. The efficiency combined with the electricity cost means that charging an EV is cheaper than fuel based vehicles.
3. **Low Maintenance Cost:** EVs have very low maintenance costs because they have lesser moving components compared to ICE vehicles (e.g., Electric vehicles don't have gears and there are no complicated controls). The **servicing requirements for EVs are lesser** than the conventional petrol or diesel vehicles. Therefore, the yearly cost of running an electric vehicle is significantly low.
4. **Zero Tailpipe Emissions:** EVs can help **reduce carbon footprint** because they have zero tailpipe emissions (carbon-dioxide emissions through combustion of fossil fuels). This can **reduce air pollution** as well as slow down the pace of global warming. EVs are thus essential for greening of transportation sector.
5. **Low Lifecycle Emissions:** Even if emissions from the production of electricity (like thermal power plant) & manufacturing of batteries are taken into account, petrol or diesel vehicles emit almost 3 times more carbon dioxide than the average EV. Thus, EVs have a significantly lower carbon footprint over their lifespan than gas-powered cars.
6. **Noise Pollution:** Electric Motors function silently, and produce much less noise compared to IC Engines. This can address noise pollution in urban areas or near highways.
7. **Brake Longevity:** Because EVs use **regenerative braking** (using the motor to slow down, which recharges the battery), your traditional brake pads and rotors experience very little wear and tear and last much longer.

What are the challenges to adoption of EVs?

1. **Charging Infrastructure Related Challenges:**
 - a. **Lack of Infrastructure:** At present, charging stations comprising of both slow and fast charging capabilities are available for all kinds of vehicles in the market. However, the number of the charging stations is inadequate. This implies their availability is restricted and even the ones that are deployed do not function optimally. Hence, the lack of charging infrastructure is a major hindrance to the adoption of EVs at scale.
 - b. **Uneven Distribution:** Infrastructure is heavily concentrated in just a few states like Karnataka, Maharashtra, and Delhi, which account for ~60% of all stations. Rural and semi-urban areas, as well as most highways (except in Tamil Nadu), remain severely underserved.
2. **Performance:** The EV manufacturers have been unable to implement the practicality of EVs being 'value for money' for consumers. The original equipment manufacturer (OEMs) are not developing **EVSE (Electric Vehicle Supply Equipment)**. As a result, the companies that are into EVSE are unsure about the types of EVs, charging technology and its time of launch. This uncertainty does not allow the EVSE OEMs to do long term planning.
3. **Range Anxiety:** It refers to an EV owner's fear that the vehicle's battery does not have sufficient charge for it to reach the destination. It is linked to how far the EV can travel on a single battery charge and the availability of charging points. This is a consequence of limited infrastructure and duration of battery charge.
4. **Long time for Charging Batteries:** The battery charging time is much longer than the time taken for refueling the ICE vehicles. Fast charging can result in overheating of batteries, hence it is avoided. This reduces the acceptability of EVs.
5. **High Upfront Cost:** The initial cost of owning an electric car is currently higher than that of ICE vehicles mainly due to the cost of the battery. Manufacturers are collaborating with the electric car

battery production supply chain to lower costs and improve overall efficiency. Apart from this, limited credit options and high EMI make it tough for the EV Sector to operate.

6. **Import Dependence:** One of the most significant barriers to EV adoption is the battery manufacturing process and supply chain. India has no manufacturing capacity for Lithium-ion cells and relies completely on imports of EV batteries. While battery prices are falling globally, India's heavy dependence on imports for lithium-ion cells and critical minerals keeps costs high and creates supply chain vulnerabilities.
7. **Grid Capacity & Reliability:** Charging thousands of EVs requires a massive, stable amount of electricity. In many parts of India, power outages and voltage fluctuations are still common, and local grids require major upgrades to handle high-power fast chargers.
8. **Financing and insurance** Banks and NBFCs are still cautious about EV loan products, partly due to uncertain resale values. Insurance premiums for EVs can also be higher, adding to running costs.
9. **The Indian Summer:** India experiences extreme summer temperatures that frequently cross **40°C to 45°C**. High ambient heat degrades battery health faster and requires sophisticated, expensive liquid-cooling systems to prevent thermal runaway (fire hazards).
10. **Lack of Skilled Mechanics:** Traditional mechanics are not equipped to handle EV repairs. Industry data suggests that **85% of mechanics lack the skills** to safely work on high-voltage batteries and electric motors, and only 5-10% of garages have the necessary tools.

Challenges to Adoption of EVs

Certain critical challenges are limiting the adoption of EVs. Castrol had undertaken a global survey to estimate the '**tipping point**': the threshold where the consumers will **shift their preference** from Internal Combustion Engine (ICE) based vehicles to EVs.

1 Cost

- 63% consumers feel EVs are **out of their budget**.
- In India, the 'tipping point' of cost is **US\$ 30,000** i.e., the consumers will shift to EVs when their price falls below this threshold.
- The Global 'tipping point' is US\$ 36,000.

2 Charge Time

- ICE vehicles can be **refuelled in matter of minutes**.
- 68% consumers say 'charging time' is important buying parameter. Current systems can **take hours to charge**.
- In India, the 'tipping point' for **charge time is 35 minutes** while global average is 31 minutes.
- **New generation chargers** that can charge within 30 minutes are becoming more affordable.

3 Range

- 73% consumers say the **distance EV can travel between successive charges** (range) is an important factor.
- In India, the 'tipping point' for range is **400 kms**. The Global average is 469 kms.
- Present range of most EVs is ~350 kms.

4 Charging Infrastructure

- 64% consumers say they'll shift to EVs if there is charging infrastructure to meet their driving habits.
- Charging infrastructure might emerge as the most critical bottleneck. High charge time would mean longer waiting time, which will reduce adoption.

Created by | ForumIAS®

What are the various government initiatives to promote the adoption of EVs in India?

<p>PM E-DRIVE</p>	<p>The central pillar of India's EV policy is the PM Electric Drive Revolution in Innovative Vehicle Enhancement (PM E-DRIVE) Scheme. Launched in September 2024, it replaced the earlier FAME (Faster Adoption and Manufacturing of Electric Vehicles in India) scheme.</p> <ul style="list-style-type: none"> ● Direct Subsidies: It provides upfront demand incentives directly at the point of sale via a digital, Aadhaar-linked e-Voucher system. ● Target Segments: It heavily prioritizes mass and public transport, targeting the deployment of roughly 25 lakh electric two-wheelers, 3.2 lakh electric three-wheelers, and over 14,000 electric buses. ● Boosting Charging Infrastructure: ₹2,000 crore has been explicitly allocated for setting up Public Charging Stations (EVPCS) across pan-India highways and major cities.
<p>Production Linked Incentive (PLI) Schemes</p>	<ul style="list-style-type: none"> ● PLI for Advanced Chemistry Cell (ACC): An ₹18,100 crore program designed to incentivize companies to set up mega-factories within India to manufacture local, long-range EV battery cells. ● PLI for Auto and Auto Components: Incentivizes local manufacturing of high-tech EV components, like electric powertrains and Battery Management Systems (BMS). It requires automakers to achieve a minimum of 50% Domestic Value Addition (DVA) to qualify for payouts.
<p>Scheme for Promotion of Manufacturing of Electric Passenger Cars in India (SPMEPCI)</p>	<ul style="list-style-type: none"> ● The policy aims to attract the global EV makers by lowering the customs/import duties (down to 15%) for a limited number of Completely Built-in Units (CBUs) for premium global EV manufacturers, provided they commit to investing a minimum of ₹4,150 crore (~\$500 million) to set up local manufacturing plants in India within a fixed timeframe.
<p>Tax Breaks & Fiscal Incentives</p>	<ul style="list-style-type: none"> ● Goods and Services Tax (GST) Slash: The GST on electric vehicles has been slashed from the standard automotive rates down to just 5%. Similarly, GST on EV chargers and charging stations has also been lowered to 5%. ● Green Plates & Road Tax Waivers: The Ministry of Road Transport and Highways (MoRTH) mandates distinctive green license plates for EVs. MoRTH has advised state governments to entirely waive road tax and registration fees for electric vehicles, a policy that most states have actively implemented.

<p>State-Level EV Policies</p>	<ul style="list-style-type: none"> Complementing the central government, individual states (such as Delhi, Maharashtra, Tamil Nadu, Karnataka, and Uttar Pradesh) have established their own EV policies. These state incentives often include additional cash cashbacks, road tax exemptions, and building mandates for charging units to sweeten the deal for local buyers.
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What are the possible solutions to increase adoption of EVs?

1. Charging Infrastructure:

- Massive Scaling of the Network:** India needs to expand from a few thousand chargers to an estimated **one million by 2030**.
- Implementing “Smart Charging”:** Moving beyond just “fast” chargers to “smart” systems that can shift loads to off-peak hours, integrate with renewable energy (like solar), and provide battery health diagnostics to the user.
- Focusing on High-Density Zones:** A targeted approach to build dense charging networks in major metropolitan areas first (e.g., Delhi, Mumbai, Bangalore) to create immediate “network effects” and build consumer confidence.
- Standardized Battery Swapping:** For two-wheelers and three-wheelers (which dominate Indian roads), battery swapping is a game-changer. Implementing strict government standards for battery sizes and connectors would allow different vehicle brands to use the same swapping stations.

2. Reduce Import Dependence:

- Exploit Domestic Reserves:** Accelerate the auctioning, commercial mining, and processing of newly discovered domestic lithium reserves (such as those in Jammu & Kashmir and Karnataka).
- Strengthen Local Manufacturing:** The government’s Phased Manufacturing Programme (PMP) and Production Linked Incentive (PLI) schemes for auto components and advanced chemistry cells are critical. Increased local production of cells, motors, and controllers will reduce import dependence and lower costs.
- Sodium-Ion Batteries:** Sodium-ion technology is cheaper, safer in high temperatures, and completely eliminates the need for lithium, cobalt, and nickel. Mass-commercializing sodium-ion for low-speed two-wheelers and three-wheelers would dramatically cut imports.

3. Battery-as-a-Service (Baas):

The battery is the most expensive part of an EV, accounting for up to 40% of its total cost. Automakers can sell the car without the battery, drastically lowering the purchase price to match or beat petrol cars. The consumer then leases or rents the battery through a monthly subscription or pay-per-use model.

4. Heat-Resilient Chemistry:

Indian R&D must focus on battery chemistries like **Lithium Iron Phosphate (LFP)** or emerging **Sodium-ion** batteries. These chemistries are inherently safer, much more thermally stable in **45°C** summers, and do not rely on scarce, expensive minerals like cobalt and nickel.

5. Transitioning the Grid to Renewable Energy:

An EV is only as clean as the electricity that powers it. To maximize emission reductions, India must actively align EV charging with renewable energy generation. States like Maharashtra, Gujarat, and Tamil Nadu have introduced lower electricity rates during solar hours (typically 10 AM to 4 PM) to encourage daytime charging when solar power is abundant. Expanding this model nationwide can shift charging behavior toward cleaner energy.

Syllabus: GS III, Environment, Conservation

Read More: [The Hindu](#)

Startups in India – Explained Pointwise

Startups have emerged as a vital pillar of India's **economic transformation, driving innovation, job creation, and inclusive development**. Over the past decade, India has rapidly evolved into one of the **world's largest startup ecosystems**, with more than **2 lakh startups as of December 2025**. Major hubs like Bengaluru, Hyderabad, Mumbai, and Delhi-NCR have been at the forefront of this transformation. At the same time, **smaller cities are also steadily contributing to the momentum with around 50% of the startups emerging from Tier II/ III cities**, reflecting the democratisation of entrepreneurship.



What is a Startup?

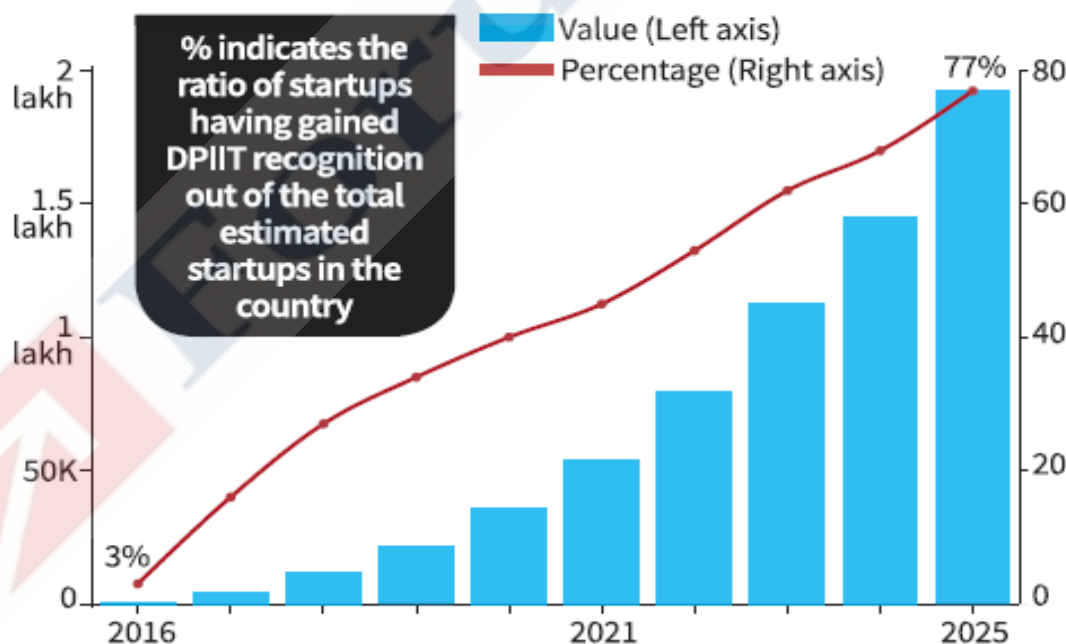
- An entity can be recognized as a startup by the Department for Promotion of Industry and Internal Trade (DPIIT) if it meets the 5 official criteria:
 1. **Entity Type:** Must be a Private Limited Company, a registered Partnership Firm, a Limited Liability Partnership (LLP), or a Cooperative Society (including Multi-State).
 2. **Business Age:** Must be within **10 years** from the date of its incorporation or registration.
 3. **Annual Turnover:** Turnover must not have exceeded **₹200 crore** in any financial year since incorporation.

4. **Business Nature:** Must be working towards innovation, development, or improvement of products/processes, OR be a scalable business model with high potential for employment or wealth creation.
 5. **Original Entity:** It must **not** have been formed by splitting up or reconstructing an existing business.
- **Deep Tech Startup:** In 2026, a new category was introduced for more advanced, research-intensive businesses. A “Deep Tech Startup” has the same basic criteria but features:
 1. **Longer Recognition:** Eligible for up to **20 years** (vs. 10 years for regular startups).
 2. **Higher Turnover Limit:** Can have a turnover up to **₹300 crore**.
 3. **Focus:** Develops solutions based on new scientific or engineering knowledge, with a high R&D expenditure and significant intellectual property (IP) creation.

How has India emerged as a startup success story?

1. **Third-largest startup ecosystem:** With **over 2 lakh DPIIT-recognised startups** as of December 2025, India stands firmly as one of the world’s **largest** startup ecosystems.
2. **Exponential Growth in Formally Recognized Startups:** Despite DPIIT recognition not being mandatory for startups to operate, there has been a significant growth in startups applying for its recognition. From 288 in 2016, which was just 3% of the total startups functioning then, the DPIIT’s coverage has increased to 77% in 2025. The growing willingness to join the formal startup ecosystem has been an important measure of success for India’s startup story.

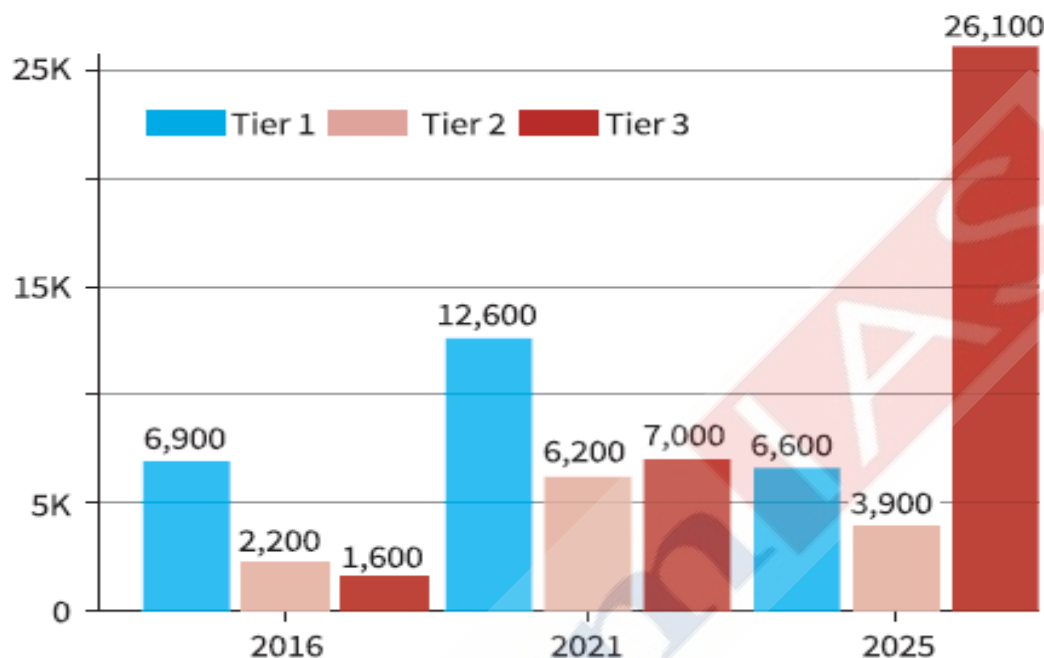
Chart 1: The growth in the number of DPIIT-recognised startups between 2016 and 2025



3. **Tier-2 & Tier-3 Cities Rise:** Over **48% of DPIIT-recognized startups** now originate from tier-2 and tier-3 cities. Cities like Jaipur, Indore, Kochi, and Surat are emerging as significant innovation hubs. Seed funding in these areas grew from **\$27 million in 2016 to \$167 million in 2025**, proving that

talent and innovation are truly distributed across the country.

Chart 2: The number of startups set up in Tier 1, Tier 2, and Tier 3 cities and towns in 2016, 2020, and 2025



- Third-Largest Unicorn Hub:** With 125 unicorns, India is now the world's third-largest startup ecosystem, a testament to its ability to create billion-dollar companies at scale. This is best illustrated by **Skyroot Aerospace**, which became India's **first space-tech unicorn** with a \$1 billion valuation, validating the potential of high-tech, IP-driven ventures from the country.
- Women's Participation at Scale:** More than 1.07 lakh recognised startups — approximately 48% of the total — have at least one woman director or partner. And women co-founded startups attracted \$1 billion in funding in 2025. Inclusive participation is a key indicator of ecosystem health.
- Age & Gender Distribution of Startup Founders:**

The age and gender distributions of startup founders reveal a strong presence of the youth. A substantial portion of founders across both genders (approximately 66% are male founders and 59% female founders) are under 40. The embrace of entrepreneurship early in one's career signals a favourable and supportive ecosystem for startups.

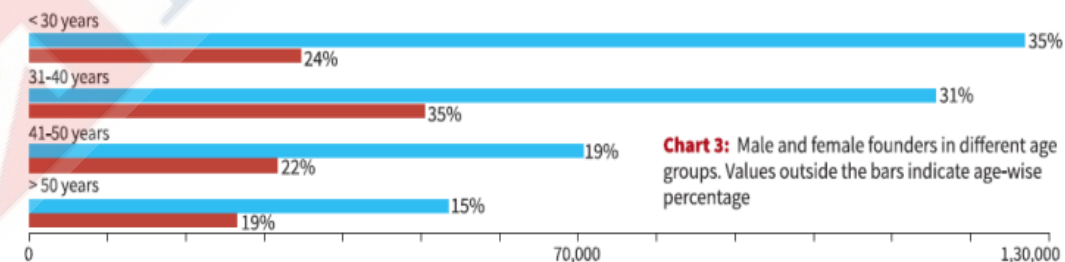
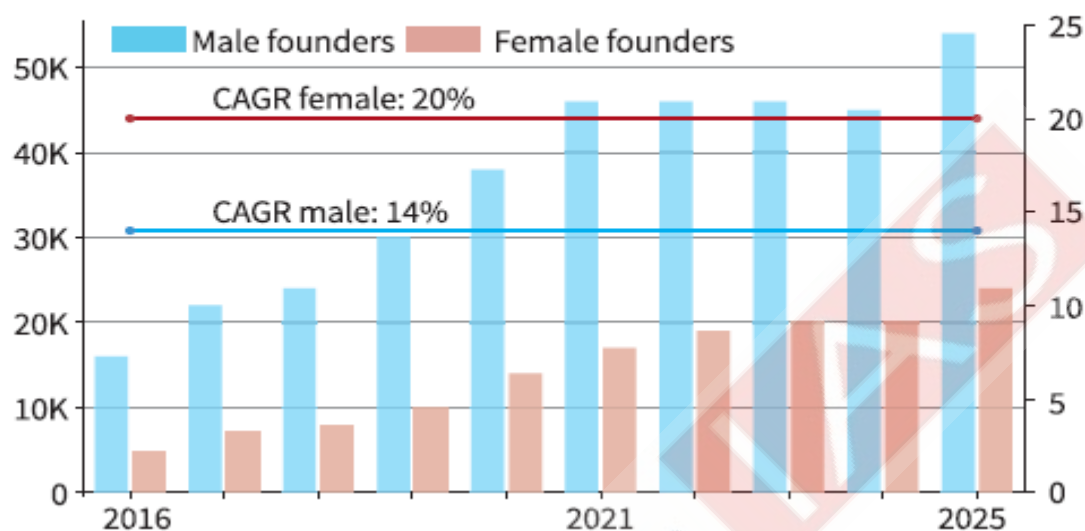


Chart 3: Male and female founders in different age groups. Values outside the bars indicate age-wise percentage

- While women account for about 21% of the founders in the under-30 age group, they account for 33% in the 50- plus age group. The Compound Annual Growth Rate (CAGR) of women founders stood at 20%, compared with 14% for men, underlining the strong trend of women increasingly pursuing entrepreneurship.

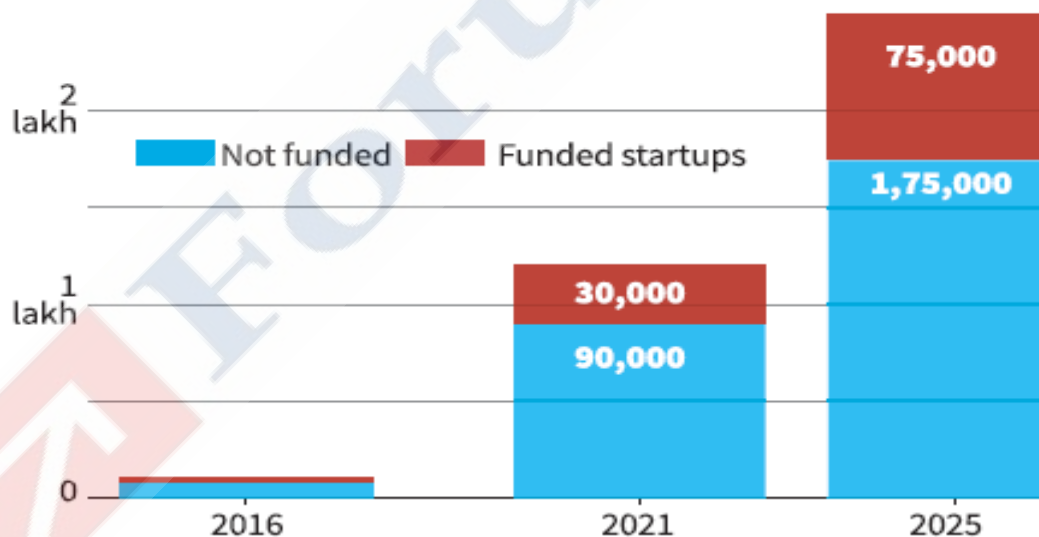
Chart 4: The growth in male and female founders between 2016 and 2025



Source: The Hindu

7. **Surge in Confidence of Investors in Indian Startups:** In 2016, India had 10,000 startups, of which 2,000 were funded ventures. The numbers have increased dramatically in 2025 with a total of 2,50,000 startups, of which 75,000 are funded ventures. This is an increase of 25-fold and 38-fold respectively.

Chart 5: The growth in startup formation and funded startups between 2016 and 2025



Source: The Hindu

What is the significance of Startups in an economy?

- Engine of Job Creation:** Startups are among the most powerful generators of employment. Unlike large established corporations that often optimize by reducing headcount, startups scale by hiring. In India's case alone, over 23 lakh direct jobs have been created by DPIIT-recognised startups.
- Driver of Innovation:** Startups thrive by doing things differently. They challenge incumbent industries, introduce new technologies, and force entire sectors to evolve. The smartphone revolution,

the rise of fintech, the transformation of retail through e-commerce – most of these disruptions originated in startups, not in the R&D labs of large corporations. Innovation driven by startups tends to be faster, riskier, and more radical than incremental corporate innovation.

3. **Contribution to GDP Growth:** As startups scale into mid-size and large companies, they directly add to a nation's GDP. Beyond their own output, they create multiplier effects. In emerging economies like India, the startup sector is increasingly treated as a structural growth engine, not a peripheral activity.
4. **Solving Market Failures and Public Problems:** Some of the most important startups address gaps that governments and large corporations have historically neglected — affordable healthcare, financial inclusion for the unbanked, clean energy access, agri-tech for smallholder farmers. In India, companies like Practo, PhonePe, and DeHaat illustrate how startups can reach underserved populations at scale, improving social outcomes alongside economic ones.
5. **Attracting Foreign Investment:** A vibrant startup ecosystem signals to global investors that a country has the talent, infrastructure, and regulatory environment to support risk capital. This attracts Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI), strengthening the balance of payments and supporting currency stability.
6. **Developing Entrepreneurial Culture:** Startups shift a society's relationship with risk and ambition. When successful entrepreneurs become visible role models, more people — especially young people — are inspired to start ventures rather than only seek salaried employment. This cultural shift has compounding effects: each generation of founders mentors the next, creating a self-reinforcing innovation ecosystem.
7. **Tax Revenue and Fiscal Strengthening:** As startups grow, list on exchanges, and generate profits, they contribute significantly to government tax revenues — both corporate taxes and income taxes from the large workforces they employ. The indirect tax base also expands as startup-driven consumption and commerce grow.
8. **Inclusive and Decentralized Growth:** Startups are increasingly **bridging India's rural- urban divide** by deploying solutions across agri-tech, telemedicine, microfinance, tourism, and ed-tech, directly addressing developmental gaps and supporting rural livelihoods. Within this landscape, women-led startups are emerging as a key driver of inclusive and regionally balanced growth, with more than 45% of recognised startups having at least one-woman Director/Partner as of December 2025. This reflects the emergence of innovation not only as an economic engine but also as a driver of social equity and balanced regional development.


What are the challenges faced by Startups in India?

1. **Access to Funding – Especially at the Early Stage:** Many startups struggle to attract investors, especially in the early stages, due to a lack of a proven track record, inadequate financial projections, or an underdeveloped business model.
2. **Regulatory Complexity and Compliance Burden:** Despite government support, startups face complex tax structures, compliance requirements, and regulatory uncertainties, including recent data protection laws. India's multi-layered regulatory environment creates a heavy compliance load that diverts founder attention and capital away from core business building. Rising compliance costs have been a direct factor in the record 11,223 startup closures seen in 2025 — a 30% increase from 8,649 closures in 2024.
3. **Infrastructure Gaps:** Many startups still face challenges related to inadequate physical infrastructure, unreliable internet connectivity, and limited access to advanced technology — particularly outside the major metro cities. Startups trying to serve Tier-2 and Tier-3 markets often run into logistics, connectivity, and last-mile delivery problems that dramatically raise their operating costs.

4. **Lack of Mentorship and Ecosystem Support:** Beyond funding, many founders — especially first-generation entrepreneurs from non-metro backgrounds — lack access to experienced mentors, networks, and institutional knowledge about building and scaling businesses. This gap in “**soft infrastructure**” is often as damaging as the lack of capital.
5. **The Deep-Tech Capital Conundrum:** Deep-tech startups (in areas like AI, space, biotech) require **patient capital** – large sums of money over long periods (often 10+ years) before becoming profitable. This type of funding is scarce in India.
6. **The Valuation Correction:** Between 2021 and 2022, massive amounts of foreign capital artificially inflated company valuations. Over the last couple of years, funding has cooled down substantially (with overall funding dropping by nearly 26% year-on-year in early 2026).
7. **Severe Talent Shortages:** Despite graduating millions of engineers every year, India suffers a severe paradox regarding skilled human capital. The hyper-growth of generative AI, semiconductors, climate tech, and advanced robotics requires specialized deep-tech talent. University curricula often remain outdated, creating a massive gap between academic knowledge and actual industry requirements.

What are various government initiatives to promote Startups in India?

Startup India Scheme	<ul style="list-style-type: none"> • The Startup India Initiative, led by the Department for Promotion of Industry and Internal Trade (DPIIT) under the Ministry of Commerce and Industry, has emerged as the cornerstone of India’s innovation and entrepreneurial ecosystem. • Over the past decade, the initiative has evolved from a policy-focused framework into a comprehensive, multi-dimensional platform supporting startups at every stage from ideation to scaling operations. • To accelerate innovation-led entrepreneurship, DPIIT, through the Startup India initiative, has rolled out the following flagship schemes and digital platforms to support funding, mentorship, and the scaling of startups nationwide.
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	 <p>Source: Ministry of Skill Development and Entrepreneurship, Ministry of Commerce & Industry</p>
<p>Funding Support</p>	<ul style="list-style-type: none"> • Startup India Seed Fund Scheme (SISFS): This scheme distributes grants and loans (up to ₹20 lakh for proof-of-concept/prototyping and up to ₹50 lakh for market entry/commercialization) to startups through approved incubators. • Fund of Funds for Startups (FFS): Instead of picking individual winners, the government managed a massive ₹10,000 crore corpus to back SEBI-registered Venture Capital (VC) funds. These private VC funds, in turn, invest that capital into high-growth Indian startups, multiplying the pool of institutional money available. • Credit Guarantee Scheme for Startups (CGSS): To help startups secure traditional bank loans without having to pledge personal property or assets as collateral, this initiative provides credit guarantees to financial institutions lending to recognized startups. • Startup India Investor Connect Portal: Developed in collaboration with SIDBI, the Startup India Investor Connect Portal is a digital platform that connects startups with venture capital funds and investors, with a particular focus on early-stage ventures. The platform enables entrepreneurs to reach multiple investors through a single application and pitch their ideas efficiently.
<p>Regulatory Relief and</p>	<ul style="list-style-type: none"> • The 3-Year Tax Holiday (Section 80-IAC): Eligible startups can apply for a 100% tax rebate on their profits for three consecutive financial years out of their first ten years of operations.

Tax Incentives	<ul style="list-style-type: none"> ● Self-Certification Compliance: To cut down on bureaucratic red tape, startups can self-certify their compliance with 6 labor laws and 3 environmental laws for up to 3 to 5 years, completely avoiding routine, disruptive on-site government inspections.
Public Procurement	<ul style="list-style-type: none"> ● Government e-Marketplace (GeM): The GeM portal is a massive public procurement platform where government departments buy goods and services. The government created a dedicated “Startup Runway” corner on GeM. ● Relaxed Tender Criteria: For recognized startups bidding on public procurement tenders, the government waived the restrictive criteria of “prior turnover” and “prior experience,” provided the startup meets the baseline technical specifications of the product or service.
National Mentorship Portal (MAARG)	<p>The Mentorship, Advisory, Assistance, Resilience, and Growth (MAARG) program has been developed to provide startups across the country with easy access to mentorship. By connecting entrepreneurs with experienced mentors, the portal aims to support startup growth, offer strategic guidance, and strengthen the overall entrepreneurial ecosystem nationwide.</p>
GENESIS (Gen-Next Support for Innovative Startups)	<p>The GENESIS initiative, a National Deep-tech Startup Platform by Ministry of Electronics and Information Technology (MeitY), was launched in 2022, with an aim to scale up about 1600 technology startups through implementing agencies in Tier-II and Tier-III cities across India, providing significant funding and support for deep-tech innovation.</p>
NIDHI (National Initiative for Developing and Harnessing Innovations)	<p>The National Initiative for Developing and Harnessing Innovations (NIDHI), launched in 2016 by the Department of Science and Technology (DST), Ministry of Science and Technology, acts as an umbrella programme for nurturing ideas and innovations (knowledge-based and technology-driven) into successful startups. The programme focuses on building an innovation-driven entrepreneurial ecosystem with the objective of socio-economic development through wealth and job creation.</p>

Scheme	Ministry	Objective
Atal Innovation Mission (AIM) (2016)	NITI Aayog	Foster nationwide innovation culture
GENESIS (Gen-Next Support for Innovative Startups) (2022)	Ministry of Electronics & IT (Meity)	Deep-tech startups in Tier II/III cities
Technology Incubation and Development of Entrepreneurs (TIDE) 2.0 (2019)	Ministry of Electronics & IT (Meity)	ICT startup incubation & scale-up
MeitY Startup Hub (MSH) (2016)	Ministry of Electronics & IT (Meity)	Integrate tech startup ecosystem
NIDHI (National Initiative for Developing and Harnessing Innovations) (2016)	Department of Science & Technology (DST)	Support S&T startups from idea to market
Startup Village Entrepreneurship Programme (SVEP) (2015)	Ministry of Rural Development (DAY - NRLM)	Promote rural entrepreneurship
ASPIRE (Scheme for Promotion of Innovation, Rural Industries and Entrepreneurship) (2015)	Ministry of MSME	Strengthen rural enterprise incubators
Prime Minister's Employment Generation Programme (PMEGP) (2008)	Ministry of MSME (KVIC)	Subsidised credit for self-employment

Source: PIB

What can be the way forward?

- Pivot from “Consumer Tech” to “Deep-Tech & IP Creation”:** The most significant strategic direction for Indian startups is to move beyond the first wave of success in consumer internet, edtech, and fintech. Capital and talent must be aggressively reallocated into sectors like generative AI, semiconductor design, quantum computing, biotechnology, and space-tech.
- Expand Beyond Metros into Tier-2 and Tier-3 Cities:** Building from Tier-2 and Tier-3 cities can significantly reduce costs and boost talent retention. Startups that design for Bharat rather than for urban elites will access a far larger and less competed market. Lower real estate, lower salaries, and higher loyalty among local talent make this a compelling operational choice too.
- Leverage Government Schemes More Effectively:** Many eligible startups are either unaware of or under-utilise available support. Securing DPIIT recognition early, applying for Credit Guarantee Scheme for Startups (CGSS) coverage, targeting climate-tech and logistics where demand meets policy incentives, and co-investing with SIDBI-backed AIFs to limit risk are all concrete steps founders can take.
- Build for Global Markets:** Indian SaaS and B2B tech startups have demonstrated that it is possible to build world-class products in India and sell them globally at competitive price points. This “**global from day one**” approach earns foreign exchange, reduces dependence on domestic funding cycles, and builds more defensible businesses.
- Fix the Regulatory Environment:** The government’s role is not just to fund startups but to get out of their way. Simplifying GST compliance for startups, rationalising ESOP taxation (so employees are not taxed before they can liquidate shares), streamlining labour law compliance, and creating faster dispute resolution mechanisms would meaningfully reduce the cost and friction of building a company.
- Build Mentorship and Knowledge Infrastructure:** Capital is necessary but not sufficient. India needs a much denser network of experienced operators — former founders, senior executives, domain experts — who actively mentor the next generation.

UPSC GS-3: Indian Economy

Read More: The Hindu, [PIB](#)

El Niño: Concept & Impacts – Explained Pointwise

The US National Oceanic and Atmospheric Administration (NOAA) ENSO Diagnostic Discussion Report (2026) states that El Niño is likely to emerge soon, with an 82% chance during May-July 2026 & a 96% chance of continuing through the winter of 2026-27. El Niño is a climate pattern that emerges sporadically along the equatorial Pacific and is known for triggering global weather changes. The impacts of El Niño extend far beyond weather, influencing marine ecosystems, agriculture, economy, and human health. As this powerful force returns, understanding the concept of El Niño and its widespread impacts becomes crucial for everyone.

El Niño: Concept & Impacts – Explained Pointwise

1. CONCEPT

- El Niño is a climate phenomenon characterized by the **abnormal warming** of sea surface waters in the central and eastern equatorial Pacific Ocean.
- It occurs every **2–7 years** and typically lasts **9–12 months**.
- It is the warm phase of the El Niño–Southern Oscillation (ENSO), which also includes La Niña (cool phase) and Neutral phase.

HOW EL NIÑO DEVELOPS (TYPICAL CONDITIONS vs EL NIÑO CONDITIONS)

2. IMPACTS OF EL NIÑO – POINTWISE

<h4>1. IMPACT ON WEATHER & RAINFALL</h4> <ul style="list-style-type: none"> Suppresses monsoon rainfall in many parts of the world, especially in India, Southeast Asia and Australia. Leads to drought conditions. 	<h4>2. AGRICULTURE & FOOD SECURITY</h4> <ul style="list-style-type: none"> Reduced rainfall affects crop yields, especially rice, pulses, oilseeds, sugarcane and cotton. Increases risk of food insecurity and price rise. 	<h4>3. FORESTS & WILDLIFE</h4> <ul style="list-style-type: none"> Higher chances of forest fires due to hot and dry conditions. Impacts wildlife habitats, biodiversity and water availability. 	<h4>4. WATER RESOURCES</h4> <ul style="list-style-type: none"> Droughts reduce river flows, reservoir levels and groundwater recharge. Affects drinking water supply and hydropower generation. 	<h4>5. EXTREME WEATHER EVENTS</h4> <ul style="list-style-type: none"> Increases frequency of extreme events in some regions like heatwaves, cyclones and heavy rainfall. Varied impacts across different parts of the world. 	<h4>6. OCEANS & FISHERIES</h4> <ul style="list-style-type: none"> Warmer ocean waters affect marine ecosystems and coral reefs. Disrupts fish migration and reduces fish catch in some regions.
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KEY TAKEAWAY

El Niño redistributes heat and rainfall across the globe, causing below-normal rainfall in some regions and above-normal rainfall in others, leading to wide-ranging environmental, economic and social impacts.

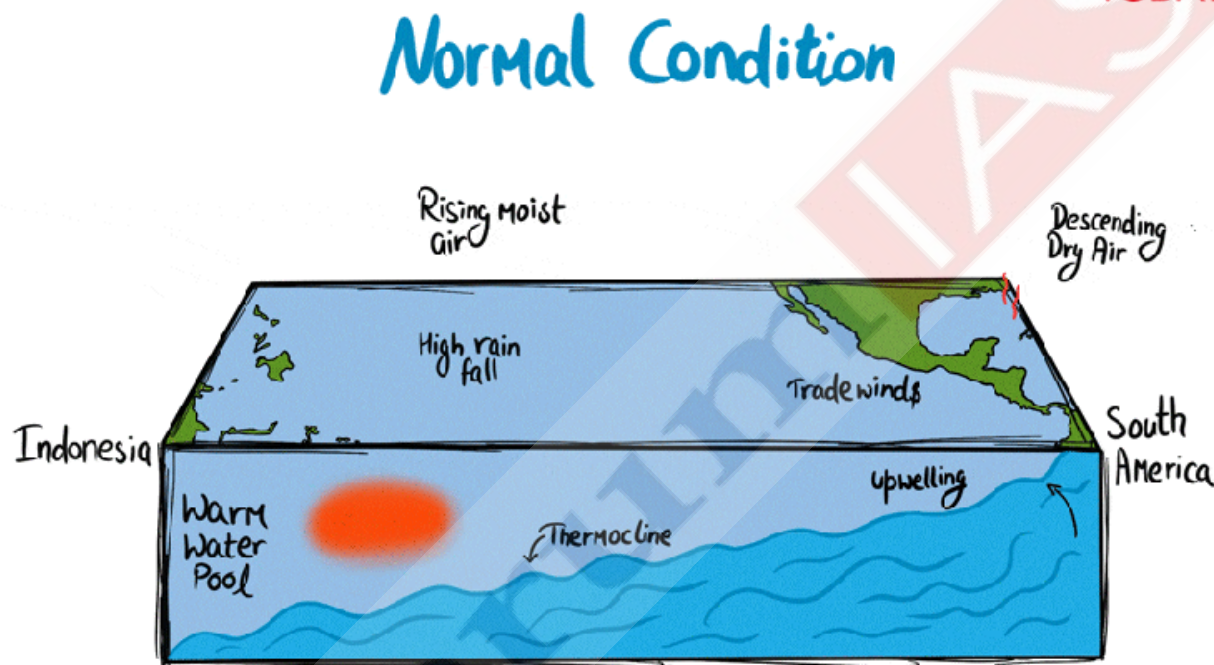
What Is El Niño?

- **El Niño** (Spanish for “The Boy Child,” referring to the Christ Child because the phenomenon often peaks around December) is a climate pattern characterized by the **unusual warming of surface waters** in the central and eastern tropical Pacific Ocean.

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- El Niño is the “warm phase” of a larger phenomenon called the El Niño-Southern Oscillation (ENSO).
- La Niña, the “cool phase” of ENSO, is a pattern that describes the unusual cooling of the region’s surface waters.
- El Niño and La Niña are considered the ocean part of ENSO, while the Southern Oscillation is its atmospheric changes. El Niño events occur irregularly at two- to seven-year intervals.

How will the formation of El Nino occur?



Normally, trade winds blow from east to west, pushing warm water to the west. This warm water causes the air to rise, creating clouds and rain in the west. The dry air then descends on the east side of the ocean, creating a circulation pattern.

Source: India Today

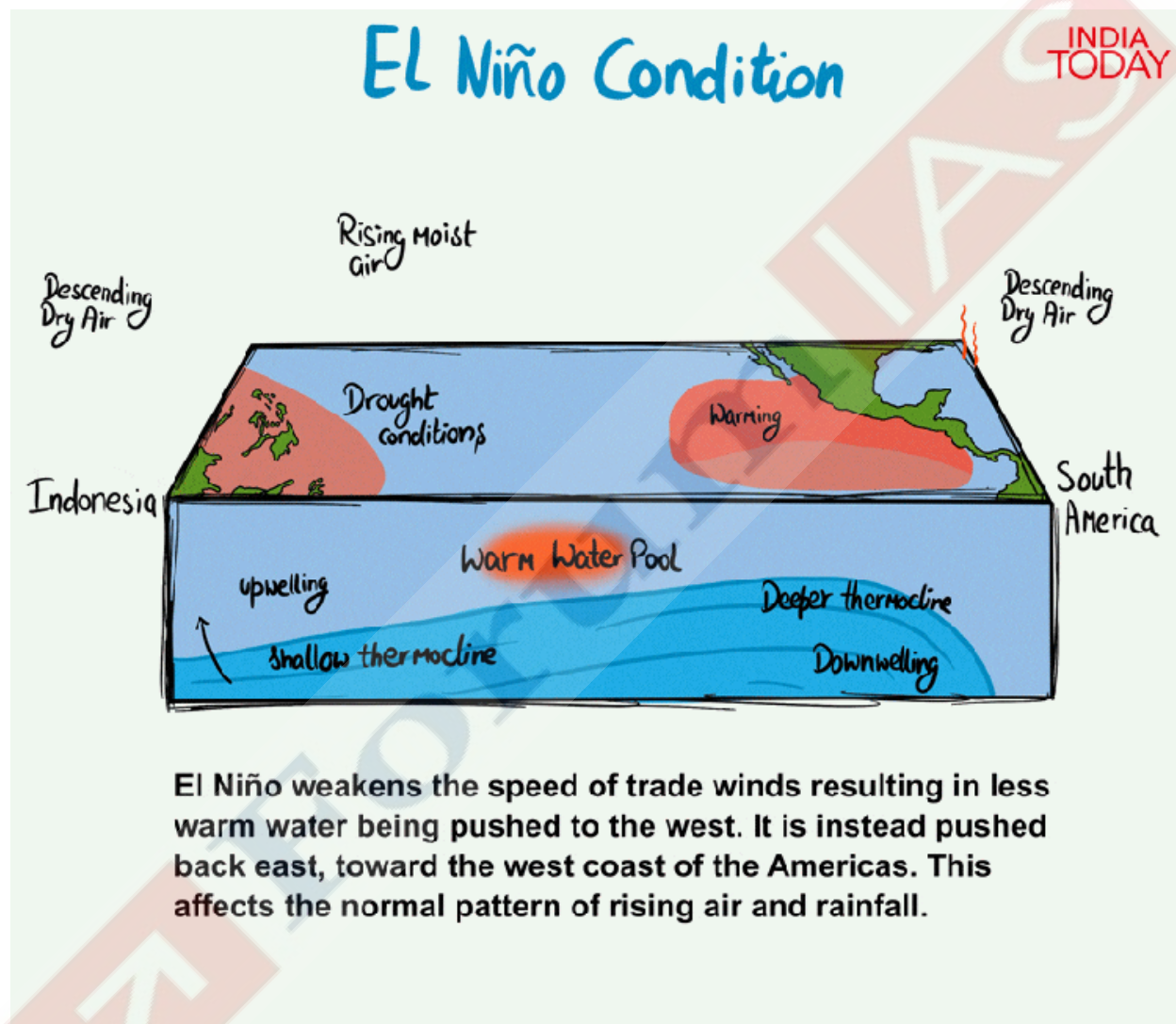
The formation of El Niño involves a series of interactions between the ocean and the atmosphere in the tropical Pacific. Here are the key steps in this complex process:

- **Normal conditions:** Under normal conditions, the trade winds (which are part of the Earth’s general circulation) blow across the tropical Pacific from east to west. These winds push warm surface water towards the western Pacific (near Asia and Australasia), piling it up there. This leaves room for cold, nutrient-rich water to well up from the depths in the eastern Pacific (near South America).
- **Air circulation:** The accumulation of warm water in the west heats the overlying air, making it moist and buoyant. This warm, moist air rises, leading to the formation of rain clouds. The rising air creates

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a low-pressure system in the west, and a high-pressure system forms in the east where cooler, drier air descends. This pressure difference reinforces the trade winds, completing what is known as the Walker circulation.

- **Weakening trade winds:** The onset of El Niño involves a weakening or reversal of the trade winds. This can happen for various reasons, such as changes in the sea surface temperature distribution or atmospheric pressure patterns. The weakening of the trade winds is often initiated by an atmospheric phenomenon known as a westerly wind burst.



El Niño weakens the speed of trade winds resulting in less warm water being pushed to the west. It is instead pushed back east, toward the west coast of the Americas. This affects the normal pattern of rising air and rainfall.

Source: India Today

- **Spread of warm water:** When the trade winds weaken, they can no longer push the warm water to the west as effectively. As a result, the warm water spreads from the western Pacific to the east. This process is known as a **Kelvin wave**. The spread of warm water to the east suppresses the upwelling of cold water near South America.

- **Feedback loop:** The eastward spread of warm water further weakens the trade winds, creating a feedback loop that intensifies El Niño. This is because the warmer water warms the overlying air, which lowers the atmospheric pressure and weakens the trade winds.
- **Establishment of El Niño:** As this feedback loop continues, the warm water in the eastern Pacific gets warmer, and the weakened trade winds get weaker. Eventually, a full-blown El Niño event is established, characterized by significantly warmer than average sea surface temperatures in the central and eastern Pacific.

What are the impacts of El Niño on India?

<p><u>Impact on Monsoon & Rainfall</u></p>	<ul style="list-style-type: none"> ● Suppressing the Monsoon: El Niño can significantly impact the Indian monsoon, leading to fluctuations in rainfall patterns. During an El Niño year, India often experiences below-average monsoon rains, potentially causing drought conditions. El Niño leads to: <ul style="list-style-type: none"> ○ Delayed Onset: The monsoon often arrives late along the Kerala coast. ○ Prolonged Dry Spells: Extended periods of little to no rain (“monsoon breaks”) during July and August, which are critical months for crop sowing. ○ Deficient Overall Rainfall: Historically, about half of all El Niño years have resulted in distinct monsoon droughts in India.
<p>Agriculture & Food Security</p>	<p>Because a vast portion of Indian agriculture relies entirely on rainfed farming, the weakening of the monsoon triggers a chain reaction through the economy:</p> <ul style="list-style-type: none"> ● Reduced Crop Yields: El Niño-induced rainfall deficits directly hurt <i>kharif</i> (summer) crops such as rice, pulses, soybeans, and cotton. Lower production leads to reduced income for farmers. ● Rabi Crop Dependence: Poor reservoir levels from a weak monsoon can also affect <i>rabi</i> (winter) crops like wheat and mustard, which depend on irrigation from stored water. ● Livestock and Dairy: Drought conditions reduce fodder availability, impacting livestock health and dairy productivity, a key rural income source.
<p>Ecological & Wildlife Impact</p>	<ul style="list-style-type: none"> ● Forest Fires: Extended droughts and soaring temperatures dry out forest floors, drastically increasing the frequency, intensity, and spread of forest fires—particularly in the deciduous forests of Central India and parts of the Western Ghats. ● Fodder and Water Crises in Protected Areas: Searing heat and dried-up natural waterholes (water bodies) inside national parks and wildlife sanctuaries force megafauna like Asian elephants and Indian rhinoceroses to migrate out of protected boundaries, leading to a sharp rise in human-wildlife conflict.

<p>Economic Impact</p>	<ul style="list-style-type: none"> ● Rural Economic Slowdown: Reduced agricultural output directly lowers incomes for millions of farmers, suppressing rural consumer demand for goods and services across the country. A hotter India is not merely a warmer India; it is an India where earning a livelihood becomes increasingly difficult. ● Rising Food Prices: Lower production of vegetables, cereals, and pulses drives up market prices. This forces households to spend a larger share of income on food, reducing discretionary spending. For policymakers, this creates a difficult balancing act – the same climate shock can simultaneously weaken growth & intensify inflationary pressures. ● Subsidy Burden: The government often raises minimum support prices (MSPs) for crops to cushion farmer losses. Subsidized food distribution (e.g., PDS) also expands to cover drought-hit populations. ● Relief and Bailouts: State and central governments spend heavily on drought relief measures, including loan waivers for farmers, free grain, and employment under rural job guarantee schemes (e.g., MGNREGA). ● Lower Tax Revenue: Reduced agricultural output slows the rural economy, curbing demand for consumer goods, tractors, and fertilizers — lowering GST collections. ● Weakened Rural Consumption: Farmers with lower incomes postpone buying vehicles, electronics, building materials, and fast-moving consumer goods (FMCG), affecting manufacturing and retail sectors.
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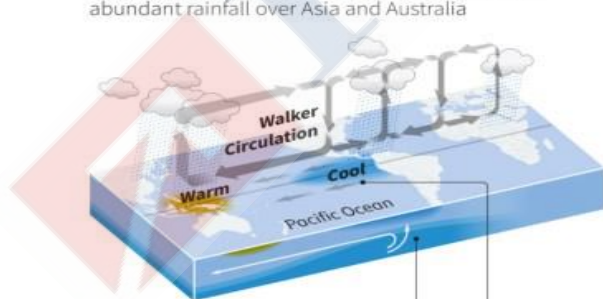
What are the El Nino impacts in regions outside India?

El Nino explained

The El Niño–Southern Oscillation (ENSO) is the Earth's most influential driver of climate variability. El Niño, the warm phase of the ENSO cycle, is marked by warmer-than-average sea surface temperatures across the central and eastern Pacific Ocean.

NEUTRAL CONDITIONS

The Walker Circulation is an east-west vertical atmospheric circulation above the Equatorial Pacific. Moist air rises over normally warm seas, causing abundant rainfall over Asia and Australia

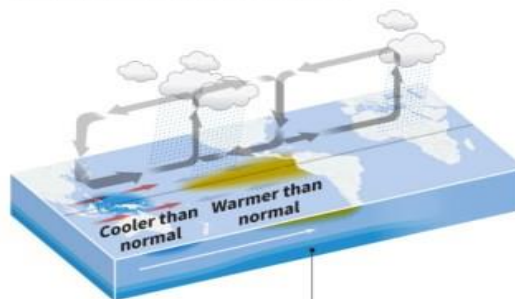


Upwelling of cold water cools the air, giving South America a cooler and drier climate

Easterly trade winds push warm surface waters westward

EL NIÑO CONDITIONS

As trade winds weaken or reverse, warm water and rain clouds from the western Pacific Ocean shift eastward towards the Americas.



Surface waters in the central and eastern Pacific Ocean become significantly warmer, reducing the upwelling of cold water

Sources: Australia Bureau of Meteorology; NOAA National Weather Service

Source: NOAA

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El Niño affects various regions across the globe in different ways. Here are some impacts observed in regions outside India:

- **North America:** El Niño tends to suppress Atlantic hurricane activity, although there are exceptions depending on other climate factors.
- **South America:** Coastal countries in South America like Peru and Ecuador can experience heavy rains and flooding. El Niño weakens the upwelling of cold, nutrient-rich waters along the coasts of South America, which can negatively impact marine ecosystems and fisheries.
- **Australia and Southeast Asia:** These regions generally experience decreased rainfall during El Niño events, which can lead to droughts and significantly impact agriculture, water supply, and ecosystems. This decrease in precipitation can also heighten the risk of wildfires.
- **Africa:** East Africa may receive more rain than usual, which could lead to flooding. Southern Africa may face drier conditions, which can lead to water shortages and impacts on agriculture.
- **Europe:** The impacts on Europe are more uncertain and depend on how El Niño interacts with other climate patterns. However, it can potentially influence the strength and path of the jet stream, which could result in various weather anomalies in the region.

How are countries around the world planning to mitigate and combat the impacts of El Niño?

- **Creation of disaster risk reduction funds:** Countries like Peru have created dedicated funds to tackle El Niño. Peru's Disaster Risk Reduction Fund is specifically designated to prepare for and mitigate the potential impacts of El Niño. These funds are often allocated to various activities, including improving infrastructure to withstand extreme weather events, supporting early warning systems, and assisting recovery efforts after disasters.
- **Improved monitoring and early warning systems:** The US-based National Oceanic and Atmospheric Administration (NOAA) continually invests in technology to monitor oceanic and atmospheric conditions better, helping predict an impending El Niño event. Early warnings from organizations like NOAA can help governments worldwide to prepare well in advance and implement strategies to minimize potential impacts.
- **International cooperation and policy frameworks:** Many countries collaborate through international agreements and conventions to manage El Niño's impacts. The Paris Climate Agreement, signed by 196 nations, underscores the importance of global action to address climate change, including phenomena like El Niño. These agreements may involve the sharing of information and resources, the development of common strategies, and cooperation on research and development efforts related to El Niño.
- **Climate change mitigation efforts:** As the effects of climate change can potentially exacerbate the frequency and intensity of El Niño, efforts to mitigate climate change are an integral part of addressing El Niño. The UN's Intergovernmental Panel on Climate Change (IPCC) plays a crucial role in guiding global policies related to climate change, including strategies to cope with El Niño events.
- **Adapting agriculture and infrastructure:** In countries like India, which are heavily impacted by El Niño, there are ongoing efforts to adapt agricultural practices to be more resilient to changes in rainfall and temperature. This includes implementing irrigation facilities, diversifying crop types, and promoting weather-based crop insurance.
- **Impact-Based Analysis:** Organizations like the UN's Food and Agriculture Organization (FAO) combine seasonal climate forecasts with data on crop yields, food security, and market prices. This allows them to predict exactly where and when crop failures or water shortages will occur.

- **Regional Collaboration:** Central American countries are coordinating through the Central American Agricultural Council to share strategies for the Dry Corridor, a region highly susceptible to drought.

What should be done?

1. **Promoting climate resilient infrastructure:** Infrastructure development needs to factor in climate resilience, meaning that buildings, roads, and other infrastructure should be constructed to withstand extreme weather events like those brought on by El Niño.
2. **Strengthening international collaboration:** Countries should strengthen international cooperation to share knowledge, technology, and resources to mitigate the impacts of El Niño. Climate change has no borders, and global collaboration is crucial.
3. **Climate change mitigation:** Efforts should be heightened to reduce greenhouse gas emissions, as global warming can exacerbate the effects of El Niño. This includes promoting clean energy, reducing deforestation, and implementing sustainable practices in industries.
4. **Adapting agricultural practices:** In agriculture-based economies, there should be widespread education on the effects of El Niño on weather patterns to help farmers adapt their practices. This can include crop diversification, implementing irrigation facilities, and promoting weather-based crop insurance.
5. **Mandatory Rainwater Harvesting:** Accelerating desiltation (clearing out mud and silt) of traditional village tanks, stepwells, and farm ponds *before* the monsoon starts so they can catch and store every drop of rain that does fall.
6. **Strategic Food Grain Reservoirs:** Maintaining robust buffer stocks of staples (wheat, rice, pulses) via the Food Corporation of India (FCI) to stabilize market supply and clamp down on hoarding or food inflation during a deficit year.
7. **Broadening Crop Insurance:** Ensuring swift, hassle-free payouts through the Pradhan Mantri Fasal Bima Yojana (PMFBY) by leveraging satellite imaging and drones to assess crop damage quickly, keeping farmers out of debt traps.
8. **Building disaster management capacity:** Countries should work on building their capacity to manage and respond to disasters caused by El Niño. This includes establishing effective disaster response strategies, conducting regular drills, and ensuring adequate resources are allocated to disaster management.
9. **Conserving marine ecosystems:** Since El Niño severely impacts marine ecosystems, it is crucial to conserve and protect these ecosystems as much as possible. This includes preventing overfishing, reducing pollution, and protecting marine habitats like coral reefs.

Conclusion: El Niño is not merely a weather event but a development challenge. India needs stronger climate adaptation measures through heat-resilient cities, worker protection & better water management. Climate risk is now economic risk, and its burden falls most heavily on the poor.

Syllabus: GS 1: Geophysical Phenomena: Important Geophysical phenomena

Sources: [Business Standard](#), [Bloomberg](#), [Time](#), [The Weather Channel](#), [Climate.gov](#), [Live Mint](#), [NPR](#), [TOI](#), [Reuters](#), [India Today](#), [DTE](#), [Financial Express](#) and [BBC](#), [The Hindu](#)

India-Indonesia Relations – Explained Pointwise

India and Indonesia recently held high-level diplomatic talks as External Affairs Minister S. Jaishankar met Indonesian Foreign Minister Sugiono in New Delhi during the **8th India-Indonesia Joint Commission Meeting**. The discussions focused on strengthening the **India-Indonesia Comprehensive Strategic Partnership**, with emphasis on defence cooperation, maritime security, trade, investment, connectivity, food security, and regional issues.

The two nations share deep historical, cultural, and trade ties. Their partnership is increasingly significant for promoting regional stability, economic growth, and rules-based order in the Indo-Pacific region.

India-Indonesia Relations

Strengthening Partnership, Building a Prosperous Indo-Pacific Together

Two Nations, One Vision for Peace, Progress and Prosperity

- STRONG PARTNERSHIP**
Elevated to a Comprehensive Strategic Partnership in 2018, built on trust, respect and shared values.
- TRADE & ECONOMY**
Growing trade and investment ties with a focus on enhancing economic cooperation and sustainable growth.
- DEFENCE & SECURITY**
Expanding defence cooperation and maritime security for a safe and stable region.
- MARITIME & CONNECTIVITY**
Working together for secure sea lanes, connectivity projects and a stronger Indo-Pacific.
- ENERGY & SUSTAINABILITY**
Collaborating in clean energy, renewables and sustainable development for a better future.
- PEOPLE TO PEOPLE TIES**
Strong cultural, historical and people-to-people connections that continue to bring our nations closer.

India and Indonesia – Together for a Peaceful, Stable and Prosperous Indo-Pacific

How have India-Indonesia Relations evolved over time?

<p>Ancient Era</p>	<p>Long before modern diplomacy, India and Indonesia were deeply connected via maritime trade routes linking Indian coastal states to Java, Sumatra, and Bali.</p> <p>Hinduism and Buddhism traveled seamlessly across the Indian Ocean. This legacy remains vibrant in Indonesia today – from the magnificent 9th-century monuments of Borobudur and Prambanan to the enduring prominence of the <i>Ramayana</i> and <i>Mahabharata</i> in Indonesian art, shadow puppetry (<i>Wayang</i>), and the unique Hindu culture of Bali.</p>
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<p>Early Post-Independence Period (1940s-1950s)</p>	<p>India played a crucial role in supporting Indonesia's struggle for independence from Dutch colonial rule. Under Prime Minister Jawaharlal Nehru, India emerged as a strong advocate for Indonesia's freedom on the global stage. Key developments during this period included:</p> <p>a. Treaty of Friendship (1951): Strengthening cooperation in trade, culture, and military affairs.</p> <p>b. Non-Alignment and Anti-Colonialism: Both nations were aligned on principles of non-alignment, peaceful coexistence, and anti-colonialism, leading to their active participation in the 1955 Bandung Conference and the formation of the Non-Aligned Movement (NAM) in 1961.</p>
<p>Deterioration in Ties (1960s)</p>	<p>Despite early cooperation, India-Indonesia relations faced setbacks in the 1960s due to geopolitical shifts:</p> <p>a. India-China Conflict (1962): India's ties with China worsened post the 1959 Tibetan uprising and the 1962 war, while Indonesia maintained cordial relations with China.</p> <p>b. India-Pakistan Conflict (1965): Indonesia openly sided with Pakistan during the 1965 India-Pakistan war, even providing military assistance to Pakistan, causing a strain in Indo-Indonesian ties.</p>
<p>Cold War Era (1966-1980s)</p>	<p>A shift in Indonesia's political landscape led to the gradual revival of ties:</p> <p>a. President Suharto's Era: Indonesia distanced itself from China and sought to rebuild relations with India.</p> <p>b. Maritime Boundary Agreement (1977): Strengthened cooperation in maritime affairs and regional security.</p> <p>c. Suharto's Visit to India (1980): Marked a new phase of improved diplomatic relations between the two nations.</p>
<p>Look East Policy (1990s)</p>	<p>India's economic liberalization in the 1990s and the launch of the 'Look East Policy' in 1991 significantly boosted Indo-Indonesian ties:</p> <p>a. Expansion of Economic Ties: Trade and investment between the two countries witnessed substantial growth.</p> <p>b. Comprehensive Partnership: Economic, security, and cultural cooperation became key aspects of bilateral relations.</p>

<p>Act East Policy and Recent Developments (Since 2000s)</p>	<p>With the launch of India's 'Act East' Policy in 2014, Indonesia emerged as a key regional partner. Notable advancements include:</p> <p>a. Trade Relations: Indonesia is India's 2nd largest trading partner in ASEAN (after Singapore), with trade growing from USD 4.3 billion in 2005-06 to US\$ 29.40 billion in 2023-24.</p> <p>b. Comprehensive Strategic Partnership (2018): PM Modi's visit to Jakarta led to the signing of the Comprehensive Strategic Partnership and a shared vision on Indo-Pacific maritime cooperation.</p> <p>c. Maritime Cooperation: Both nations jointly advocate for the resolution of maritime disputes and the finalization of the South China Sea Code of Conduct as per UNCLOS (United Nations Convention on the Law of the Sea).</p> <p>d. Defense Cooperation: Indonesia is negotiating with India for the BrahMos missile system, with an estimated deal worth USD 450 million.</p>
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What are the key pillars of cooperation between India-Indonesia?

1. Economic & Trade Relations:

- **Bilateral Trade:** Indonesia is India's **second-largest trading partner** in the ASEAN region, with bilateral trade reaching **\$28.15 billion in 2024-25**. The goal is to increase the bilateral trade to \$50bn.
- **Key Exports & Imports:** India's **key imports** include **coal, palm oil, and rubber**, while its key exports are refined petroleum, telecom equipment, and agricultural products.
- **Investment:** **Indian investment in Indonesia stands at \$1.56 billion**, with a focus on mining, textiles, and infrastructure, while **Indonesian investment in India totals \$653.8 million**, primarily in manufacturing and trade.
- **Trade Facilitation:** India and Indonesia have made efforts in trade facilitation, including the **ASEAN-India Trade in Goods Agreement (AITIGA) review** to reduce trade barriers, and the Local Currency Settlement MoU, which encourages trade in local currencies.
- **Fintech & Digital Payments:** Discussions are underway to link India's Unified Payments Interface (UPI) with Indonesia's Quick Response Code Indonesian Standard (QRIS) to seamless cross-border retail payments.
- **Andaman-Sumatra Connectivity:** The governments are working to build direct economic and tourism links between India's Andaman and Nicobar Islands and Indonesia's Aceh province, which are separated by less than 150 nautical miles.

2. Strategic & Security Cooperation:

- **Vision Alignment:** India's **Act East Policy** and **SAGAR** (Security and Growth for All in the Region) vision align directly with Indonesia's **Global Maritime Fulcrum** concept.
- **The Sabang Port Project:** The most significant geopolitical initiative is the joint development of the **Sabang Deep-Sea Port** in Sumatra. Located at the western entrance of the Malacca Strait, this port provides India with strategic maritime access to one of the world's busiest choke points.

- **Defence & Security:** Both countries pledged to enhance defense cooperation through initiatives such as **Coordinated Patrol, Ex Garuda Shakti (Army)**, and **Ex Samudra Shakti (Naval)**. Additionally, both sides agreed to set up a **Bilateral Maritime Dialogue** and a **Cyber Security Dialogue**.
- **Defense Industry Collaboration:** India-Indonesia Defense Industry Exhibition (2024) focused on co-producing defense equipment, sharing military technology, and increasing maintenance and logistical support for naval vessels.

3. Energy & Health Security:

- **Renewable Energy & Critical Minerals:** Both countries are focused on joint exploration of **nickel and bauxite** for clean energy and biofuel collaboration for sustainability.
- **Health Cooperation:** Both countries signed MoUs on Health Cooperation and Traditional Medicine Quality Assurance, focusing on digital health and capacity-building for healthcare professionals.

4. Technological Cooperation:

- India's digital initiatives, such as **Aadhaar, UPI, and CoWIN**, serve as models for Indonesia's digital growth.
- Collaborative efforts in quantum communication, cybersecurity, artificial intelligence, and space technology.

5. Cultural & Educational Cooperation:

- **Language and Symbolism:** The Indonesian national language (Bahasa Indonesia) contains thousands of Sanskrit loanwords, and the national symbol, the *Garuda*, draws directly from Indian mythology.
- **Heritage & Arts:** India supports the restoration of the **Prambanan Temple, a UNESCO World Heritage Site in Indonesia**, and the Indian Cultural Centers in Jakarta and Bali promote Indian arts and yoga.
- **Education:** Scholarships for Indonesian students available through **I TEC (Indian Technical and Economic Cooperation)** and **ICCR (Indian Council for Cultural Relations)** programs

6. Multilateral Cooperation:

- Both countries emphasise the necessity of a free, open, stable, and peaceful Indo-Pacific based on international law.
- Both countries highlighted the significance of ASEAN centrality and collaboration on regional matters such as the ASEAN Outlook on the Indo-Pacific, the **India-Indonesia-Australia Trilateral**, the Indo-Pacific Oceans Initiative (IPOI), as well as BRICS and the Indian Ocean Rim Association (IORA).

What are the challenges in India-Indonesia relations?

1. Trade and Economic Barriers:

- **Missed Targets:** Bilateral trade for 2024-25 stood at \$28.15 billion, falling well short of the ambitious \$50 billion target set for 2025. This gap highlights the gap between ambition and current economic traction.
- **Lack of Comprehensive Economic Cooperation Agreement (CECA):** Unlike Malaysia and Singapore, **Indonesia does not have a CECA with India**, reducing its competitiveness, particularly in sectors like palm oil.
- **Low utilization of AITIGA:** The ASEAN-India Trade in Goods Agreement (AITIGA) has a **utilization rate of only 25%**, limiting the benefits that could be gained from the agreement.
- **Trade Imbalance:** While bilateral trade is robust, it is profoundly asymmetrical and heavily skewed in Indonesia's favor. India imports significant quantities of palm oil (\$11 billion in 2022) and coal from Indonesia, contributing to a trade imbalance that favors Indonesia.
- **Unrealized trade potential:** Bilateral trade could increase by 33% to reach \$61 billion, indicating untapped opportunities for growth in trade.
- **Market Access & Tariffs:** Indian exporters face significant non-tariff barriers in Indonesia, particularly in the pharmaceutical, dairy, and bovine meat sectors.

2. Investment and Competition with China:

- **Dominance of Chinese investments:** Under President Joko Widodo, Chinese investments have overshadowed Indian investments. In 2024, **Indonesia signed \$10 billion worth of business deals with China**, further intensifying competition for investment.
- **Protectionist policies in India:** Indian industries, especially textiles, have raised concerns about the influx of Indonesian products like **Viscose Staple Fibre (VSF)**, fearing increased competition.

3. Geopolitical and Strategic Constraints:

- **Strategic Ambiguity:** Indonesia adheres strictly to its **Bebas-Aktif** (Independent and Active) foreign policy. It fiercely avoids taking sides in the U.S.–China rivalry and looks at minilateral groupings like the **Quad** (which includes India) with a degree of caution, fearing they could destabilize ASEAN centrality.
- **The South China Sea vs. Indian Ocean:** While Jakarta faces incursions by Chinese coast guard vessels in its Exclusive Economic Zone (EEZ) around the Natuna Islands, it is highly protective of its economic ties with Beijing (China remains Indonesia's largest trading partner). Indonesia is hesitant to form an overt anti-China military alignment with India, preferring quiet, localized maritime capacity building over aggressive balancing.
- **Regulatory challenges in defence:** Differences in defense procurement processes have delayed joint defense projects, limiting the scope of strategic cooperation between the two nations.
- **The Sabang Port Sluggishness:** The development of the **Sabang Deep-Sea Port** in Aceh is hailed as a geopolitical game-changer due to its proximity to the Malacca Strait. However, actual construction, feasibility studies, and joint investments have moved at a bureaucratic crawl. Delays in upgrading this infrastructure limit the immediate interoperability of the Indian and Indonesian navies.

4. Connectivity and People-to-People Barriers:

- **Limited air connectivity:** Direct flights between India and Indonesia are limited, restricting tourism, business expansion, and people-to-people exchanges.
- **The Andaman-Aceh Gap:** Plans to establish thriving commercial shipping routes, institutional trade, and eco-tourism links between the Andaman & Nicobar Islands and Sumatra have remained mostly on paper due to strict regulatory frameworks on both sides.
- **Visa barriers:** Restrictive visa policies hinder student exchanges, business travel, and cultural engagement, limiting deeper bilateral ties.
- **Underdeveloped People-to-People Ties:** Compared to the high-level diplomatic engagement, connections at the grassroots level – among youth, students, academics, and civil society – remain weak. This lack of societal integration prevents the relationship from developing a strong, self-sustaining foundation beyond government initiatives.

What should be the way forward?

1. **Expand Economic and Trade Integration:** Accelerate negotiations for a Comprehensive Economic Partnership Agreement (CEPA) to address existing trade and investment barriers. This is essential for boosting bilateral commerce, which has historically fallen short of targeted goals.
2. **The Shared Economic Zone:** Finalizing the legal and customs frameworks for direct shipping lines between Aceh and the Andaman & Nicobar Islands would create a sub-regional economic hub, cutting down transit times for goods moving between South and Southeast Asia.
3. **Securing Critical Minerals:** As both countries push for green energy and EV manufacturing, establishing supply chains for Indonesia's massive **nickel** reserves and India's processing capacities is a natural win-win.
4. **Leverage Tourism and Cultural Diplomacy:** Build robust people-to-people ties, particularly among youth and women, by advancing theme-based tourism routes like the RICH (Religious, Cultural & History) plan to connect shared ancient maritime legacies and traditions.
5. **Deepened Collaborations:** Expanding partnerships in IT, energy, and tourism, while fostering cultural ties, positions India as a reliable partner for Indonesia's growth trajectory.
6. **Aviation and Tourism Push:** Both governments need to incentivize airlines to establish direct, daily commercial flights connecting major Indian cities (like Delhi, Mumbai, and Bengaluru) directly to Jakarta and Sumatra, reducing the current over-reliance on connecting hubs like Singapore or Kuala Lumpur.
7. **Manage the China Question Tactfully:** India and Indonesia must identify areas of collaboration beyond the China factor. Both countries can use platforms like BRICS to collectively advocate for the Global South, effectively diluting Beijing's ability to monopolize the developing-world narrative. Acting as co-anchors of a multipolar world order allows India and Indonesia to push back against economic coercion while maintaining pragmatic channels of communication with China.
8. **Multilateral Co-Leadership:** India and Indonesia should expand cooperation in global and regional forums such as the UN, G20, and ASEAN, where countries can only hope to avoid being caught in a US-China bifurcation if they scale up alternative forms of collective action.

Conclusion: India & Indonesia relationship requires a shift from broad-stroke ambition to detailed, coordinated execution. The two nations need to finally fulfill the immense promise of their ancient and modern relationship, becoming true anchors of stability and prosperity in the Indo-Pacific.

Read more: [Indian Express](#)

UPSC Syllabus- GS 2- Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

India's Foreign Trade Agreements (FTAs): Approach and Challenges – Explained Pointwise

India has recently accelerated its pursuit of Free Trade Agreements (FTAs) as part of its strategy to deepen global economic integration, diversify export markets, and strengthen supply-chain resilience. Moving beyond its earlier cautious approach, India has concluded FTAs with countries such as United Arab Emirates and Australia, while actively negotiating agreements with the European Union, United Kingdom, and other partners. India now has 15 FTAs covering 27 countries, another 9 agreements with 42 countries are nearing completion – once finalized, India's FTA partners will total 69 countries & could account for ~75% of the country's exports.

India's Foreign Trade Agreements (FTAs): Approach and Challenges - Explained Pointwise

What are Free Trade Agreements (FTAs)?

- FTAs are arrangements between two or more countries or trading blocs that agree to **reduce or eliminate customs, tariff and non tariff barriers on substantial trade** between them.
- FTAs, normally cover **trade in goods** (such as agricultural or industrial products) and **trade in services** (such as banking, construction, trading etc.).
- FTAs can **also cover other areas** such as:
 - **Services trade:** market access for banking, insurance, telecom, education, etc.
 - **Investment protections:** guarantees against arbitrary expropriation, dispute resolution mechanisms
 - **Intellectual property:** patent, copyright, and trademark standards
 - **Government procurement:** opening public contracts to foreign bidders
 - **Non-tariff barriers:** harmonising standards, certifications, and customs procedures
 - **Labour and environment:** increasingly common in newer agreements

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- Types of Trade Agreements:

Preferential Trade Agreement	Partial tariff reductions on select goods
Free Trade Agreement	Broad elimination of tariffs/barriers between members
Customs Union	FTA + common external tariff
Common Market	Customs union + free movement of labour and capital
Economic Union	Common market + harmonised economic policies

Key Features of FTAs:

1. **Reduction of Tariffs:** Tariffs are taxes imposed on imported goods. FTAs typically eliminate these taxes entirely (zero tariff) or reduce them significantly over a phased period.
2. **Reduction of Non-Tariff Barriers:** NTBs are obstacles like quotas (limits on quantity), burdensome licensing requirements, or unnecessary technical standards. FTAs aim to streamline or remove these.
3. **Rules of Origin:** To prevent goods from non-member countries from entering via the member with the lowest tariff, FTAs specify that only goods “substantially transformed” or with a high percentage of local content within the member countries qualify for the preferential tariff rate.
4. **Trade in Services:** Many modern FTAs cover services (e.g. banking, insurance, consulting, telecommunications), allowing companies to set up operations in partner countries under fair conditions.
5. **Intellectual Property (IP) Protection:** FTAs often set standards for protecting patents, copyrights, and trademarks to encourage innovation and creative industries.
6. **Investment Provisions:** These include protections for foreign investors, such as fair treatment, protection from expropriation, and mechanisms for dispute resolution (e.g. investor-state dispute settlement, or ISDS).
7. **Dispute Settlement Mechanism:** A formal process for resolving disagreements between member countries over the interpretation or implementation of the agreement.

Pros & Cons of FTAs:

Pros	Cons
Lower Prices for Consumers: Imported groceries, tech, and clothing become cheaper because import taxes are removed.	Job Displacement: Domestic industries that cannot compete with cheaper foreign imports may downsize or close, hurting local manufacturing.
Market Expansion: Local businesses gain friction-free access to millions of new buyers abroad, boosting export potential.	Intellectual & Regulatory Pressure: Smaller nations sometimes have to alter domestic laws to align with larger trade partners.

<p>Increased Foreign Investment: Companies are more likely to build factories or offices in a country that has stable, duty-free trade access to major global markets.</p>	<p>Dependency Risks: Relying too heavily on another country for critical goods (like tech or pharmaceuticals) can expose a nation to supply chain shocks.</p>
<p>Increased efficiency: as countries specialize in what they do best.</p>	<p>Loss of policy space: Governments cannot easily raise tariffs to protect a struggling domestic industry.</p>
<p>Boosts economic growth and innovation through competition.</p>	<p>Trade diversion: Buying from an FTA partner that is less efficient than a non-member, simply because of tariff preferences.</p>

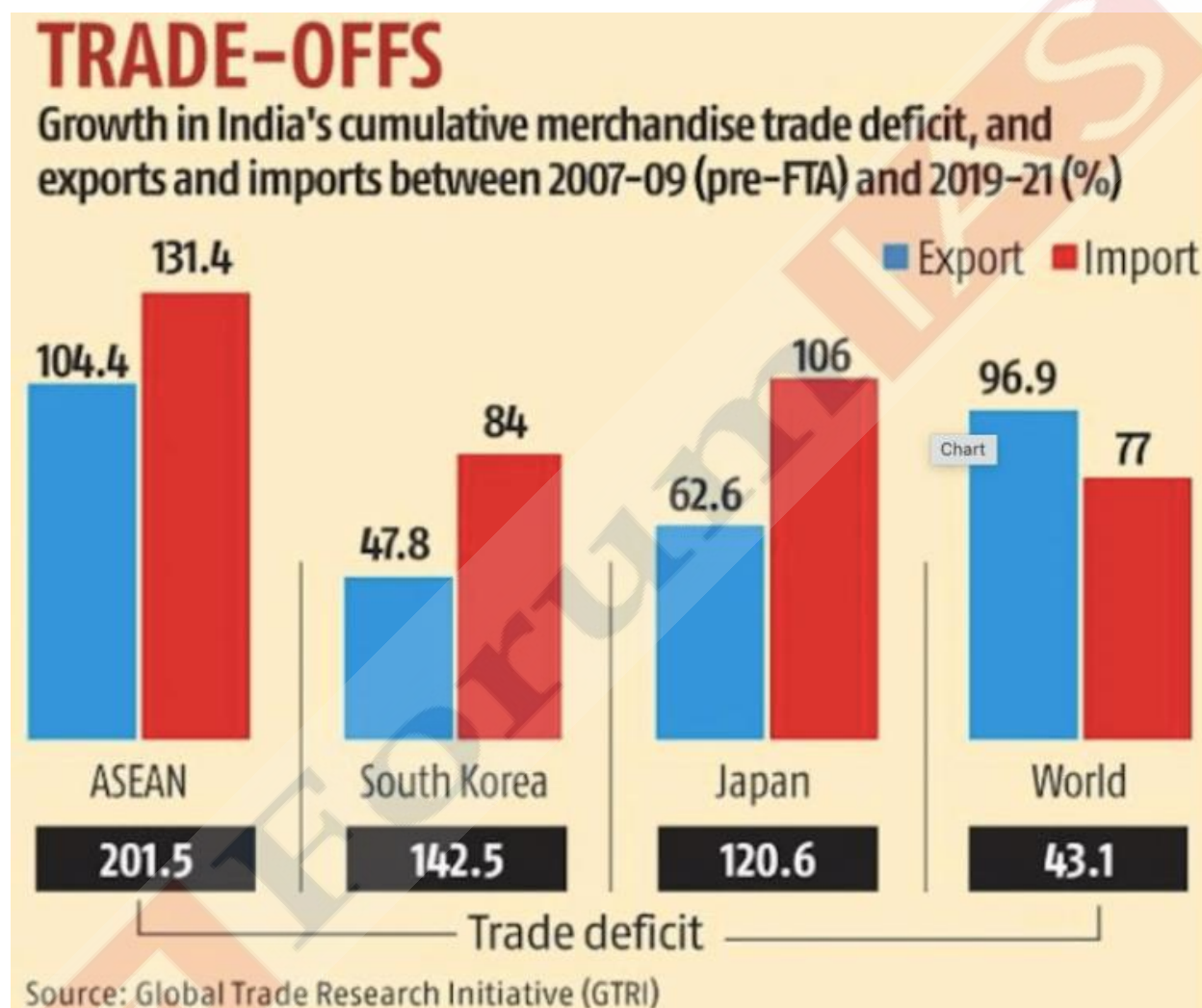
What is the relationship between Multilateralism under the WTO Regime and the FTAs?

- **Article 1 of GATT** (General Agreement on Tariffs and Trade) deals with the **Most Favoured Nation (MFN) principle of the WTO**. It states that “any advantage, favour, privilege, or immunity granted by any contracting party to any product originating in or destined for any other country shall be accorded immediately and unconditionally to the like product originating in or destined for the territories of all other contracting parties”. This means that if tariffs are lowered or eliminated on a particular good from the US, they must be lowered/eliminated for the same good from the EU or the UK or any other country.
- However, derogations (**exemptions**) from this MFN principle are permitted for forming FTAs under specific conditions of the WTO Agreements. Article XXIV of GATT for goods and Article V of GATS (General Agreement on Trade in Services) deal with these exemptions.
- The specific conditions (Article XXIV of the GATT) permitting FTAs are:
 1. FTA members shall not erect higher or more restrictive tariff/non-tariff barriers on trade with non-members than existed prior to the formation of the FTA;
 2. Elimination of tariffs and other trade restrictions be applied to “*substantially all the trade between the constituent territories in products originating in such territories*” i.e., if FTA is signed between two countries, the **trade barriers should be eliminated for nearly all goods/**
 3. Elimination of duties and other trade restrictions on trade within the FTA to be accomplished “*within a reasonable length of time*” meaning a period of no longer than 10 years.
- The ‘Enabling Clause’ allows developing countries to form preferential trading arrangements without adhering to the conditions under Article XXIV.

India’s Stance towards FTAs:

- India had signed its first Trade Agreement in 1975. It was a Preferential Trade Agreement known as **Bangkok Agreement** (renamed **Asia-Pacific Trade Agreement** in 2005).
- India signed the **India-Sri Lanka FTA** in 1998. This was the first time duties were eliminated on substantial tariff lines/goods.
- After the ‘**Look East Policy**’ was announced, several agreements were signed with East Asian countries. This includes Agreements with Japan, South Korea and the ASEAN.

- However, the outcomes of these FTAs were not favorable. While the trade with the FTA partner countries grew, the growth rate of imports was much greater than exports leading to rise in trade deficit.
- FTAs benefited India's trade partners more than Indian firms. As a result, the Government became wary of signing more FTAs. India withdrew from RCEP in 2019. The fear was that the agreement included inadequate safeguards for Indian industries and that Indian market will be flooded with Chinese goods.



Source: Business Standard. India's imports with FTA partner countries (South Korea, Japan, ASEAN) grew at a much faster rate than exports.

- But since 2021, India has broken a decade-long drought by signing and concluding a wave of major pacts for e.g. Treaties with the **UAE** (May 2022), **Australia** (December 2022), the **EFTA bloc** (Switzerland, Norway, Iceland, Liechtenstein in October 2025), and most recently, **Oman** (which officially went into effect on June 1, 2026). The Government is now seeking more investment,

technology and potential markets for Indian goods in exchange for access to India's domestic market to foreign goods.

- India concluded a massive historic FTA with the **European Union (EU)** in January 2026, finalized a framework for an interim trade agreement with the **United States** in February 2026, and is actively preparing to implement signed pacts with the **UK** and **New Zealand**.

What advantages have FTAs brought to India?

1. Massive Surges in Export Volumes:

- **India-UAE CEPA:** Following the 2022 India-UAE CEPA, bilateral trade crossed a historic **\$100 billion**. Indian non-oil exports to the UAE surged by over 25% annually, driven by duty-free access for Indian gems, jewelry, textiles, and engineering goods.
- **India-Australia ECTA:** Under the India-Australia ECTA, Australia granted immediate preferential access to Indian goods. By January 1, 2026, **100% of Indian exports entered Australia completely duty-free**, causing India's exports to Australia to more than double compared to pre-FTA levels.

2. Securing Cheaper Raw Materials for "Make in India":

- **Steel & Power:** Under the Australia pact, India eliminated tariffs on **Australian coking coal** and critical metallic ores. This provided an uninterrupted, cheaper supply of vital raw materials directly to Indian steel plants and infrastructure projects.
- **Textiles & Electronics:** Deals with nations like the UAE and the EFTA bloc have reduced input costs on petrochemicals, polymers, and raw fabrics, allowing local MSMEs to manufacture finished goods at a lower cost base.

3. Binding Commitments to Foreign Direct Investment (FDI):

In India's agreement with the European Free Trade Association (Switzerland, Norway, Iceland, and Liechtenstein), India secured a formal commitment to **\$100 billion in direct, long-term investments** into India over 15 years. Crucially, this agreement excludes volatile stock-market portfolio flows and focuses purely on building domestic industrial capacity and factories.

4. Employment Generation:

Since India has strictly focused its tariff-cutting advantages on high-employment, labor-intensive sectors (like textiles, footwear, leather, and toys), the Ministry of Commerce estimates that the Australia and UAE pacts alone are on track to generate upwards of **1.2 million to 1.5 million new domestic jobs**.

5. Advantage for Indian Service Sector:

- **Extended Visas:** Treaties with Australia and the UK include dedicated clauses granting extended post-study work visas (up to four years) for Indian STEM graduates.
- **Mutual Recognition Arrangements (MRAs):** India has begun signing MRAs where foreign countries legally recognize Indian professional qualifications. For example, recent pacts have streamlined cross-border recognition for Indian IT professionals, engineers, accountants, and even traditional AYUSH/Yoga experts, allowing them to practice abroad without repeating expensive local degrees.

6. Strategic & Geopolitical Gains:

Deepening ties with Gulf states (UAE, soon potentially Saudi Arabia and GCC) anchors energy security and diaspora remittance flows. Agreements with developed economies signal India's openness, supporting its "Viksit Bharat" and supply-chain-diversification narrative. Thus, FTAs help India position itself as an alternative to China in global supply chains. Thus, beyond economics, FTAs have served India's strategic interests.

What are the challenges associated with Free Trade Agreements (FTAs) for India?

1. **Widening Trade Deficits:** Since implementing older agreements, India's trade deficit with ASEAN countries has ballooned by over 380%, with South Korea by roughly 268%, and with Japan by nearly 318%. This trend persists even in recently concluded deals. In fiscal year 2025, India exported \$48.6 billion to its newer partners (UAE, Australia, Mauritius, and EFTA) but imported nearly \$100 billion from them, triggering a trade deficit exceeding **\$50 billion**.
2. **Tariff Asymmetry:** India's FTAs often yield asymmetric tariff benefits because many partner countries already have highly liberalized trade regimes. Countries such as Singapore, Japan, Australia, and the UAE maintain very low import tariffs, whereas India's trade-weighted tariff averages around 12.6%. As a result, when tariffs are eliminated under an FTA, foreign exporters gain a significant price advantage in the Indian market. In contrast, Indian exporters receive limited additional market access benefits since partner markets were already largely open before the agreement.
3. **Low "Utilization Rates":** Getting a great tariff discount on paper is meaningless if businesses do not actually use it. India's FTA utilization rate stands at a poor **20% to 30%** for eligible exports. In stark contrast, developed economies sit at 70% to 80% utilization, and competitors like Vietnam and Mexico operate at 40% to 50%.
4. **Inverted Duty Structure:** FTAs have aggravated India's inverted duty structure, where duties on raw materials exceed those on finished products. Domestic manufacturers may pay 7.5–10% import duties on inputs such as steel and aluminum, while fully assembled machinery and engineering goods from FTA partner countries often enter duty-free. This creates a cost disadvantage for Indian producers, raising domestic production costs and making it difficult for local industries to compete with cheaper imported finished goods in the domestic market.
5. **Non-Tariff Barriers:** Indian agricultural and pharmaceutical exports are frequently rejected or delayed by European and American authorities citing sanitary, phytosanitary, and rigorous packaging measures. Furthermore, newer-generation FTAs (like the India-EU FTA) introduce new NTBs for e.g. EU's **Carbon Border Adjustment Mechanism (CBAM)** effectively imposes a carbon tax on imports like steel and aluminum. This adds significant costs for Indian manufacturers who may not yet have green technologies.
6. **Services Liberalisation Asymmetry:** India's core comparative advantage lies in services – IT, software, healthcare, education, professional services. Yet most FTAs India has signed are heavily weighted toward goods, not services. Partner countries are reluctant to liberalise **Mode 4** (movement of natural persons) – the most relevant mode for Indian services exports. Visa restrictions, work permit quotas, and mutual recognition of qualifications remain barriers even within FTA frameworks.

India-South Korea CEPA and Zinc Trade:

- The India-South Korea Comprehensive Economic Partnership Agreement came to force in January 2010. At that time, India used to export considerable amount of Zinc to South Korea (Refer graph). Korea had low production and India had a weak domestic demand. As part of CEPA, the duties on zinc trade were eliminated.
- Since 2010, South Korea has increased its manufacturing and smelting capabilities. It has also lowered logistical costs. In addition, it was also helped by the 'smart free trade agreement negotiations'.
- Zinc trade between two countries has completely reversed since then. South Korea now contributes 52% of India's Zinc imports. This has adversely impacted India's domestic zinc smelting firms, especially in the MSME sector.

- South Korea does not possess zinc reserves/mines. It exports zinc from abroad, processes it and re- exports. Experts feel if India had a minimum 35% value addition clause under Rules of Origin, the zinc trade would not have distorted.
- This shows that India must be very careful and **consult industry at every stage while signing new FTAs**. Clauses, such as related to say Rules of Origin, should be carefully negotiated.

The India-Korea zinc story

Our bilateral trade with the Republic of Korea has seen a huge increase in zinc and zinc-alloy imports after duties were phased out.



Source: Mint. India's zinc trade with South Korea reversed in 2013-14 when India's trade balance in Zinc became negative, i.e., India became a net importer of zinc.

Rules of Origin:

- Rules of Origin (RoO) are the criteria needed to determine the national source of a product. Their importance is derived from the fact that a number of trade policy measures are applied on the basis of source of imports.
- RoOs have become vital because of globally integrated supply chains, where value addition occurs across different nations (e.g. manufacturing of a component in Vietnam and Taiwan, assembly in India etc.).
- Restrictions like tariffs and duties are applied on the basis of country of origin, e.g. India may want to restrict imports from China but Chinese goods may find their way into Indian markets through indirect route via another country. Hence, it becomes necessary to have clearly defined rules of origin.

What should be India's approach regarding the FTAs?

1. **Create a Dedicated "FTA Impact Monitoring Authority"**: India needs an independent monitoring authority tasked with:

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- **Real-time tracking** of import surges to trigger early warning “safeguard duties” before foreign goods overwhelm local markets.
 - **Aisling performance audits** on a sector-by-sector basis to see exactly which industries are winning or losing under active FTAs.
 - **Accountability mechanisms** for trade negotiators to ensure the concessions they win translate into actual shipments.
2. **Eliminate the “Inverted Duty Structure”**: The government must proactively restructure its domestic customs duties. Before a new FTA kicks in, standard MFN (Most-Favored-Nation) tariffs on critical components, raw minerals, and chemicals used by local factories must be reduced below the tariff levels of the fully assembled products arriving from trade partners.
 3. **Launch an “FTA Utilization” Outreach Program**: Set up dedicated trade helpdesks across industrial hubs (like Surat for textiles or Tiruppur for garments) to educate small-scale entrepreneurs on how to price and package their goods to clear foreign FTA criteria.
 4. **Fight Non-Tariff Barriers (NTBs) via Mutual Recognition**: India’s negotiators must prioritize **Mutual Recognition Agreements (MRAs)** and conformity assessments. If an Indian regulator (like the FSSAI for food or the CDSCO for pharma) tests and certifies a product inside India, partner nations must be legally bound to accept that certification without demanding repeating, redundant local testing at European or American ports.
 5. **Building Digital Capabilities**: The Government must work on building its digital capabilities and infrastructure in key export sectors through a ‘**Digitally Informed Foreign Trade Policy**’, with a focus on **enhancing India’s trade competitiveness**. This can be achieved by developing digital infrastructure for trade, building digital skills in trade-able sectors, increasing the share of technology content in exports, and leveraging advanced technologies (Big Data Analytics, IoT, and Blockchain) for evidence-based and informed trade policy decisions.

Conclusion:

India’s approach to should involve learning from past imbalances, targeting high-opportunity partners, innovating with investment-linked and digitally-enabled agreements, and building a robust domestic ecosystem to enforce and benefit from them. The goal is to transform FTAs from static documents into dynamic tools for economic resilience and growth.

Syllabus: GS III, Indian Economy and Issues related to Growth

Source: [Business Standard](#), [The Hindu BusinessLine](#), [Indian Express](#), [Economic Times](#), [IBEF](#), [EEPC](#), [Indian Express](#)

India-Nepal Relationship – Explained Pointwise

India and Nepal share deep civilizational, cultural, and people-to-people ties, underpinned by an open border and close economic cooperation. However, periodic disagreements over boundary issues, including recent remarks by Nepal’s Prime Minister on the border dispute, highlight persistent sensitivities. Nepal’s PM indicated that the the boundary dispute is not one-sided & should be resolved through diplomatic channels – suggest a cautious move towards a more rational approach in India-Nepal relations.



Evolution of India-Nepal Relationship:

<p>Civilisational & Colonial Foundations</p>	<ul style="list-style-type: none"> • The relationship predates modern statehood. The relationship is built on deep-rooted historical, cultural, and geographical ties, often referred to as “Roti-Beti ka Rishta” – ties of food and family. • The Treaty of Sugauli (1816) between Nepal and British India defined Nepal’s boundaries along the Kali River, laying the groundwork for later territorial interpretations and disputes like Kalapani and Susta. • The British also began recruiting Gorkha soldiers – a tradition that continues to define the human dimension of the relationship.
<p>The Foundational Era (1950-1962)</p>	<ul style="list-style-type: none"> • Following the Chinese annexation of Tibet, India and the ruling Rana dynasty of Nepal signed the 1950 Treaty of Peace and Friendship. Driven by mutual security fears, the treaty established an open border and gave reciprocal rights to citizens. • During this period, India acted as a security guarantor, even placing military checkpoints along Nepal’s northern border with Tibet.

<p>Era of Divergence & the 'China Card' (1962-1990)</p>	<ul style="list-style-type: none"> ● To balance India's overwhelming influence, the monarchy began playing the "China Card" – cultivating ties with China to gain diplomatic leverage over India. ● When Nepal attempted to purchase weaponry from China, India allowed a key trade treaty to lapse, leading to a 15-month economic crisis in 1989 that severely damaged Nepal's economy and nationalist sentiment.
<p>Democratic Transition & Crisis (1990-2015)</p>	<ul style="list-style-type: none"> ● This era shifted the relationship toward economic and developmental frameworks. It saw a focus on developmental partnerships, marked by key agreements like the Mahakali Treaty (1996) to harness Nepal's hydropower potential. ● Nepal's decade-long Maoist insurgency (1996–2006) and subsequent transition to a federal republic created political turbulence, but also an opportunity. ● Relations hit a historic low in 2015 over Nepal's new constitution. The Madhesi population in the plains felt marginalized, and an informal border blockade led to severe fuel shortages in Nepal, fueling widespread anti-India sentiment and pushing Nepal closer to China's Belt and Road Initiative (BRI).
<p>Geopolitical Diversification & the "Cartographic War" (2015-2024)</p>	<ul style="list-style-type: none"> ● This phase was defined by Nepal asserting strategic autonomy and using China as a counterweight. ● The 2020 dispute over the Kalapani-Lipulekh region led to Nepal's "New Map" amendment, signalling that Nepal would no longer accept the status quo in border management.
<p>Recalibration & Regional Reset (2024-Present)</p>	<ul style="list-style-type: none"> ● Realizing that a heavy-handed approach pushed Nepal closer to Beijing, India pivoted to economic pragmatism. Prime Minister Modi introduced the HIT formula (Highways, Information ways, Transways). ● Energy has become a primary pillar. India finalized agreements to import up to 10,000 MW of electricity from Nepal and greenlighted a breakthrough trilateral energy trade allowing Nepal to export electricity to Bangladesh via the Indian grid.

What are the various areas of cooperation between India & Nepal?

1. **Connectivity and Infrastructure:** Physical and digital connectivity is the cornerstone of the modern partnership, helping landlocked Nepal access maritime trade:
 - **Rail Links:** The **Jaynagar–Kurtha–Bijalpura** rail link is Nepal's first-ever operational broad-gauge railway line built with Indian assistance. Plans are underway for a direct line connecting Raxaul to Kathmandu.
 - **Integrated Check Posts (ICPs):** To streamline cross-border trade, ICPs have been operationalized at vital border points like **Birgunj, Biratnagar, Nepalgunj, and Bhairahawa.**

- **Roads:** India has actively assisted in upgrading the **Hulaki Rajmarg (Postal Highway)** across the Terai region of Nepal.
2. **Energy and Power Trade:** Energy has evolved into one of the most successful areas of bilateral cooperation:
 - **Hydropower Development:** Indian companies are heavily investing in mega projects in Nepal, such as the **Arun-3** and West Seti hydroelectric projects.
 - **Power Grid & Export:** Under a **Long-Term Power Trade Agreement**, India imports electricity from Nepal, allowing Kathmandu to monetize its surplus energy. A trilateral agreement also allows Nepal to export electricity to Bangladesh via the Indian grid.
 - **Petroleum Pipelines:** The **Motihari-Amlekhgunj pipeline** is South Asia's first cross-border petroleum products pipeline. Work continues to extend this network further into Chitwan and Jhapa.
 3. **Culture and People-to-People Ties:** The **1950 Treaty of Peace and Friendship** allows citizens of both countries to move freely across the border without passports or visas to live, work, and own businesses. Cultural ties are formally anchored by **Sister-City Agreements** that link shared heritage sites for e.g. Kathmandu – Varanasi, Janakpur – Ayodhya, Lumbini – Bodhgaya.
 4. **High Impact Community Development Projects (HICDPs):** Since 2003, India has undertaken nearly 600 HICDPs across all seven provinces of Nepal. These projects are in sectors like education, health, agriculture, drinking water, and sanitation. Recently, the cost limit for individual projects was increased to Rs 20 crore.
 5. **Joint Exercises:** The two armies conduct a regular, major annual joint military exercise called **Exercise Surya Kiran** to enhance interoperability in mountain warfare and counter-insurgency.
 6. **Disaster Relief:** India acts as a first responder during humanitarian crises in Nepal – most notably during the devastating 2015 earthquake, deploying specialized NDRF teams and massive relief materials.
 7. **Multilateral Forums:** Nepal and India maintain close coordination in the UN, SAARC, and BIMSTEC. Nepal consistently supports India's bid for permanent UNSC membership, while India supports Nepal's "Landlocked Developing Country" interests.

What is the Significance of India-Nepal Relationship?

1. **Geopolitical & Strategic Significance:**
 - **The Himalayan Buffer:** Nepal serves as a vital geographic buffer zone between India and China. The northern border of Nepal is guarded by the Himalayas, making its territory India's first line of defense in the central Himalayan region.
 - **The Shared Border Vulnerability:** India and Nepal share a 1,850 km long, porous border that touches five Indian states (Uttarakhand, Uttar Pradesh, Bihar, West Bengal, and Sikkim). Because the border is open, political stability and effective security cooperation in Nepal are critical to preventing transnational crime, smuggling, and the infiltration of hostile actors into India's heartland.
2. **Economic & Commercial Significance:**
 - **Economic Interdependence:** India is **Nepal's largest trading partner**, accounting for over 60–65% of Nepal's trade (USD 8.5 billion in 2024). India provides petroleum, electricity, and essential commodities, while Nepal's vast hydropower potential offers clean energy opportunities for India. Remittances from 600,000 Nepali workers in India sustain Nepal's economy.
 - **Gateway for a Landlocked Nation:** Nepal is geographically landlocked and surrounded by India on three sides. India provides Nepal with essential transit access to sea ports (like

Kolkata and Vishakhapatnam) for its third-country trade, acting as its largest trading partner and economic lifeline.

- **India's Energy Security:** Nepal possesses immense hydropower potential (estimated at over 40,000 MW of commercially viable power). By investing in Nepalese hydro projects, India gains clean energy to fuel its growing economy, while Nepal earns revenue by exporting its surplus electricity to India and Bangladesh.

3. Cultural & Civilizational Significance:

- **Open Border & Shared Lives:** Unlike any other two sovereign neighbors in the region, citizens of India and Nepal do not need visas or passports to cross the border. Millions of Nepalese citizens live, work, own property, and do business in India on equal terms with Indian citizens.
- **Religious & Spiritual Geography:** Both countries share deep Hindu and Buddhist roots. The sacred geography of the region is deeply intertwined – linking Pashupatinath (Kathmandu) with Kashi Vishwanath (Varanasi), and Muktinath with temples across India. Janakpur (the birthplace of Goddess Sita in Nepal) is culturally tied to Ayodhya (the birthplace of Lord Ram in India), and Lumbini (the birthplace of Buddha in Nepal) connects seamlessly to India's Buddhist circuit (Bodhgaya, Sarnath, and Kushinagar).
- **Gurkha Legacy:** The recruitment of Gurkha soldiers into the Indian Army (under the 1947 Tripartite Agreement) is a historic symbol of shared valor. These soldiers serve as a living bridge between the two nations.

4. Political & Security Significance:

- **Border Security:** Cross-border crimes (smuggling of narcotics, counterfeit currency, and wildlife parts) and the movement of insurgent groups (from India's northeast) require daily, seamless coordination between the Sashastra Seema Bal (SSB) and Nepal's Armed Police Force (APF).
- **Constitutional Stability:** India has a direct stake in Nepal's political stability. A functioning, democratic, and inclusive Nepal prevents the emergence of safe havens for anti-India elements and ensures the smooth flow of economic activity.
- **Disaster Response:** During the 2015 earthquake (**Operation Maitri**) and the 2014 floods in Uttarakhand, India acted as the "first responder" for Nepal. This capability is unmatched by any other country.

What are the challenges in the relations between the two countries?

1. Territorial and Boundary Disputes:

- **The Western Tri-junction (Kalapani, Lipulekh, and Limpiyadhura):** This region sits at a crucial India-Nepal-China tri-junction. India administers the territory. Nepal, however, claims the river Kali originates further west, placing the entire region within its borders. Tensions flared when Nepal published a new political map incorporating these areas, cementing the dispute into its constitution.
- **The Susta Dispute:** Located in the south, this dispute is driven by nature rather than maps. Over decades, the changing, shifting course of the **Gandak River** has altered the physical landscape, leading to constant cross-border disagreements over agricultural land ownership.

2. Economic Dependence:

- **Dependence on Trade Routes:** Nepal's access to the sea for its global trade is entirely dependent on transit routes through India. This has, in the past, led to economic blockades and supply disruptions when bilateral relations are strained.

- **Trade Asymmetry:** Nepal imports over 64% from India but exports less than 10% to India, creating persistent economic asymmetry. While this is a standard trade relationship, it contributes to a feeling of economic dependency in Nepal.
3. **The China Factor:**
 - **BRI & Chicken's Neck:** Nepal officially joined China's **Belt and Road Initiative (BRI)**. This led to growing unease from India, particularly concerning the strategic implications of BRI projects near the vulnerable Siliguri Corridor – the narrow 20–22 km stretch connecting India's mainland to its northeastern states.
 - **Trans-Himalayan Railway:** Nepal's growing engagement with China's BRI, including USD 3 billion in loans and projects like the Trans-Himalayan Railway, increases Beijing's influence, challenges India's traditional primacy, and heightens strategic competition in the Himalayas.
 4. **Security and the Challenge of an Open Border:**
 - **Security Vulnerabilities:** The border is not continuously fenced, and in some stretches, particularly in Bihar's Seemanchal region, there are significant gaps (4-5 km) between border outposts. This creates blind spots that are exploited by criminals.
 - **Cross-Border Crime:** This open border facilitates the **smuggling of narcotics, counterfeit currency, and goods**, as well as the movement of insurgent groups who can use Nepali territory as a safe haven.
 5. **The Gurkha Recruitment & "Agnipath" Deadlock:** With India's introduction of the **Agnipath Scheme**-which transitioned military recruitment into short-term, 4-year tours of duty rather than permanent pensions – the Nepalese government suspended the recruitment of Gurkhas into the Indian Army. Kathmandu argues that the new terms violate the 1947 Tripartite Agreement and leave young Nepalese veterans vulnerable without long-term retirement security.
 6. **The "Big Brother" Syndrome:** Many within Nepal's political elite and growing youth population view the **1950 Treaty of Peace and Friendship** as unequal and paternalistic. They argue it infringes on Nepal's sovereign autonomy, particularly regarding independent weapons procurement and foreign policy choices.
 7. **Hydro-Hegemony:** India's position as the primary market and sole transit route for Nepali power gives it significant leverage. This has led to concerns in Nepal about a "hydro-hegemonic" relationship where India has a dominant say in Nepal's water resource development.
 8. **Political Instability in Nepal:** Nepal's foreign policy is shaped by its turbulent internal politics. Governments change frequently, and no government has completed a full five-year term in decades. Now, heavily influenced by youth-led anti-corruption movements (often referred to as Nepal's "**Gen Z movement**"), the rise of non-traditional parties, such as the **Rastriya Swatantra Party (RSP)**, means India can no longer rely on long-standing relationships with old-guard elites.

What should be the way forward?

1. **Acknowledge Strategic Autonomy:** India must recognize that a democratic, modern Nepal will naturally engage with multiple global powers, including China and the United States. New Delhi should avoid treating Kathmandu's foreign policy as a zero-sum game, focusing instead on being a more efficient, reliable, and non-interfering partner.
2. **Rebalance Trade: From Dependence to Interdependence:**
 - **Market Access for Nepali Exports:** India should reduce non-tariff barriers on Nepal's goods, particularly in agro-processing, herbs, and light manufacturing, where Nepal has genuine comparative advantage.

- **Joint Industrial Corridors:** Establishing SEZ-linked industrial zones along the border – connecting Nepali labour and Indian capital and logistics – could transform the trade relationship from extractive to productive.
- 3. **Border Dispute Settlement:** Open, public debate over territorial disputes like Kalapani, Lipulekh, and Susta often triggers nationalist rhetoric that stalls progress. The path forward lies in activating high-level technical boundary committees to map, clear, and resolve disputes quietly based on historical evidence.
- 4. **Smart Border Management:** The open border must be preserved for citizens, but security against transnational crime must be modernized. Transitioning to digital profiling, biometric monitoring, and real-time intelligence-sharing between security agencies will secure the border without disrupting the daily lives of local communities.
- 5. **Modernize People-to-People Connections:** The “Roti-Beti” narrative resonates deeply with older generations, but a younger, hyper-connected Nepalese population prioritizes digital innovation, entrepreneurship, and job creation. India should expand tech-driven partnerships, such as cross-border startup incubators, space-tech collaborations, and deeper UPI digital financial integration.
- 6. **Resolve the Agnipath Impasse:** India and Nepal should negotiate a special dispensation or post-service rehabilitation framework under the Agnipath scheme to address Nepal’s concerns regarding the long-term financial security and employment of its young veterans. A tailored recruitment model for Nepalese Gorkhas – perhaps offering longer service or clear post-service pathways – could resolve the current recruitment deadlock.
- 7. **Make Energy the Anchor of the New Partnership:** By strengthening grid connectivity, simplifying trade regulations, and ensuring long-term power purchase agreements, Nepal and India are transforming energy from a domestic challenge into a shared regional opportunity. The landmark 10,000 MW deal and the first tri-national energy transit to Bangladesh are the right template — but execution must improve.

Conclusion: The India-Nepal relationship remains a structural necessity. By shifting from a security-first approach to infrastructure connectivity, water cooperation, and mutual respect, both nations can transform historic ties into a resilient, prosperous partnership.

UPSC GS-2: International Relations
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Industrial Disasters – Causes & Way Forward – Explained Pointwise



India has experienced numerous **industrial disasters** over the decades, ranging from chemical leaks and mining accidents to factory fires and structural collapses. Recently, a blast occurred at a steel plant in Vizag that killed 9 workers. Last year also, a lethal accident happened in the pharma unit of Sigachi Industries in Hyderabad that led to the death of 36 workers there, similarly, 8 workers were killed in Tamil Nadu at a firework manufacturing unit in Virudhunagar district.

The frequency of such accidents raises the question of safety at industrial places in India & is likely to have a negative bearing on the manufacturing sector & trade from it for India. Thus, it is important to understand what steps the government has taken & should take to ensure that such disasters do not occur in future.

Notable INDUSTRIAL DISASTERS in India:

<p>Bhopal Gas Tragedy (1984)</p>	<ul style="list-style-type: none"> ● Cause: Leak of methyl isocyanate (MIC) gas from Union Carbide plant. ● Impact: Over 15,000 deaths, 5 lakh+ affected ● It was the world's worst industrial disaster & led to Environmental Protection Act (1986)
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<p>Chasnala Mining Disaster (1975)</p>	<ul style="list-style-type: none"> ● Cause: An explosion, likely triggered by a pocket of methane gas, compromised a thin wall of coal separating the active mine shaft from an abandoned, flooded reservoir above it. ● Impact: Millions of gallons of water rushed into the deep tunnels at an uncontrollable speed. 372 miners were trapped deep underground and drowned.
<p>Jaipur IOC Depot Fire (2009)</p>	<ul style="list-style-type: none"> ● Cause: Leak of petrol vapour at IOC oil terminal. ● Impact: The fire raged uncontrollably for over a week, completely consuming 11 massive fuel storage tanks. The explosions killed 12 people, injured over 130, and forced the evacuation of roughly half a million residents.
<p>NTPC's Feroz Gandhi Thermal Power Plant (2017)</p>	<ul style="list-style-type: none"> ● Cause: Pressure build-up in boiler due to excessive ash accumulation which led to tube failure. ● Impact: The blast resulted in 45 fatalities and left close to 100 people with severe, life-altering third-degree burns.
<p>Vizag Gas Leak (2020)</p>	<ul style="list-style-type: none"> ● Cause: Styrene gas leak at LG Polymers chemical plant. ● Impact: The toxic vapor drifted over a 5-kilometer radius into surrounding residential areas early in the morning. It resulted in 13 deaths and left more than 1,000 people hospitalized with acute respiratory issues, neurological distress, and temporary blindness.
<p>Neyveli Lignite Plant Explosion (2020)</p>	<ul style="list-style-type: none"> ● Cause: Boiler explosion
<p>Vedanta's Thermal Power Plant (2026)</p>	<ul style="list-style-type: none"> ● Cause: Failure of Primary Air fan that led to a dangerous pressure build-up inside the boiler.

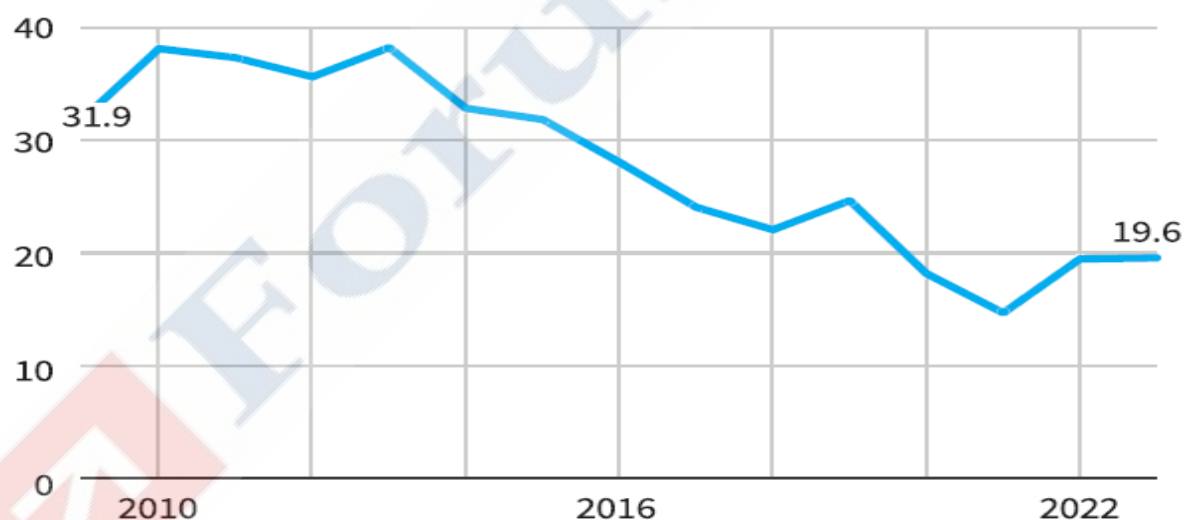
What are the CAUSES of industrial disasters in India?

1. **Inadequate Inspections:** State-level Factory Inspectorates and pollution control boards are often understaffed, underfunded, and lack the technical expertise to conduct thorough and frequent inspections of industrial units, especially those handling hazardous chemicals. This leads to lax enforcement of existing safety and environmental regulations.

Chart 5: Inspectors per factory among the States with the highest number of factories as of 2023

	Number of factories	Inspectors of Factories	Factories per inspector
Tamil Nadu	50,669	106	478
Gujarat	49,246	81	608
Maharashtra	39,533	44	898
Haryana	25,607	35	732
A.P.	24,642	42	587
Kerala	22,601	53	426
Telangana	22,118	27	819
Karnataka	18,389	48	383
Delhi	13,616	7	1,945
Rajasthan	11,014	27	408

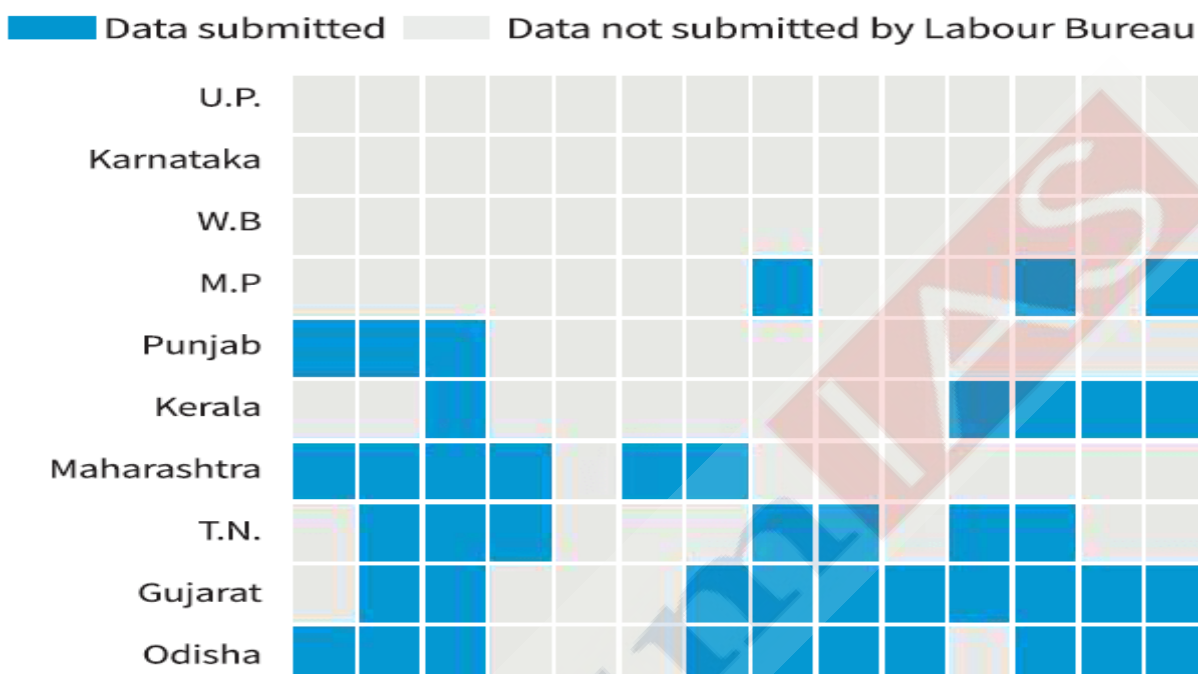
Chart 6: The share of factories inspected by DGFASLI each year (in %). The inspections have dropped significantly in the recent years, perhaps due to the staff crunch



2. **Discrepancies in Collection of Safety Data:** The Directorate General Factory Advice Service and Labour Institutes (DGFASLI) plays a key role in implementing the **Occupational Safety, Health and Working Conditions (OSH) Code, 2020**. It compiles industrial accident data through its annual **Standard Reference Notes (SRNs)**. Each SRN presents accident statistics from two sources: data collected by the Labour Bureau and information obtained directly by DGFASLI through correspondence with Chief Inspectors of Factories. However, significant discrepancies between the two datasets highlight persistent

shortcomings in accident reporting and data collection.

Chart 7: Many States did not furnish data on fatal and non-fatal incidents, either to the Labour Bureau, or DGFASLI, as per the SRNs. U.P. , Karnataka and W.B. did not provide data even once



- Inadequate Training and Awareness:** Many workers, especially contractual laborers, lack proper training in handling hazardous materials, operating machinery safely, and emergency response procedures. This often stems from industries trying to cut costs.
- Lack of Safety Culture:** A poor safety culture within an organization, where safety is not prioritized by management and employees alike, is a significant underlying cause. This can manifest as a disregard for safety protocols, shortcuts in operations, and a failure to report near misses.
- Equipment Failure and Maintenance Issues:** Neglecting regular maintenance, inspection, and repair of machinery, pressure vessels (*for e.g. negligence in equipment upkeep caused sudden fluctuations in boiler's pressure in Vedanta thermal power plant*), pipelines, and safety systems is a major cause. Worn-out components are prone to malfunction. Some older plants may use outdated technology and machinery that is inherently less safe or less efficient compared to modern alternatives.
- Running Beyond Structural Limits:** Infrastructure is frequently pushed past its intended capacity. For example, during the 2017 NTPC Unchahar explosion and the 2020 Visakhapatnam leak, mechanical components failed because they were left stagnant or running continuously past their safety wear-and-tear thresholds.
- Inadequate Risk Assessments:** Failure to conduct thorough Hazard Identification and Risk Assessment (HIRA) studies, Process Hazard Analysis (PHA), and Safety Audits to identify all potential risks and implement appropriate control measures.
- Poor Siting:** Locating hazardous industries too close to densely populated residential areas (*for e.g. as seen in the Bhopal Gas Tragedy and Vizag gas leak*) significantly increases the risk to human life in case of an accident.
- Informal Sector Challenges:** A significant portion of India's industrial activity is in the unorganized or informal sector, which often operates outside regulatory oversight, making workers highly vulnerable to unsafe conditions.

What are the CONSEQUENCES of industrial disasters?

Human Consequences	<ul style="list-style-type: none"> ● Loss of Life: The most tragic and immediate consequence is the loss of lives of workers, residents in surrounding communities, and emergency responders. ● Severe Injuries and Disabilities: Many survivors suffer from severe injuries (burns, respiratory damage etc.) that can lead to permanent disabilities, chronic illnesses, and a significant reduction in their quality of life.
Environmental Consequences	<ul style="list-style-type: none"> ● Air Pollution: Disasters involving gas leaks (e.g., Methyl Isocyanate in Bhopal, Styrene in Visakhapatnam) release highly toxic substances into the atmosphere, which can travel long distances, contaminating a wide area. ● Water Contamination: Spills, leaks, and discharge of chemical effluents into rivers, lakes, and other water bodies contaminate aquatic ecosystems, harming marine life and making water unsafe for human consumption, agriculture, and livestock. ● Soil Contamination: Chemical spills and deposition of hazardous substances from the air can contaminate agricultural land, making it infertile or rendering crops unsafe for consumption. This has long-term implications for local livelihoods and food security. ● Bioaccumulation: Toxins enter the local food chain, accumulating in fish, livestock, and crops, which eventually poisons the human population consuming them far outside the immediate disaster zone. ● Biodiversity Loss and Ecosystem Damage: Direct exposure to toxic substances can kill flora and fauna, disrupt food chains, and damage entire ecosystems. This can lead to a loss of biodiversity and ecological imbalance in affected regions.
Economic Consequences	<ul style="list-style-type: none"> ● Loss of Livelihoods: The affected industrial unit might be shut down permanently or temporarily, leading to significant job losses for workers. ● Economic Disruption: Disasters can disrupt local economies, impact supply chains, and affect investor confidence, particularly if the affected industry is a major employer or contributor to the regional economy. ● Corporate Bankruptcy and Reputational Ruin: Brand value often plummets overnight. Legal liabilities can force stock prices to crash, leading to corporate liquidation or hostile takeovers, while executives face criminal prosecution and imprisonment for negligence. ● Massive Financial Burden on the State: The government must bear enormous costs for emergency response, temporary shelters, long-term healthcare for survivors, environmental remediation, and compensation payments.

	<ul style="list-style-type: none"> ● Impact on agricultural economy: Contamination of land and water can destroy crops and make farming unsustainable, leading to loss of income for farmers.
Social Consequences	<ul style="list-style-type: none"> ● Forced displacement of people: People living in highly affected or uninhabitable areas may be forced to abandon their homes and migrate, leading to social disruption, loss of community ties, and increased pressure on recipient areas. ● Inter-Generational Effects: Emerging research, again highlighted by studies on Bhopal survivors, indicates that industrial disasters can have multi-generational health impacts, with children born to exposed parents facing higher risks of disabilities and cancers later in life. ● The “NIMBY” (Not In My Back Yard) Effect: Public outrage following an accident often leads to fierce community resistance against new industrial projects, forcing governments to implement much stricter zoning laws and push hazardous industries far away from urban populations.

What INITIATIVES have been taken by the government to prevent such disasters?

Factories Act, 1948	<ul style="list-style-type: none"> ● This is the primary legislation regulating working conditions in factories, including provisions related to safety, health, and welfare of workers. It places responsibilities on factory owners to ensure a safe workplace. ● Post-Bhopal (1987 amendment), its scope was significantly extended to cover risks from hazardous industries, mandating safety committees, safety officers, and addressing dangerous operations.
Environment (Protection) Act, 1986	<ul style="list-style-type: none"> ● Enacted in the wake of the Bhopal disaster, this umbrella Act gives the central government wide powers to protect and improve environmental quality. ● Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989: Notified under the EP Act, these rules detail the responsibilities of occupiers of industrial premises handling hazardous chemicals, including requirements for safety reports, on-site emergency plans, and public information. ● Chemical Accidents (Emergency Planning, Preparedness, and Response) Rules, 1996: These rules mandate the preparation of off-site emergency plans by district authorities for managing chemical accidents, and establish Crisis Groups at central, state, and district levels.

<p>Public Liability Insurance Act, 1991</p>	<ul style="list-style-type: none"> • This Act mandates industries handling hazardous substances to take out insurance policies. • This insurance provides immediate interim relief to persons affected by accidents occurring while handling such substances, even without proving fault.
<p>Occupational Safety, Health and Working Conditions Code, 2020</p>	<ul style="list-style-type: none"> • This is a recent consolidated code that aims to simplify and rationalize existing labor laws related to occupational safety, health, and working conditions. • It extends provisions to more establishments and emphasizes employer duties, safety committees, and regular audits.
<p>Guidelines on Chemical Industrial Disaster Management (2007)</p>	<p>These comprehensive guidelines provide a framework for all stakeholders (industry, government agencies, local authorities) for prevention, preparedness, response, and mitigation of chemical industrial disasters.</p> <p>Key elements include:</p> <ul style="list-style-type: none"> • Risk mapping of Major Accident Hazard (MAH) units. • Development of on-site and off-site emergency plans. • Regular mock drills and exercises. • Establishment of Emergency Response Centres (ERCs) and integration with other emergency services. • Emphasis on HAZOP (Hazard and Operability Study) and HAZAN (Hazard Analysis) for early hazard identification.
<p><u>National Green Tribunal (NGT)</u></p>	<ul style="list-style-type: none"> • Established in 2010, the NGT acts as a dedicated environmental court. • It holds the power to summarily shut down non-compliant factories, levy massive fines under the “Polluter Pays” principle, and adjudicate compensation payouts directly under India’s Strict and Absolute Liability doctrines.

What DISASTER MANAGEMENT MEASURES should be taken to prevent such industrial disasters?

1. Strengthening Regulatory and Enforcement Mechanisms:

- Continuously review and update existing acts (Factories Act, EP Act, PLI Act) and rules (MSIHC, Chemical Accidents Rules) to incorporate latest scientific advancements, international best practices (e.g., EU’s Seveso Directive), and lessons learned from past disasters.

- Significantly increase the number of factory inspectors, safety officers, and environmental auditors. Ensure they are adequately trained, equipped with modern tools, and well-remunerated to attract and retain talent.
- Impose significantly higher penalties for non-compliance, including severe fines, imprisonment, and immediate closure of non-compliant units. Expedite legal proceedings against violators to ensure deterrence.

2. Fostering a Culture of Safety and Responsibility:

- Safety education must be mandatory for all staff, including contract and daily-wage laborers. Instruction should be delivered via multi-lingual, visual, and practical formats, ensuring every worker can quickly identify chemical warning codes and correctly operate emergency shut-off valves.
- Create a non-punitive environment where workers feel safe and encouraged to report near-misses, unsafe conditions, and procedural deviations without fear of reprisal.
- Conduct frequent and realistic mock drills for both on-site and off-site scenarios, involving all stakeholders, to test the effectiveness of emergency plans and identify gaps. Learnings from drills must be incorporated.

3. Advanced Risk Assessment Tools: Utilize Artificial Intelligence (AI) and Machine Learning (ML) for predictive analytics to identify potential failure points in equipment and processes based on operational data, enabling proactive maintenance.

4. Strategic Industrial Zoning: Implement and strictly enforce policies for locating new hazardous industries away from densely populated residential areas, schools, and hospitals. Re-evaluate and, where feasible, relocate existing hazardous units that are currently located in highly populated areas.

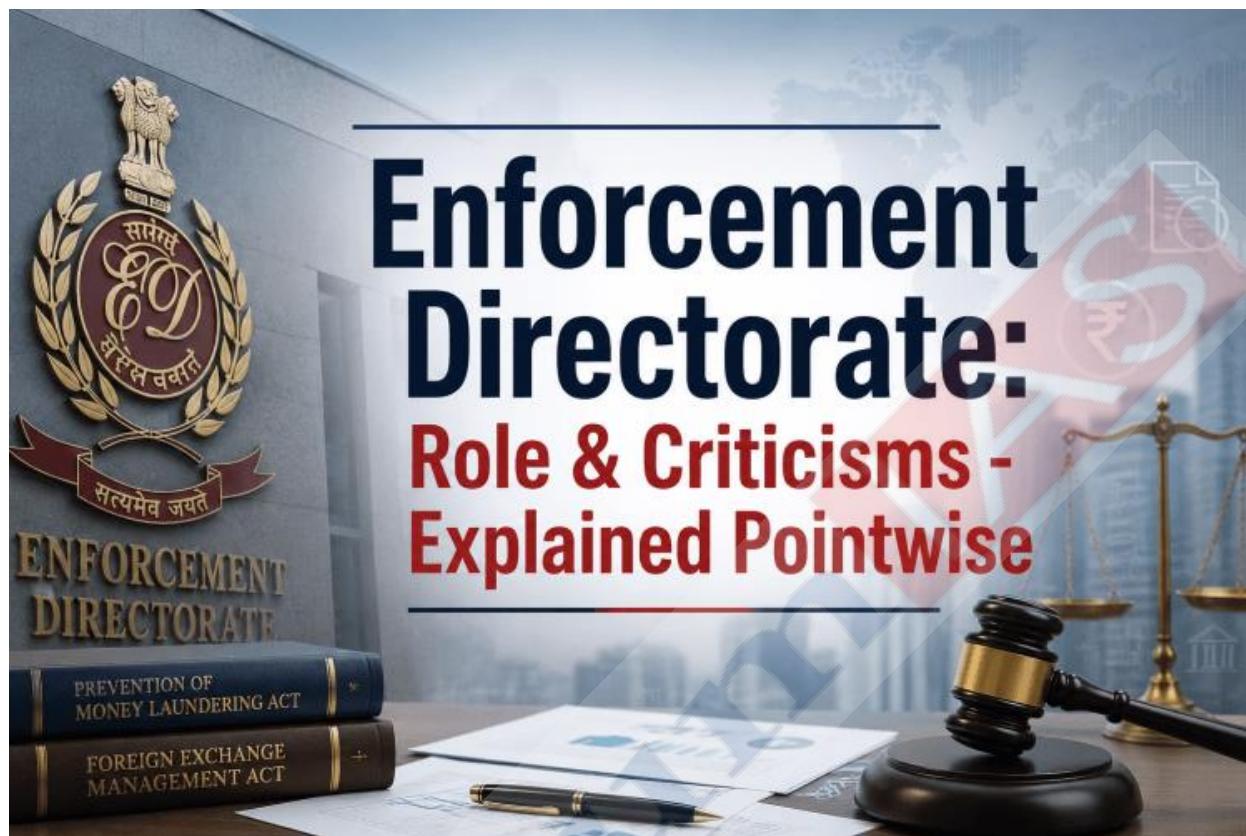
5. Adequate Resources: Ensure that emergency services (fire departments, hospitals) in industrial zones are adequately equipped and trained to handle industrial accidents, including chemical hazards.

CONCLUSION:

Industrial disasters are a threat to not only the economy of a rapidly industrializing country like India but also to its society. Stronger enforcement, modernized infrastructure, better training, and a culture of safety – especially in the informal sector – are urgently needed to prevent tragedies in the future.

Read More: [Indian Express](#), [Wikipedia](#), [The Hindu](#)
UPSC GS-3: Disaster Management

Enforcement Directorate: Role & Criticisms – Explained Pointwise



In a significant judgment, the Delhi High Court quashed the Enforcement Directorate's case against a media outlet and its founder, holding that the allegations failed to disclose any cognisable offence and that continuing the proceedings amounted to a gross abuse of law. The ED is India's premier agency for investigating money laundering and foreign exchange violations. While crucial for economic security, concerns over accountability, transparency, and alleged misuse highlight the need for institutional reforms.

About the Enforcement Directorate:

- ED is a multi-disciplinary financial investigation agency mandated with investigation of offences of money laundering and violations of foreign exchange laws.
- It is a non-statutory body under the **Department of Revenue**, Ministry of Finance.
- The statutory functions of the agency include enforcement of following Acts:
 1. **The Prevention of Money Laundering Act, 2002 (PMLA):** ED has been given the responsibility to enforce the provisions of the PMLA. It conducts investigation to trace the assets derived from proceeds of crime and ensures prosecution of the offenders and confiscation of the property by the Special court.
 2. **The Foreign Exchange Management Act, 1999 (FEMA):** ED has been entrusted with the responsibility of investigating suspected violations of foreign exchange laws and regulations.

Additionally, it has the authority to adjudicate cases and impose penalties on those found to have contravened these laws.

3. **The Fugitive Economic Offenders Act, 2018 (FEOA):** Under this law, the agency is mandated to seize the properties of fugitive economic offenders who have fled from India to evade arrest.
4. **Sponsoring agency under COFEPOSA:** Under the Conservation of Foreign Exchange and Prevention of Smuggling Activities Act, 1974 (COFEPOSA), the ED is empowered to sponsor cases of preventive detention regarding contraventions of FEMA.

How has the ED evolved with time?

- The ED was founded as “**Enforcement Unit**” within the Department of Economic Affairs of Ministry of Finance in 1956. It was renamed as “Enforcement Directorate” in 1957.
- It originally handled Exchange Control Laws violations under the **Foreign Exchange Regulation Act, 1947 (FERA 1947)**. Under this act, the ED had the power to arrest for FERA violations, but the scope of powers was limited as the ED’s domain was largely limited to the corporate world.
- The administrative control of the ED was transferred from the Department of Economic Affairs to the Department of Revenue in 1960.
- The nature of ED changed as India changed. In the **pre-liberalisation era**, the laws driving ED were “**regulation**” laws whereas **post-liberalisation**, those became “**management**” laws. For example, FERA 1973 (which replaced FERA 1947) became the Foreign Exchange Management Act, 1999 (FEMA).
- Under FEMA, 1999, ED lost its power to arrest people or take them into custody as forex violations amounted to civil offenses, compoundable after payment of a fine.
- ED’s **powers increased significantly after the enactment of PMLA, 2002** because the act re-empowered ED with the powers of criminal prosecution. The 2009 and 2013 amendments widened the scope of PMLA and provided further powers to the ED.

Recent expansion of powers:

- In 2022, the Centre has amended a **2006 notification** to list 16 entities which will have to mandatorily share information with the Enforcement Directorate (ED) under **Section 66** of the PMLA. Among these are the National Investigation Agency (NIA), the Competition Commission of India (CCI), the Serious Fraud Investigation Office (SFIO), and State Police Divisions. This has further widened ED’s powers.
- Again, in 2022, the **Supreme Court upheld the amendments** made to the PMLA through Finance Acts. It gives the ED virtually unchecked powers of summons, arrest, and raids, and makes bail nearly impossible while shifting the burden of proof of innocence on to the accused rather than the prosecution.

How ED is different from other policing agencies?

	Enforcement Directorate (ED)	Traditional Police Agencies

Primary Mandate	Enforces economic laws, specifically the Prevention of Money Laundering Act (PMLA) , 2002 and the Foreign Exchange Management Act (FEMA) , 1999.	Enforces the general criminal law of the land, primarily the Indian Penal Code (IPC) and other special acts (e.g. corruption, specific crimes).
Administrative Control	Part of the Department of Revenue , Ministry of Finance, Government of India.	State Police are under respective State Governments ; the CBI is under the Department of Personnel and Training (DoPT) in the Ministry of Personnel, Public Grievances and Pensions.
Nature of Action	A “sui generis” (unique) process focusing on an inquiry into the ‘proceeds of crime’ . The goal is to trace, attach, and confiscate assets derived from a crime.	Conducts a criminal ‘investigation’ into a crime itself, starting with the registration of a First Information Report (FIR).
Initiation of Case	Cannot register a case independently. It relies on a predicate offence being registered by other agencies (e.g., police, CBI) under a ‘scheduled offence’ listed in the PMLA.	Can register a case (FIR) independently upon receiving information about a cognizable offence. The CBI can also register cases on its own or by court order.
Key Powers	Wide powers of attachment of assets believed to be proceeds of crime, summons, and search and seizure.	Powers of arrest , search and seizure, and custodial interrogation primarily for the purpose of crime detection and prevention.
Arrest & Bail	Arrest under Section 19 of the PMLA based on “reason to believe.” Bail is highly stringent , as Section 45 of the PMLA imposes a double condition (public prosecutor’s opinion and court’s satisfaction).	Arrest based on “reasonable suspicion.” Bail provisions are relatively less stringent and vary depending on the nature of the offence (bailable, non-bailable).
Admissibility of Statement	A statement recorded before an ED officer is admissible as evidence in court.	A statement recorded by a police officer during an investigation is not admissible as evidence.

Focus	Focuses on recovering the 'proceeds of crime' to redistribute them to victims. Works on the financial trail of an offence.	Focuses on establishing the guilt of the accused for the criminal offence committed.
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What role does the Enforcement Directorate (ED) play in India?

1. **Combating Money Laundering:** This is ED's primary role. The ED investigates and prosecutes money laundering offences, with the power to attach and confiscate properties and assets derived from criminal activity, known as the "proceeds of crime."
2. **Enforcing Foreign Exchange Laws (Under FEMA, 1999):** The ED investigates violations of foreign exchange regulations, such as illegal money transfers (hawala) and other infractions. It has the power to summon individuals, conduct surveys, and impose penalties.
3. **Targeting Fugitive Economic Offenders (Under FEOA, 2018):** The ED works to attach and confiscate the properties of economic offenders who have fled India to avoid facing legal proceedings. The ED sell or auction these seized assets to help state banks recover their lost funds.

What are the major criticisms of the Enforcement Directorate (ED)?

1. **Low Conviction Rate:** Between 2014 and 2024, only 40 convictions were secured out of 5,297 cases registered under PMLA, with a particularly low rate of 1% (2 convictions) in 193 cases filed against politicians. The Supreme Court noted this undermines the justification for the agency's sweeping powers.
2. **Political Bias & Selective Targeting:** Opposition leaders allege the ED is "weaponized" to target rivals, with 98% of political cases since 2014 filed against non-BJP leaders. Critics point to high-profile arrests of leaders like Arvind Kejriwal and Hemant Soren, contrasting with the lack of similar actions against ruling party members.
3. **Draconian Bail Conditions (Reversal of Innocence):** The PMLA's stringent bail provisions (Section 45) impose a "reverse burden of proof," making it exceptionally difficult for accused individuals to secure bail. The Supreme Court observed that this "reverses the presumption of innocence" and effectively results in "sentencing them almost without a trial".
4. **No Access to the "FIR":** Unlike regular criminal law where an accused has a right to a copy of the Police FIR, the ED treats its equivalent document (the ECIR) as an internal, confidential file. An individual can be summoned or arrested without fully knowing the exact details or scope of the allegations against them.
5. **Immediate Asset Freezing:** The ED can provisionally freeze or attach bank accounts, properties, and business assets at the mere inquiry stage. For businesses, this sudden cash-flow strangulation often forces them into bankruptcy long before they can prove their innocence in court.
6. **Inefficiency & Resource Drain:** The agency takes years to conclude trials – only 56 trials have been completed in two decades. However, the ED defends its record by highlighting a ~95% conviction rate in completed trials and noting that it has returned nearly ₹23,000 crore to victims.
7. **Expanding jurisdiction:** The broad definition of "proceeds of crime" and "money laundering" has drawn criticism for potentially criminalising ordinary financial activity.

What Should be the Way Forward?

1. **Ease the Stringent Bail Conditions (Section 45 of PMLA):** The Supreme Court has noted that the near-automatic denial of bail effectively punishes the accused without trial. Thus, amend the law to

make bail the rule and denial an exception, except for the most serious offenders, while still allowing for strict conditions.

2. **Strengthen Pre-Attachment Safeguards:** Before attaching assets (which can cripple a business or individual), the ED should provide a detailed, reasoned order and a meaningful, time-bound opportunity for the person to be heard by an independent adjudicating authority.
3. **Insulate from Political Influence:** The ED's top officers, including the Director, should be appointed for fixed, non-extendable tenures with security of service. A collegium of senior officials, judges, and the Central Vigilance Commissioner, rather than a single political authority, should oversee key decisions.
4. **Defined Criteria for Case Selection:** The ED needs clear, objective, and public criteria for picking up cases. Setting a minimum financial threshold (e.g., cases involving frauds over ₹50 or ₹100 crores) would stop the agency from stretching its resources thin over minor municipal offenses.
5. **Focus on High-Quality Prosecution:** Instead of a high volume of cases with low conviction rates, the ED should prioritize high-quality, evidence-rich investigations on major financial conspiracies. Invest in specialized training for its legal teams to improve trial outcomes.
6. **Mandate Transparency:** The ED should routinely publish anonymized data on its website: number of searches, arrests, assets attached (by value and case), charge sheets filed, and conviction rates. It should also disclose the average time taken for trial completion.
7. **Sharing the ECIR:** There should be a legal mandate to provide a copy or a detailed summary of the Enforcement Case Information Report (ECIR) to the accused at the time of summoning or arrest. This aligns with the constitutional right to know the exact grounds of one's detention.

Conclusion: By embedding strict adherence to due process, the ED can successfully catch major economic offenders while remaining an unassailable, trusted pillar of the Indian justice system.

UPSC GS-2: Indian Polity – Constitutional & Non-Constitutional Bodies

Read More: [Indian Express](#)

India-France Relations – Significance & Challenges – Explained Pointwise

Prime Minister Narendra Modi is set to visit France to participate in the G7 Summit. This is PM's 7th official visit to France since 2014. India and France share a longstanding strategic partnership rooted in mutual trust, encompassing defence, space, nuclear energy, maritime security, and climate cooperation. The relationship is significant for advancing India's strategic autonomy and global aspirations. However, challenges persist in trade imbalances, technology transfer, market access issues, and navigating evolving geopolitical dynamics.



What is the history of India-France Relations?

India and France have traditionally close and friendly relations.

<p>Pre-Independence Era</p>	<ul style="list-style-type: none"> ● The French East India Company (1664): Established under King Louis XIV, the company created prominent trading posts in India, most notably at Pondicherry (Puducherry), Chandernagore, Karikal, Mahé, and Yanam. ● The Anglo-French Wars: Throughout the 18th century, the Carnatic Wars saw the French and British fight for supremacy over the Indian subcontinent. Brilliant French governors like Joseph François Dupleix formed strategic alliances with local Indian rulers to counter British expansion.
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<p>Post Independence Era</p>	<ul style="list-style-type: none"> ● Establishing Ties (1947): India and France officially established diplomatic relations immediately after India gained independence. ● The Treaty of Cession (1956/1962): France agreed to peacefully transfer its Indian territories to the Republic of India. A de facto transfer occurred in 1954, followed by a formal Treaty of Cession signed in 1956 and ratified by the French Parliament in 1962. Pondicherry and the other pockets were integrated smoothly without military conflict. ● French aircraft and helicopters like Ouragan, Mystere, Alize, Alouette, Jaguar have been part of the Indian air fleet since 1960's. ● In 1984, France stepped in to supply nuclear fuel to Tarapur power plant after the US backed out citing domestic constraints. ● France supported India's space programme since its inception, like setting up Sriharikota launch site and Centaure and Viking rocket technologies in the 1970s. <p>However, the Cold War Constraints, did not let the development of a fully developed relationship.</p>
<p>Post Cold War Era</p>	<ul style="list-style-type: none"> ● Strategic Partnership: India and France entered into Strategic Partnership in 1998. The areas of defence & security cooperation, space cooperation and civil nuclear cooperation constitute the principal pillars of our Strategic Partnership. ● The 1998 Nuclear Tests: India conducts its Pokhran-II nuclear tests. While the US, UK, and other Western powers impose harsh economic and technological sanctions, France refuses to sanction India, choosing instead to engage in open diplomatic dialogue. ● Special Global Strategic Partnership: In February 2026, India and France elevated their ties to a Special Global Strategic Partnership. This historic upgrade expands collaboration beyond traditional defense into AI, space, and clean energy. ● Horizon 2047 Agreement: Horizon 2047 agreement between India and France lays down the future roadmap of India-France collaboration for the next 25 years. The collaboration between India and France in emerging domains such as supercomputing, cloud computing, artificial intelligence, and quantum technologies holds significant importance for India's future.

What are the areas of cooperation between India and France?

1. **Geo-Political:** India and France have close geopolitical relations which has only strengthened in due course of time.
 - France was the **first P-5 country** to support Indian membership **in the UNSC** and the reforms of the United Nations.

- France's support was vital in India's accession to the Missile Technology Control Regime (MTCR), Wassenaar Arrangement (WA) and Australia Group (AG).
 - France has got the **unique honour of being the country** that has been **invited the highest number of times** as chief guest for the Republic Day.
2. **Geo-Strategic:** France has been appreciative of the geostrategic concerns of India and has taken the following measures to bolster the geo-strategic cooperation.
- France has offered its biggest strategic asset in the Indo-Pacific territory to India. **For Ex-Indian Air Force planes** have been deployed to **Reunion Island**.
 - France has also given equities in organisations such as the **Indian Ocean Commission** to India. France is also part of **India-France-Australia Trilateral Dialogue** that supports free, open and inclusive Indo-Pacific
 - France has supported India on Jammu and Kashmir and has stood with India to **counter Pakistan-sponsored terrorism**, and has bolstered **India's capabilities** against China.
3. **Defence and Security:** India and France's Relationship in the defence and security domain has increased many folds, which are mentioned below:
- France has emerged as a key defence partner for India. It has become the **second-largest defence supplier** in 2017-2021. Major Military equipments imported from France include **Rafale** and **Mirage 2000 Fighter Aircraft** and **Scorpene Submarines**.
 - India and France have been regularly conduct joint exercises- **Varuna** (Naval), **Garuda** (Air Force) and **Shakti** (Army).
 - India and France have been undertaking '**joint patrolling**' in the Indian Ocean Region and are striving towards **maritime domain awareness** in the Indian Ocean region.
 - During recent PM Modi's visit, India offered France the DRDO-developed **Pinaka multi-barrel rocket launcher**.
4. **Economic cooperation:** India and France share a strong economic partnership, as outlined below:
- Bilateral trade between India and France has reached a new peak at **USD 13.4 billion** in 2022-23. The exports from India have crossed **USD 7 billion**.
 - France is the **11th largest foreign investor in India**. The cumulative investment of France in India is USD 10.49 billion from April 2000 to December 2022.
 - More than **1,000 French establishments** are present in India. Their total turnover is around US\$ 20 billion and they employ around 300,000 persons.
5. **Energy and Climate:** India-France relationship is distinctly defined by the close cooperation in the fields of renewable energy to protect the Climate change.
- French support played an important role in India getting an **exemption from the Nuclear Suppliers Group (NSG) in 2008** to resume international cooperation in civil nuclear energy.
 - France actively **supports India's entry** in to the **NSG**.
 - India and France played a pivotal role in the establishment of **International Solar Alliance**.
6. **Science and Technology:** India and France share close partnership in the field of Science and Technology.
- France's CNES and India's ISRO partnership has been strengthened with the **Joint Vision for Space Cooperation in 2018**.
 - India and France are collaborating on Joint Earth Observation Mission- **TRISHNA**, Joint Mars Mission and removal of space debris.
 - India and France are jointly constructing the **world's largest nuclear park** in Jaitapur, Maharashtra.
 - France is the first European country to accept the UPI payments system.

- Formalized during the 2026 AI Impact Summit, both nations are working to democratize AI resources and have established a joint Research Centre for AI in Healthcare.
7. **Diaspora:** Around 109,000 of Indians, largely originating from French enclaves of **Puducherry, Karaikal, Yanam, Mahe** and **Chandernagore** live in France. Also, a sizable number of Indian-origin population lives in the French Overseas Territories of **Reunion Island** (280,000), **Guadeloupe** (60,000), **Martinique** (6,000) and **Saint Martin** (300).
 8. **Connectivity:** Both countries recently agreed to strengthen cooperation on implementing the **India-Middle East-Europe Economic Corridor**, first discussed during the G20 Summit in New Delhi in 2023. The plan **includes an Eastern Corridor** linking India to the Gulf region and a Northern Corridor connecting the Gulf region to Europe. The corridor will integrate railway networks, a ship-rail transit system, and supporting road transport routes.

What is the significance of India-France Relations?

1. **Securing the Indo-Pacific:** France is a permanent resident of the Indo-Pacific via its territories (Reunion, Polynesia), and India is the region's geographic heart. Both advocate for a **"rules-based order"** and freedom of navigation (UNCLOS) in response to growing maritime competition. India requires French support for maintaining the stability and security of the Indo-Pacific region and to counter the growing Chinese aggression. **For ex-** India-France **Joint Strategic Vision for cooperation in the Indian Ocean Region** in 2018.
2. **Technology and Defence Sovereignty:** France has historically served as India's primary alternative to reliance on Russian or American military hardware. From the Mirage 2000s in the 1980s to the modern Rafale fighter jets and Scorpene submarines, France provides cutting-edge technology without political strings attached. The partnership is highly significant for India's defense modernization and its push for *Atmanirbhar Bharat* (self-reliance).
3. **Strategic Autonomy:** The India-France relation is strategically autonomous in its truest sense, as **it is not constrained either** by the **Anglo-Saxon views** (in France) nor **the anti-western thoughts** (In India). **For ex-** France support of India after 1998 Pokhran Nuclear Test.
4. **Entry to Key Organisations:** France's support is crucial to India's entry into important organisations like the **UNSC** and the **NSG**.
5. **Global Stability:** India- France relations is crucial for checking **Russia's assertiveness in Europe** and **China's assertiveness in Asia**. This will ensure, global stability and power parity in the emerging world order.

What are the challenges in India-France Relationship?

1. **Trade Imbalances and IPR issues:** India- France economic relation is a concern for India as it suffers from trade imbalances (**France exports more to India**). France ranks far behind other major partners like the US, China, the UAE, or even Germany in terms of volume.. Also, India has been criticized by France for **inadequate protection of intellectual property rights** (IPRs) of French businesses operating in India.
2. **The "Defense-Heavy" Basket:** A substantial portion of economic engagement is restricted to government-to-government defense and aerospace procurement. Diversification into broader consumer goods, agriculture, and general manufacturing remains limited.
3. **Stalled Projects:** The India-France relations also face the challenge of non-operationalisation of the negotiated projects. **For ex-** France's offer to build reactors at Jaitapur faces delays, high costs, and legal tensions over India's Civil Liability for Nuclear Damage Act (2010). The Act requires nuclear suppliers to compensate disaster victims, which French firms view as a barrier to investment.

4. **Differences in geopolitical approaches:** Both nations deeply value “strategic autonomy,” but this means they occasionally prioritize different threats based on geographical realities such as:
 - **Ukraine:** France actively supports Ukraine against Russia, while India maintains neutrality, abstaining from UNGA resolutions.
 - **West Asia:** Differing positions on Iran and the Israel-Palestine conflict.
 - **China:** France’s economic ties with China may reduce strategic convergence with India in the Indo-Pacific.
5. **Technology Transfer Friction:** High-tech military transfers are tightly regulated by France. Agreeing on exactly how much core technology gets shared for local production—such as the co-development of high-thrust fighter jet engines with Safran—requires intense, prolonged negotiations.

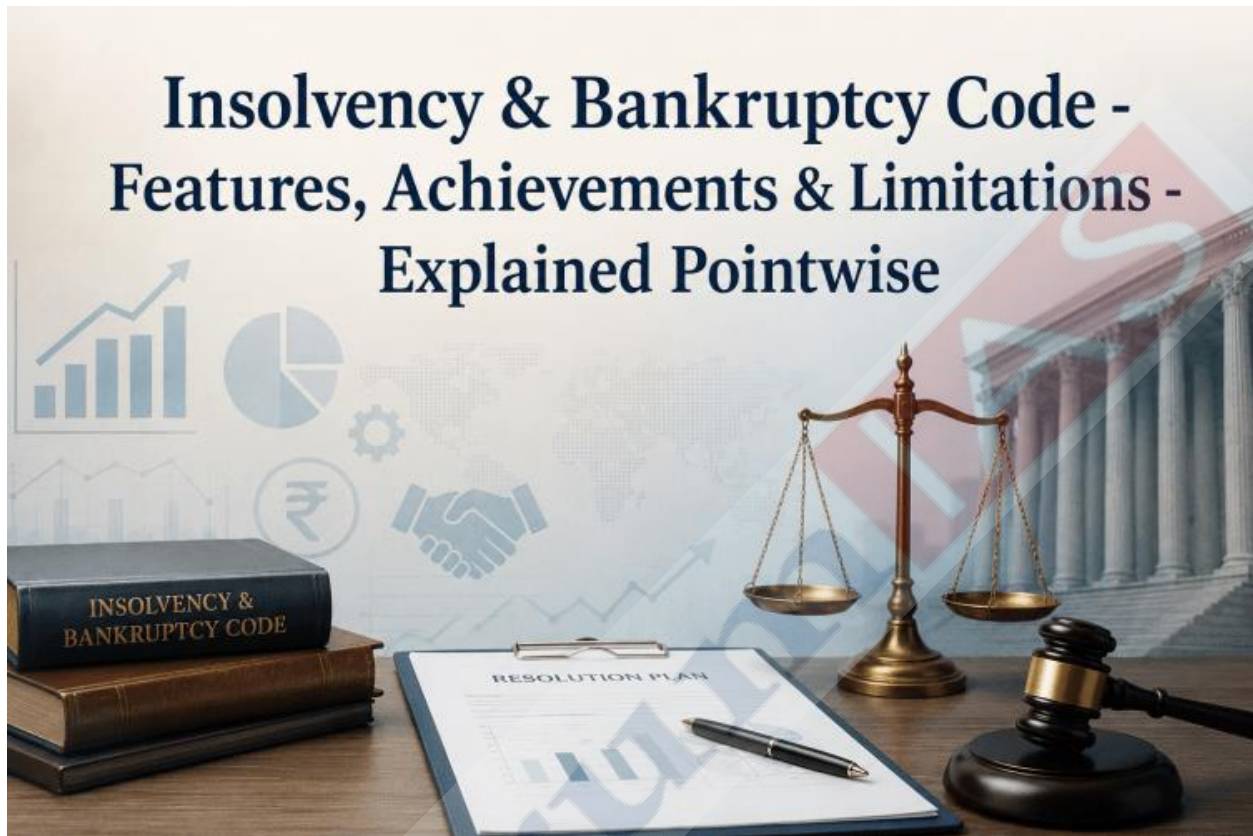
What should be the Way Forward?

1. **Leveraging the India-EU FTA:** Both nations must use their political capital to help steer and conclude the broader India-European Union Free Trade Agreement negotiations. Resolving localized tariff disputes on automobiles, spirits, textiles, and carbon taxes will structurally boost bilateral trade beyond the sluggish \$15 billion threshold.
2. **Implementation of Agreement on Migration and Mobility:** India and France must work jointly to **increase the mobility of students, graduates, professionals and skilled workers** while strengthening their efforts to combat irregular migration.
3. **Increased Trade and Investment:** The two countries must work towards increasing bilateral trade and investment with measures like **setting up joint ventures, expanding trade agreements and promoting cross-border investment.**
4. **Broadening the International Solar Alliance (ISA):** The ISA should move beyond institutional capacity building to actively financing and executing decentralized solar grids across Africa and the Global South. This positions the partnership as a functional bridge providing tangible climate-resilient infrastructure.
5. **Expedition on stalled projects:** A joint working group must be created to expedite the completion of the stalled projects like **Jaitpur Nuclear Power Plant** – Address liability concerns under India’s Civil Liability for Nuclear Damage Act (2010) through a bilateral supplement or insurance mechanism to enable ground breaking after decades of delays.

Read More– [The Indian Express](#)

UPSC Syllabus- GS 2– Bilateral, regional and global groupings and agreements involving India and/or affecting India’s interests.

Insolvency & Bankruptcy Code – Features, Achievements & Limitations – Explained Pointwise



The Insolvency and Bankruptcy Code (IBC), 2016 is India's landmark insolvency law that provides a time-bound framework for resolving corporate distress, maximizing asset value, and improving creditor recovery. To address delays and procedural bottlenecks, the government recently enacted the IBC (Amendment) Act, 2026, introducing stricter timelines, a creditor-initiated insolvency process, enhanced creditor rights, and measures to expedite resolution and liquidation proceedings.

What is the Insolvency and Bankruptcy Code (IBC)?

- The Insolvency and Bankruptcy Code (IBC), enacted in 2016, is a landmark reform that consolidated and modernized India's insolvency framework.
- Its main aim is to provide a unified, time-bound process for resolving insolvency and bankruptcy of corporates, individuals, and partnership firms, thereby improving overall financial sector health and creditor confidence.
- **Insolvency** refers to a situation where individuals or companies cannot repay back their outstanding debt obligations.
- **Bankruptcy** refers to a legal status declared by a court of competent jurisdiction for a person or entity that is insolvent i.e. unable to pay off debts.

What are the key amendments brought by the IBC (Amendment) Act, 2026?

1. **Mandatory Admission & 14-Day Timeline:** The Act replaces the discretionary “may” with a mandatory “shall” regarding the admission of applications by financial creditors. Once the existence of a default is established and the application is complete, the Adjudicating Authority (NCLT) **must** admit the application, typically within **14 days**. Failure to do so requires the NCLT to record written reasons for the delay.
2. **Creditor-Initiated Insolvency Resolution Process (CIIRP):** One of the most transformative introductions is the **Creditor-Initiated Insolvency Resolution Process (CIIRP)**. This is an alternative, faster, out-of-court mechanism available to notified classes of financial creditors and eligible corporate debtors. The CIIRP track must be finished within a swift **150 days**. If it fails, the case automatically upgrades into a standard, formal courtroom CIRP.
3. **Codifying the “Clean Slate” Principle:** An approved resolution plan now, by statute, extinguishes all past claims against the corporate debtor and its assets that are not covered by the plan. This codifies the principle from the **Ghanshyam Mishra Case** and provides a statutory guarantee to resolution applicants that they will not face unknown future liabilities.
4. **Two-Stage Plan Approval:** To prevent implementation delays caused by disputes over fund distribution, the NCLT can now approve the **implementation of the resolution plan first** and subsequently pass a separate order approving the distribution mechanism within 30 days.
5. **CoC Oversight in Liquidation:** The Committee of Creditors (CoC) constituted during the CIRP will now also **supervise the liquidation process**.
6. **Group Insolvency & Cross-Border Frameworks (Enabling Provisions):** The Act empowers the Central Government to frame rules for the consolidated resolution of **corporate groups** (connected by 26% or more control) and for **cross-border insolvency** based on the UNCITRAL Model Law.
7. **Penalty for Frivolous Litigation (Section 64A):** To deter misuse of the process, the NCLT can impose a penalty ranging from **₹1 lakh to ₹2 crores** on any person initiating frivolous or vexatious proceedings.

What are the Key Features of the IBC?

- **“Creditor-in-Control” Model:** Before the IBC, if a company defaulted, the owners (promoters) kept managing the company while banks fought court battles to get their money back. Now under IBC, once an insolvency plea is admitted, the existing management is **suspended** & an independent **Insolvency Professional (IP)** takes over day-to-day operations. Also, all major business decisions are handed over to a **Committee of Creditors (CoC)**.
- **Strict timelines:** The Corporate Insolvency Resolution Process (CIRP) must be completed within **180 days** (extendable to 330 days in special cases, including litigation). Special provisions for small companies and startups (90 days + 45 days).
- **Insolvency Professional (IP):** An individual licensed by **IBBI** (Insolvency and Bankruptcy Board of India) who manages the debtor’s operations during the resolution period (called Interim Resolution Professional or Resolution Professional).
- **Insolvency and Bankruptcy Board of India (IBBI):** Regulates professionals and agencies, sets standards, and oversees proceedings.
- **The Waterfall Mechanism (Priority of Distribution):** In case of liquidation, the IBC specifies a strict hierarchy for distributing sale proceeds. This overrides all other laws (Income Tax, Customs, etc.) except for workers’ dues:

Priority Level	Claimant
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1st	Insolvency resolution costs & liquidation costs.
2nd	Secured creditors (selling their security) + Workmen's dues (up to 24 months).
3rd	Employees (other than workmen) – wages for 12 months.
4th	Unsecured creditors.
5th	Government (taxes, duties, penalties – this is a major shift; earlier govt had priority).
6th	Preference (preferred) shareholders.
7th	Equity shareholders (residual owners).

- **Resolution Plans (Revival vs. Liquidation):**
 - **Resolution Applicant:** Any person (individual, company, even the existing promoter) can submit a plan to revive the company.
 - **Voting Threshold:** A resolution plan requires **66% (two-thirds)** vote of the CoC to be approved.
- **Adjudicating Authorities:**
 - **National Company Law Tribunal (NCLT)** for companies/LLPs.
 - **Debt Recovery Tribunal (DRT)** for individuals/partnerships.
- **Pre-Packaged Insolvency (for MSMEs):** Introduced in 2021, this is a hybrid process for Micro, Small & Medium Enterprises (MSMEs):
 - The debtor and creditors negotiate a resolution plan before going to court.
 - The existing management stays in control (Debtor-in-Possession), but an IP oversees them.
 - **Time Limit:** 120 days (much faster than regular IBC).
- **Cross-border Insolvency Provisions:** The IBC contains provisions to deal with companies having assets and creditors in multiple countries, based on the **UNCITRAL Model Law**.

What are the Objectives of the IBC?

1. **Consolidation & Amendment of Insolvency Laws:** Merge and streamline multiple, outdated insolvency and bankruptcy laws under a single, comprehensive code for individuals, companies, LLPs, and partnership firms.
2. **Facilitate time-bound resolution:** Ensure fast and predictable outcomes for insolvency cases (180–330 days), minimizing value erosion and maximizing asset recovery for creditors.
3. **Maximise Value of Assets:** Prevent value depletion for stressed companies or individuals by encouraging restructuring, sale, or liquidation in a manner that realizes maximum possible returns.
4. **Promote Entrepreneurship:** By making exit easy and non-punitive, IBC encourages risk-taking, business innovation, and investment, fostering a dynamic entrepreneurial ecosystem.
5. **Protect interests of Creditors & other Stakeholders:** Structure processes to balance the interests of financial creditors, operational creditors, employees, government dues, and other stakeholders fairly.

6. **Improve Ease of Doing Business:** By offering clarity, predictability, and a speedy resolution process, IBC elevates India's reputation for contract enforcement and dispute management, making it more attractive for investment.
7. **Reduce NPAs & Boost Credit Supply:** Provide an effective mechanism for addressing bad loans and stressed assets, strengthening the financial system and allowing for more responsible credit creation.
8. **Establishment of Regulatory Mechanism:** Establish the Insolvency and Bankruptcy Board of India (IBBI) to regulate insolvency professionals and agencies, ensuring ethical, efficient, and accountable practice.

Thus, The IBC aims to **resolve** (not just liquidate) distressed entities **quickly** (330 days) to preserve **value** for **creditors**, while giving honest debtors a second chance.

Why was the Insolvency and Bankruptcy Code (IBC) introduced?

1. **Fragmented & Outdated Insolvency Laws:** Prior to IBC, insolvency and bankruptcy were governed by multiple, overlapping laws and forums, causing confusion, delays, and high costs for resolution. Lack of clarity led to conflicting legal interpretations and inefficiency in resolving business distress. On average, it took **4.3 years** to resolve an insolvency case in India, compared to just 6 to 12 months in developed economies.
2. **Prolonged Resolution Time & Value Erosion:** Average insolvency resolution in India took over 4 years, in contrast to 1–1.5 years in developed countries. Long proceedings caused value erosion of assets and discouraged genuine business restructuring.
3. **Mounting NPAs & Stressed Assets:** Banks and financial institutions suffered from rising non-performing assets (NPAs) and mounting bad debts. Ineffective recovery mechanisms left creditors with little recourse and led to growing economic risks.
4. **Poor Ease of Doing Business:** India's low ranking in the World Bank's Ease of Doing Business index was partly due to cumbersome exit processes for distressed firms. Investors and entrepreneurs were deterred by unpredictable and costly insolvency procedures. The introduction of the IBC was a major signal to global markets that India was modernizing its market infrastructure.
5. **Strengthening Credit Discipline & Market Confidence:** The absence of strong recovery laws allowed for poor credit discipline and willful defaulting, harming India's banking sector and overall business climate.
6. **Need for Modern, Unified, Creditor-friendly Framework:**
 - Global best practices demanded a unified, quick, and transparent framework that empowers creditors and ensures fair outcomes for all stakeholders.
 - Encouraging entrepreneurship, risk-taking, and a robust financial market needed time-bound exits and non-punitive resolution processes.

What are the major achievements of the Insolvency and Bankruptcy Code (IBC)?

1. **Improved Recovery Rates:** The IBC has emerged as the most successful mechanism for recovering bad or stressed assets in India, consistently outperforming older systems like Lok Adalats, Debt Recovery Tribunals (DRTs), and the SARFAESI Act. Financial creditors have realized over **₹4.32 lakh crore** through successfully approved corporate resolution plans.
2. **Strengthening Banking Sector & Asset Quality:** The code has been a driving force behind the dramatic cleanup of India's banking sector. Gross Non-Performing Assets (GNPAs) of scheduled commercial banks have declined from a peak of over 11.5% in 2018 to a multi-decadal low of

approximately **2.3% in 2025**. Public sector banks have reported record combined net profits, reflecting their improved financial health.

3. **Deterrent Effect Leading to Settlements:** The credible threat of losing control of their company to creditors has prompted many defaulting promoters to settle their dues before the formal insolvency process begins. Over **30,000 cases**, involving an estimated **₹14 lakh crore** of debt, were resolved at the pre-admission stage.
4. **Prioritizing Business Revival Over Closure:** The IBC is fundamentally built to save enterprises rather than bury them. Out of all corporate cases reaching ultimate closure, **over 57% were successfully rescued** through formal resolution plans, mutual settlements, or legal withdrawals.
5. **Successful Resolutions:** As of March 2026, 1,419 companies have found new buyers and successfully emerged from the insolvency process. Of these, about 42% were companies that were defunct or had been languishing in older, ineffective forums like the Board for Industrial and Financial Reconstruction (BIFR).
6. **Boost to Investor Confidence:** The successful revival of companies has boosted investor confidence. The aggregate market valuation of resolved listed entities witnessed a remarkable increase from approximately **₹2.8 lakh crore to about ₹9 lakh crore** over five years.
7. **Legislative Progress:** Rather than remaining static, the framework has adapted. The passing of the **IBC (Amendment) Act, 2026**, structurally modernized the code by introducing a streamlined Creditor-Initiated track (CIIRP), formalizing cross-border insolvency procedures, and codifying a strict “Clean Slate” principle so new buyers aren’t bogged down by past corporate crimes.
8. **Creation of a New Ecosystem:** The IBC led to the creation of an entirely new institutional ecosystem, including the Insolvency and Bankruptcy Board of India (IBBI), a body of over 3,800 licensed insolvency professionals, and information utilities, which have together built a specialized market for stressed assets.
9. **More Robust Credit Market:** IBC has made the Indian market more attractive to investors, especially in distressed asset deals, creating greater transparency and predictability.

What are the major issues facing the implementation of the IBC?

1. **Case Backlog & Delays:** The most fundamental issue is the failure to adhere to the IBC’s statutory timeline of 330 days for completing the Corporate Insolvency Resolution Process (CIRP). The average resolution time has been rising, increasing to **744 days in FY26** from 713 days the previous year. Nearly **78% of ongoing corporate insolvency cases** have crossed the 270-day threshold without reaching a resolution.
2. **NCLT Infrastructure and Capacity Crunch:** The National Company Law Tribunal (NCLT), the adjudicating authority for corporate insolvency, is severely overburdened. As of late 2025, the NCLT was functioning with only **55 members against a sanctioned strength of 63**, and nearly **24 of its 30 benches were operating on a half-day basis**. This has led to a massive backlog, with around **7,000 cases pending** at the admission stage alone.
3. **Declining Recovery Rates:** The effectiveness of the IBC is ultimately measured by the recovery for creditors, and this metric has shown a worrying trend. Recoveries against admitted claims fell sharply to just **23% in FY26, down from 46% in FY25**. This means creditors, on average, are getting back less than a quarter of what they are owed.
4. **Low Recovery for Certain Assets:** Although average recovery improved, some sectors and cases deliver lower-than-expected recoveries, especially where asset quality is poor or liquidation proceeds are limited for e.g. Agricultural and service-based enterprises often face distinct liquidation challenges.
5. **Structural Issues in Credit Markets:**

- Banks exhibit risk aversion, preferring secured over unsecured lending, and delay initiating insolvency to maximize loan lifetimes, reducing early resolution incentives.
 - Non-Banking Financial Companies (NBFCs) and informal creditors remain less integrated into the insolvency framework.
6. **The MSME Pre-Pack Failure:** The **Pre-packaged Insolvency Resolution Process (PPIRP)**, created to give fast-track, out-of-court relief to small micro-enterprises, has seen dismal traction. Over multiple years, fewer than 20 applications total have been admitted nationwide.
 7. **Conflicts with Other Laws:** The IBC was designed as a special statute with an overriding effect, but in practice, it frequently clashes with other laws, creating significant legal uncertainty. The most prominent conflict is with the **Prevention of Money Laundering Act (PMLA)**, under which enforcement agencies attach the assets of a corporate debtor. Other conflicts with the **Income Tax Act, Customs Act, and SEBI regulations** further complicate the process.
 8. **Delay in Resolution Plan Approvals:** Resolution plans sometimes face resistance, litigation, or withdrawal, causing significant delays and uncertainty for creditors and employees.
 9. **Impact on MSMEs & Startups:** The insolvency process can be costly and intimidating for small and medium enterprises and startups, which may opt for informal settlements or closure.
 10. **Incomplete Creditor Participation:** Non-financial creditors often feel underrepresented or sidelined in decision-making by the Committee of Creditors (CoC), impacting consensus and fair resolutions.

What should be the Way Forward?

1. **Strengthen Judicial & Institutional Capacity:**
 - Expand the number of dedicated NCLT benches and National Company Law Appellate Tribunal (NCLAT) members to reduce case backlog and expedite resolution.
 - Enhance training for judges, insolvency professionals, and related authorities to handle complex insolvency cases efficiently.
2. **Simplify Legal & Procedural Framework:**
 - Streamline multiple legal provisions and reduce overlaps with sector-specific laws to minimize litigation and conflicting appeals.
 - Introduce fast-track insolvency resolution mechanisms for MSMEs and startups with simplified procedures.
3. **Improve Credit Participation & Transparency:**
 - Ensure fair representation and participation of operational creditors and minority stakeholders in the Committee of Creditors (CoC).
 - Promote transparency in resolution processes and encourage stakeholder consultations to build trust and consensus.
4. **Enhance Awareness & Capacity Building:**
 - Launch nationwide awareness campaigns for debtors, creditors, and businesses about the benefits and processes of IBC.
 - Increase the pool of qualified insolvency professionals and upgrade their skill sets through continuous professional development programs.
5. **Foster Early Insolvency Detection & Resolution:**
 - Encourage early identification of financial distress through improved credit monitoring systems.
 - Facilitate pre-insolvency frameworks and corporate debt restructuring schemes to prevent insolvency where possible.
6. **Leverage Technology for Efficiency:**

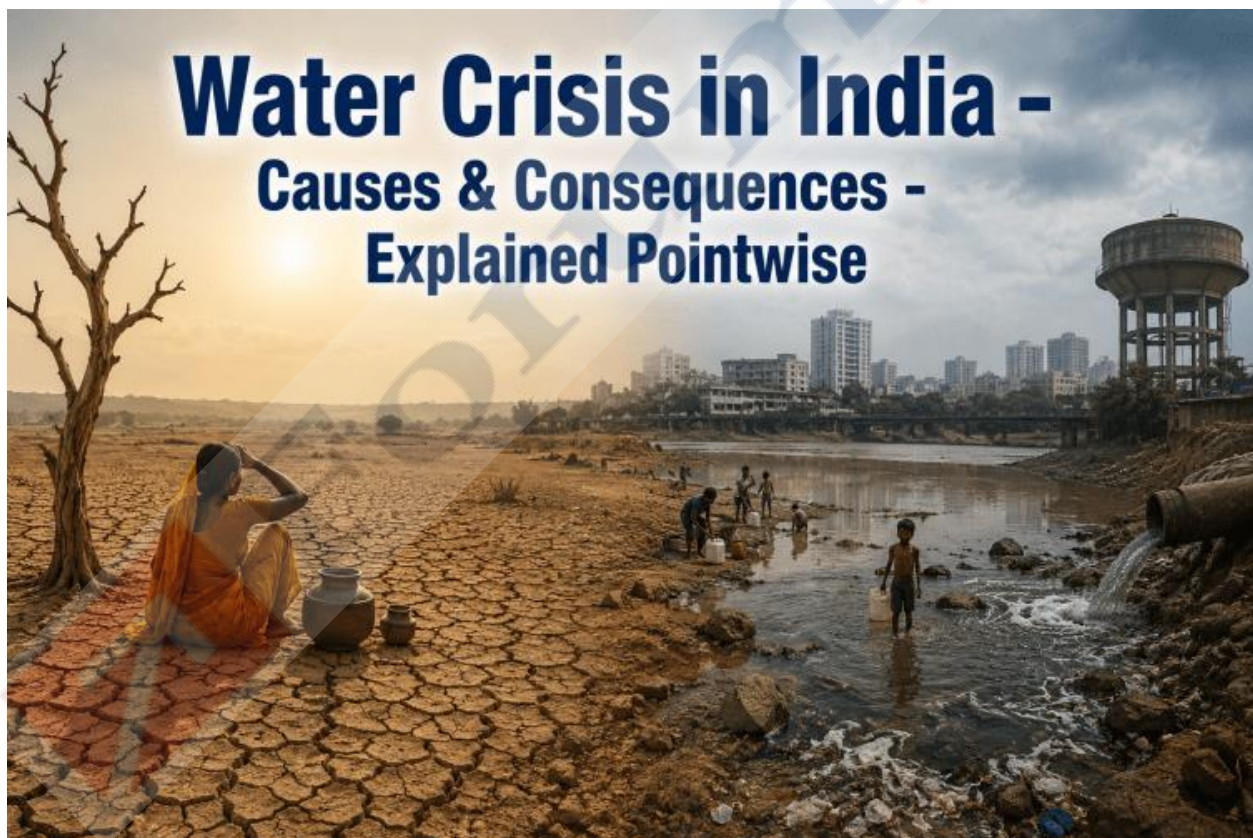
- Establish a single unified platform – **Central Digital Insolvency Dashboard** – to eliminate slow physical paperwork and tracking errors.
- Strengthen information utilities and digital platforms for collecting and authenticating financial data.
- Implement technology-enabled case management and monitoring systems to ensure transparency and real-time updates.

Conclusion:

IBC is a crucial piece of economic legislation that has modernized India's bankruptcy laws, providing a much-needed framework for resolving financial distress and promoting a more robust and transparent credit market.

UPSC GS-3: Economics

Read More: [The Hindu](#)

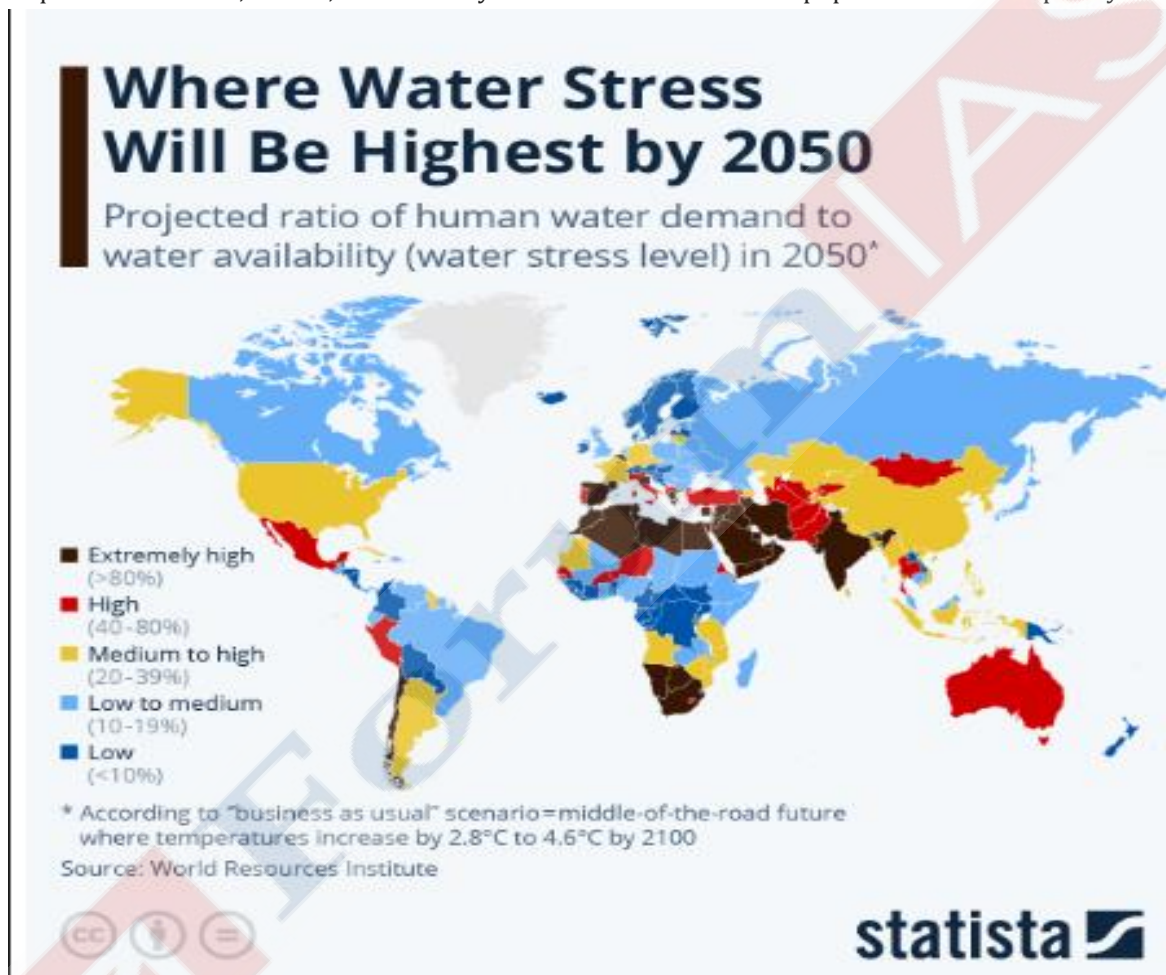
Water Crisis in India – Causes & Consequences – Explained Pointwise

India is experiencing one of the most severe water crises in its history. With only 4% of the world's freshwater resources but home to nearly 18% of the global population, the country faces acute stress in meeting the water demands of its people, agriculture, and industry. By 2030, India's water demand is projected to be twice the available supply, risking severe shortages for millions and potentially impacting the nation's GDP.

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What is Water Crisis? What is the situation in India?

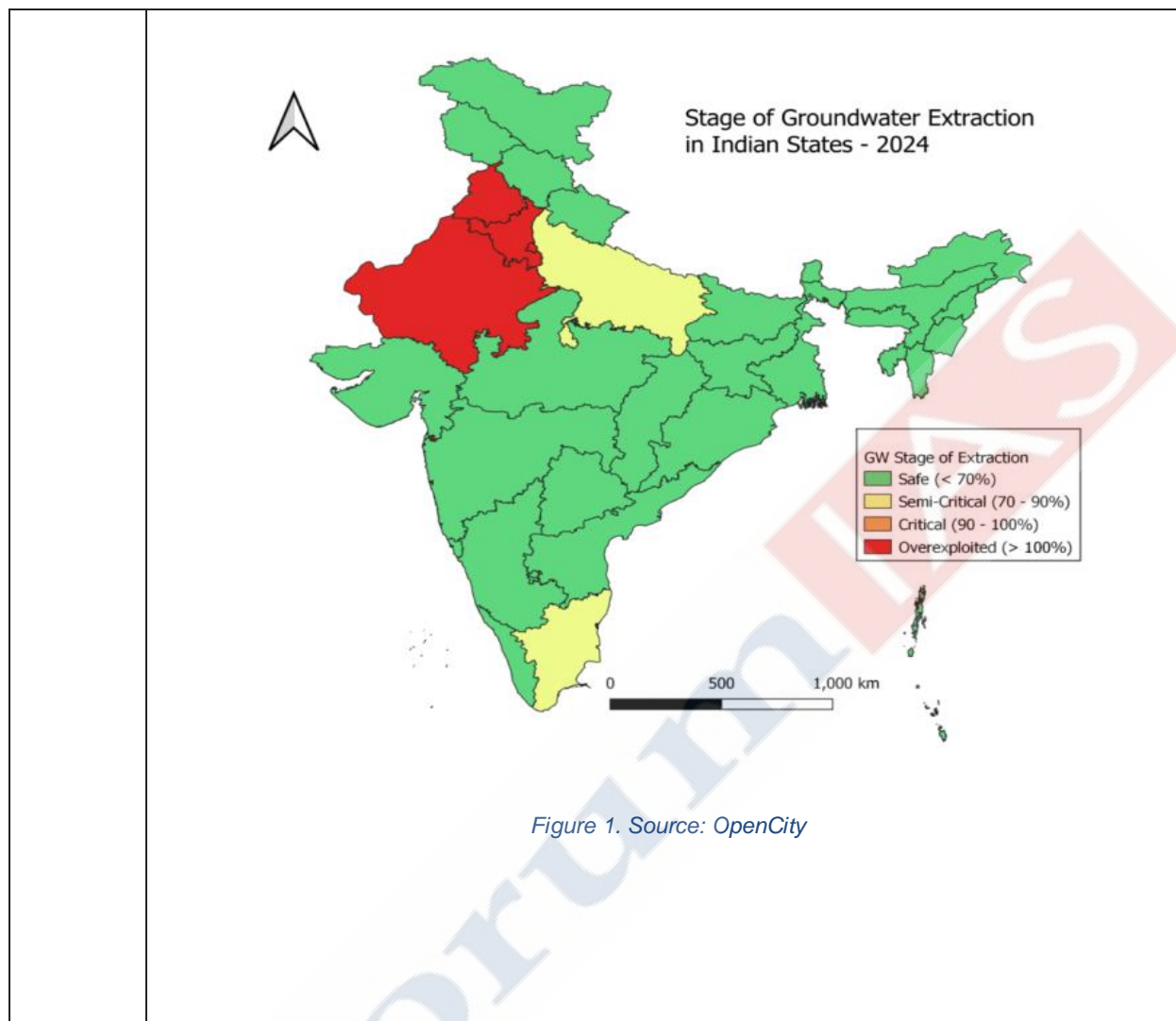
- **Water Crisis:** Water crisis refers to the situation where the available potable, safe water in a region is less than its demand. The World Bank refers to **water scarcity** as a condition when the **annual per-capita availability** is less than **1000 cubic metres**.
- Experts generally categorize the crisis into two distinct types:
 1. **Physical Water Scarcity:** There simply is not enough water naturally available in the region. This is common in naturally arid zones like the Middle East and North Africa.
 2. **Economic Water Scarcity:** Water exists, but the infrastructure, management, or funding required to clean, store, and safely distribute it to the population is completely lacking.



Water Crisis Situation in India:

Water Crisis	<ul style="list-style-type: none"> ● India possesses only 4% of the world's freshwater resources, despite supporting 18% of the world's population ● According to NITI Aayog's "Composite Water Management Index (CWMI)", report India is undergoing the worst water crisis in its history. Nearly 600 million people were facing high to extreme water stress.
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	<ul style="list-style-type: none"> ● India's annual per capita availability of 1,486 cubic meters in 2021 is in the water stress category (less than 1700 cubic meters). As per Govt estimates, this may reduce to 1,341 cubic metres by 2025 and 1,140 cubic metres by 2050. ● Many cities are already facing existential threats. Chennai's "Day Zero" crisis, where water supplies completely ran dry, is a warning. The concept of "Day Zero" refers to the day when a city's drinking water supply is effectively exhausted and taps run dry.
Lack of Access to Safe Drinking Water	<p>According to NITI Aayog CWMI Report:</p> <ol style="list-style-type: none"> 2,00,000 people die every year due to inadequate access to safe water. 75% of the households in the country do not have access to drinking water. 40% of India's population will have no access to drinking water by 2030.
Overexploitation and pollution of Ground water	<ul style="list-style-type: none"> ● India is the largest groundwater user in the world, with its total use exceeding 25% of the global usage. ● The Central Groundwater Board (CGWB) highlights that the national average for groundwater extraction sits at roughly 60%. However, this masks severe regional over-extraction in India's agricultural "breadbasket" states, where water capital is dropping at an unsustainable rate: <ul style="list-style-type: none"> ○ Punjab: 156% extraction rate ○ Rajasthan: 147% extraction rate ○ Haryana: 137% extraction rate ● Nearly 70% of groundwater is contaminated. India is placed at the rank of 120 among 122 countries in the water quality index.



What are the reasons for the Water Crisis in India?

1. **Rising water demand:** According to NITI Aayog, India's water demand is increasing at a rapid rate. India's water demand will be twice the available supply by 2030. Also, the rate of depletion of groundwater in India during 2041-2080 will be thrice the current rate.
2. **Flawed Agricultural Policies:** Agriculture consumes nearly 90% of India's available freshwater, leaving very little for industrial and domestic use. The crisis here is driven by policy rather than necessity:
 - **Subsidized Power and "Free" Pumping:** In many states (like Punjab and Haryana), the government provides free or highly subsidized electricity to farmers. This has led to the unrestricted, 24/7 pumping of groundwater using deep tube wells.
 - **Cultivation of Water-Intensive Crops:** Due to government Minimum Support Prices (MSP) guaranteeing a market for rice and sugarcane, farmers grow these water-intensive crops in naturally semi-arid regions. It takes roughly 3,000 to 5,000 liters of water to produce just one kilogram of rice in India – a rate that is completely unsustainable for regions with dipping water tables.

3. **Unregulated Groundwater Exploitation:** Because surface water (rivers and lakes) is unreliable or polluted, India has become the **world's largest extractor of groundwater**, pulling more than the United States and China combined:
 - **Lack of Legal Restraints:** Historically, land ownership in India gave the landowner absolute rights over the water beneath their property. This has led to a "race to the bottom," where neighbors dig deeper and deeper wells to out-pump one another.
 - **Failed Natural Recharge:** As water is extracted at a rate faster than the monsoons can replenish it, aquifers are permanently collapsing.
4. **Encroachment of Natural Water Bodies & Wetlands:** Historically, Indian cities relied on interconnected systems of lakes, stepwells, and floodplains to store water. Cities like Bengaluru and Chennai have built IT parks, housing societies, and roads directly on top of these ancient water bodies, destroying their natural storage capacity.
5. **Severe Water Pollution (Quality Crisis):** India does not just have a water *quantity* problem; it has a massive water *quality* crisis. Much of the water that is physically available is too toxic to use:
 - **Untreated Sewage:** Nearly 70% of urban sewage in India is dumped directly into local rivers and lakes without any treatment. Rivers like the Yamuna and Ganga are severely compromised by municipal waste.
 - **Industrial Effluents:** Chemical, textile, and manufacturing plants frequently discharge untreated, toxic heavy metals into surface water and unlined pits, which then leach down into deep groundwater aquifers.
 - **Geogenic Contamination:** As groundwater tables drop to extreme depths, the remaining water reacts with deep rock layers, leading to dangerous, natural spikes in **arsenic, fluoride, and salinity**, making the water unsafe to drink without heavy chemical treatment.
6. **Climate Change:** Climate change is acting as a massive risk multiplier, destabilizing the predictable weather patterns. Climate change has led to:
 - **Erratic Monsoons:** Instead of steady rain spread across 3 to 4 months, India now frequently experiences long dry spells interrupted by sudden, violent downpours. These intense bursts cause immediate flooding and runoff, giving the ground no time to absorb the water.
 - **Glacial Retreat:** The Himalayan glaciers, which act as natural water towers feeding India's major perennial rivers (like the Indus, Ganga, and Brahmaputra), are melting at an accelerated pace. While this initially causes flooding, it threatens to permanently reduce the dry-season flow of these vital rivers in the coming decades.
7. **Lack of proactive management policies:** Water management policies in India have failed to keep pace with changing demands of time. **For ex- The Easement Act of 1882 granting groundwater ownership rights** to the landowner leading to indiscriminate use of water resources.
8. **Governance issues:**
 - **Water governance** in India has been **fragmented**. The Centre and the States have their respective departments for governing various issues related to water.
 - There have been separate departments for surface water and groundwater. **Central Water Commission (for surface water)** and **Central Ground Water Board (for groundwater)**.
 - **Politicization of inter-state disputes** by the political parties have hindered the quick resolution of disputes.
9. **Detached Citizens:** Since water is a free resource, it is not valued by the citizens. Citizens are completely detached from the water issues.

What are the impacts of Water Crisis in India?

<p>Economic Impact</p>	<ul style="list-style-type: none"> ● NITI Aayog's Composite Water Management Index (2018) warned that India's water crisis could cost 6% of GDP by 2050 if unaddressed. ● Water scarcity will result in decline of food production. This will hamper India's food security and have serious impacts on the livelihood of farmers and farm labourers. A study shows that a 100mm drop in rainfall can reduce farmer incomes by 15% during the kharif season. Climate change could further erode agricultural incomes by 15-18% on average, and up to 25% in unirrigated areas. ● Decline in industrial production as Industrial sectors such as textiles, thermal power plants etc. may suffer due to water shortage. ● Over 80% of India's electricity comes from thermal power plants (coal and gas) which require massive amounts of water for cooling. Intense water shortages regularly force these plants to temporarily shut down operations, triggering widespread power outages that disrupt manufacturing. ● In cities like Bengaluru and Chennai, municipal water supply cannot keep up with demand. This has allowed private water tanker operators – often called “tanker mafias” – to thrive. They pump water illegally from surrounding villages and sell it to urban residents and tech parks at highly inflated prices, driving up the cost of living and doing business. ● India's rapidly growing tech sector relies heavily on data centers, which require millions of liters of water daily for cooling systems. Building these facilities in water-stressed zones like Chennai or Hyderabad is becoming highly risky, threatening billions of dollars in tech investments.
<p>Ecological Impact</p>	<ul style="list-style-type: none"> ● Drying Rivers and Dead Lakes: Perennial rivers are turning into seasonal streams. Major rivers like the Cauvery and Krishna frequently fail to reach the sea for parts of the year. Rivers like the Yamuna, Sabarmati, and Cooum are ecologically dead or severely degraded through stretches, unable to support aquatic life. ● Loss of Biodiversity: As wetlands and marshes dry up, local flora and fauna disappear. Migratory birds are losing their winter nesting grounds, and aquatic life in India's river systems is facing localized extinctions. Heavy metal contamination (Arsenic, cadmium, nickel etc.) and oil spills in rivers and oceans respectively may threaten the marine biodiversity.

Social Impact	<ul style="list-style-type: none"> • Due to scarcity of clean water, millions of people are forced to rely on contaminated surface water. This drives massive annual outbreaks of preventable waterborne diseases such as cholera, dysentery, hepatitis A, and typhoid. • Deterioration of health of children due to intake of contaminated water. It leads to a reduction in human capital. • The increased out-of-pocket expenditure on medical expenses adversely impacts the poorest and the most vulnerable sections. • As communities dig deeper to find water, they tap into toxic aquifers. Over 300 districts in India have groundwater heavily contaminated with arsenic and fluoride. Prolonged exposure leads to arsenicosis (skin lesions and cancers) and fluorosis, a painful condition that cripples bones and rots teeth. • Increased hardships for women like school dropout, 'water wives' to fetch water in drought prone regions.
Impact on Federal Relations	<ul style="list-style-type: none"> • Amplification of the existing inter-state water disputes like Kaveri, Krishna, Godavari. There will be emergence of new disputes in the future. • There will be a rise in parochial mindset and regionalism among states and may hinder growth of national unity.
Impact on International Relations	<ul style="list-style-type: none"> • Water scarcity can lead to conflict among nations to get control over the water bodies. For ex- Impact on India-China relations due to Chinese building of dams over Brahmaputra river and India-Pakistan relations with India putting the Indus Water Treaty in abeyance.

Case Study: Bengaluru Water Crisis:

- Water starved Bengaluru is facing the **looming threat of Day Zero** (when government will shut down water connections for homes and businesses).
- A **BBC report**, based on UN-projections, had listed **Bengaluru in the second position** after **Brazil's São Paulo** among the 11 global cities that are likely to run out of drinking water.



Bengaluru Water Crisis

WATER CRISIS IN INDIA

The World Bank refers to water scarcity as a condition when the **annual per-capita availability is less than 1000 cubic metres**.

According to **NITI Aayog's Composite Water Management Index report**, India is undergoing the worst water crisis in its history. Nearly **600 million people** are facing **high to extreme water stress**. About 200,000 people die every year due to inadequate access to safe water.

REASONS BEHIND BENGALURU'S WATER CRISIS

- 1. Reduced Rainfall leading to Empty Water Reservoirs-** Water levels in **Cauvery Basin reservoirs** like **Harangi, Hemavathi, and Kabini** are at **39%** of their total capacity as of 2024 due to **deficient North-East Monsoon**.
- 2. Depletion of Groundwater-** **Excessive extraction** of groundwater by the bore wells and lack of proper implementation of rain water harvesting systems.
- 3. Destruction of natural water bodies-** Concretisation and destruction of natural lakes has reduced their storage capacity from **35 tmcft in 1800** to **2 tmcft**
- 4. Mismanagement and Inequitable Distribution-** Inefficient water management practices, including **wastage, leakage, and unequal distribution of water resources**

Created By Forum IAS

What are the government initiatives?

Jal Shakti Abhiyan (JSA) "Catch the Rain" Campaign	Executed annually right before the monsoon season, this campaign pushes for nationwide mandatory rainwater harvesting. It focuses on retrofitting traditional stepwells and tanks, removing encroachments from urban wetlands, and establishing localized Jal Shakti Kendras (Water Knowledge Centers) in every district.
Atal Bhujal Yojana	This scheme focuses directly on seven of India's most groundwater-stressed states (including Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, and Uttar Pradesh). Instead of relying entirely on top-down government mandates, it implements participatory water budgeting .
Amrit Sarovars	Launched in 2022 to combat the collapse of local surface water bodies, this project aims to develop and rejuvenate at least 75 massive water bodies (ponds/lakes) in every single district of India. Each "Amrit Sarovar" is built with a substantial holding capacity to boost local irrigation and naturally recharge regional aquifers.
Jal Jeevan Mission (JJM) - Har Ghar Jal	Launched in 2019, this initiative aims to provide functional household tap connections to every rural home. Prior to the mission, only about 16.7% of rural homes had tap water. More than 81.5% of rural households have been successfully connected. The mission was extended to achieve 100% coverage, shifting its emphasis heavily toward local operations and auditing infrastructure quality.
Namami Gange Program	It is a comprehensive program with twin objectives of effective abatement of pollution in Ganga (Nirmal Dhara) , conservation and rejuvenation of Ganga (Aviral Dhara) .
Jal Shakti Ministry	Jal Shakti Ministry has been formed by merging the Ministry of Water Resources, River Development and Ganga Rejuvenation and the Ministry of Drinking Water and Sanitation . Its aim includes: Providing clean drinking water, implementing the Namami Ganga project, resolving the inter-state water disputes, cleaning Ganga.
Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)	Operating under the motto " Per Drop More Crop ," this initiative targets the fact that farming consumes 90% of India's water. The government heavily subsidizes micro-irrigation systems, pushing farmers to pivot away from traditional flood irrigation toward precise drip and sprinkler systems .
National Water Policy	The policy focuses on the conservation, promotion and protection of water. It promotes measures like rainwater harvesting for meeting the demand of water.

Jal Sanchay Jan Bhagidari (JSJB)	A highly scalable, community-driven initiative that focuses entirely on creating artificial groundwater recharge structures. Millions of localized recharge and storage works have been completed across both rural and urban areas to catch monsoon runoff.
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What should be the Way Forward?

1. **Promotion of Water Conservation:** Encouraging rainwater harvesting to capture monsoon run-off. Also, **traditional water conservation practices** like Kudimaramath practice (Tamil Nadu), Ahar Pynes (Bihar), Bamboo Drip irrigation System(North-East) **must be revived**.
2. **Demand-side Management:** States can adopt a participatory approach with the involvement of local communities. **For ex-** The **Swajal model adopted by Uttarakhand** focusing on community-based management of water resources. **Revival of Johads** in Rajasthan desert by Rajendra Singh (Waterman of India).
3. **Nature-Based Solutions:** **Nature-based solutions** refer to the **solutions that mimic natural processes** to provide **human, ecological and societal benefits**. **For ex-** **Artificial Floodplains** to increase water retention, **Forest management** to reduce sediment loadings.
4. **River Basin Management:** River basin management must be done through **hydrological-basin approach** rather than **administrative boundaries**. Also, steps must be taken to **promote interlinking of rivers**, while addressing its environmental concerns.
5. **Evidence-based Policymaking:** We must create robust water data systems with real-time monitoring capabilities. **For ex-** Andhra Pradesh's online water dashboard for mapping of hydrological resources for better policymaking.
6. **Implementing the Mihir Shah Committee Report:** The Mihir Shah Committee recommendations must be implemented for restructuring the water governance in India:
 - **Establishing National Water Commission** by merging Central Water Commission(CWC) and Central Groundwater Board(CGWB). It would ensure that the surface and the groundwater are taken as a single entity.
 - **Focusing on management and maintenance of dams** rather than construction of dams.
 - Adopting a **participatory approach** to water management.
7. **Decentralized Local "Water Budgeting":** India cannot rely on a single, top-down policy because water availability varies drastically across regions. Following NITI Aayog's new data-driven frameworks, India must roll out localized **water budgeting** across all districts. Using digital platforms like **Varuni**, local village and town councils can calculate exactly how much water they have vs. how much they consume.
8. **Agricultural Resets:**
 - **Crop Diversification:** Governments must realign procurement policies (like the Minimum Support Price) to actively incentivize water-efficient crops like millets, pulses, and oilseeds in semi-arid zones, rather than flooding fields for paddy and sugarcane.
 - **Scale Up Precision Irrigation:** Transition aggressively from wasteful flood irrigation to solar-powered drip and sprinkler irrigation under the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY).
 - **Direct Seeded Rice (DSR):** Promote water-saving farming methods like DSR, which bypasses the traditional, heavily flooded nursery stage for rice farming.
9. **Shifting to a Circular Water Economy:** Cities and industries must stop looking at wastewater as sewage and start treating it as an active resource. Enforce strict urban laws requiring residential

complexes, commercial buildings, and factories to treat and reuse 100% of greywater (from sinks, showers, and AC units) for flushing, cooling towers, and landscaping.

10. **Urban Hydrology & “Sponge Cities”**: To keep cities like Bengaluru, Chennai, and Mumbai from running completely dry, urban planning must prioritize natural water absorption:
- **Permeable Infrastructure**: Urban spaces must integrate porous concrete, green roofs, and retention parks that allow heavy monsoon rains to soak directly into the ground rather than causing flash floods.
 - **Eviction of Wetland Encroachments**: Strict mapping and legal protection are needed to clear illegal real estate and IT infrastructure built directly over ancient floodplains and natural drainage networks.
11. **Community Participation**: Initiatives like the **Jal Sanchay Jan Bhagidari** are designed to promote community ownership and responsibility. Success stories, like reviving traditional water harvesting systems in Barmer (Rajasthan), show the power of integrating heritage knowledge with modern techniques.

Conclusion:

India’s water crisis is a multifaceted challenge driven by overuse, pollution, mismanagement, and climate change. It threatens health, livelihoods, and the environment. While government schemes like Jal Jeevan Mission and Atal Bhujal Yojana are steps in the right direction, sustained efforts in conservation, efficient use, community participation, and robust governance are essential for a water-secure future.

Read More: [The Hindu](#), [Indian Express](#)

UPSC Syllabus GS 1: Issues related to water resources (Geography), GS 3- Environment

G7 and India – Significance and Challenges – Explained Pointwise



The 52nd G7 Summit, hosted by France in Évian-les-Bains from June 15 to 17, 2026, brought together global leaders to address critical challenges including the Ukraine war, West Asia diplomacy, global economic imbalances, and artificial intelligence governance. India is not a member of the G7 but has become a regular and influential invitee to its outreach sessions. As of 2025, India has participated in thirteen G7 Summit Outreach sessions, with Prime Minister Narendra Modi attending for the seventh consecutive time this year. India is seen as a major emerging economy, a voice for the Global South, and a critical partner on issues like energy security, technology, climate change, and geopolitical stability. The host country invites India to ensure broader representation and to address global challenges that require cooperation beyond the G7's core membership.

What is G-7? What are the achievements of the Grouping?

- G-7 is a group of the **most developed and advanced economies** of the world.
- The members of the G7 group are **France, Germany, Italy, the United Kingdom, Japan, the United States**, and **Canada**.
- Additionally, the **European Union (EU)** participates in all discussions as a non-enumerated member, represented by the presidents of the European Council and European Commission.
- Unlike organizations like the UN or NATO, the G7 has no permanent headquarters or legal status. It is a forum for dialogue rather than a formal international organization with a permanent secretariat or legal status.

- The presidency rotates annually among the member nations. The country holding the presidency hosts the annual summit and sets the agenda for that year.
- The resolutions passed at the end of a summit are not legally binding. Instead, they act as political commitments showing a unified direction from the world's wealthiest democracies.

Origin:

- The G-7 originated from the **Oil crisis of 1973** and **the resulting financial crisis**, which forced the leaders of **6 major industrial nations (G6)** to convene a meeting in 1975.
- The participating countries were the **US, UK, France, West Germany, Japan, and Italy**. **Canada** joined in 1976, leading to the formation of the G-7.
- It was known as the '**G8**' for several years after the original seven were joined by **Russia** in 1997. However, it was renamed as **G-7 after Russia was expelled as a member in 2014** following its annexation of the Crimea region of Ukraine.

What is the significance of G7?

1. **Grouping of Advanced Economies:** G7 members collectively represent a significant portion of global GDP and trade, giving the group substantial influence over international markets and economic policymaking. As of 2026, they comprise over 44% of world nominal GDP and about 30% of world GDP by purchasing power parity (and about 60% of global net wealth).
2. **Forum for Discussing Pressing Global Challenges:** While initially focused on economics, the G7's agenda has significantly expanded over the years to encompass a wide range of global issues. Because they share basic values – **democracy, open-market capitalism, and human rights** – they can align on major global issues much faster than larger organizations. These include:
 - **International peace and security:** Addressing geopolitical tensions, conflicts (e.g. Russia-Ukraine war), and terrorism.
 - **Climate change and energy security:** Coordinating efforts on climate action, clean energy transition, and ensuring affordable and reliable energy access.
 - **Global health:** Discussing responses to pandemics, health crises, and strengthening global health systems.
 - **Technology and Artificial Intelligence:** Addressing the implications of emerging technologies, including their ethical use and governance.
 - **Trade policies and supply chains:** Promoting free and fair trade and addressing disruptions.
 - **Development and humanitarian aid:** Coordinating efforts to support developing countries and address humanitarian crises.
3. **Symbol of Multilateralism & Shared Values:** Geopolitically, the G7 is seen as the core of the Western-led liberal order. The G7 members are united by shared values of liberal democracy, pluralism, and free-market economies. The forum reinforces these principles and promotes a rules-based international order.
4. **Consensus-Building:** While it does not have a permanent secretariat or binding legal authority, the G7 operates by consensus. Its summits are important because they embody the principles of multilateral cooperation and consensus-building among major powers.
5. **Setting Norms & Agendas:** The G7 functions as a global norm-setter. It identifies global norms, elevates their importance, and often sets the agenda for broader discussions in other international bodies like the UN, IMF, World Bank, and WTO such as:

- **Climate Change:** The G7 was the first major forum to commit to phasing out fossil fuels and set concrete deadlines for decarbonization.
 - **Global Taxation:** In 2021, the G7 brokered a historic deal to create a **global minimum corporate tax rate of 15%**, aiming to stop big tech companies from shifting profits to tax havens. It effectively set the stage for over 130 countries to reform their tax laws to prevent multinational companies from dodging taxes in offshore havens.
 - **Technology and AI:** The G7 recently launched the “**Hiroshima AI Process**,” creating the first international framework for governing generative AI.
6. **Crisis Coordination Platform:** Unlike the UN Security Council, which can be paralyzed by vetoes, the G7 is more active. It can convene emergency summits within days to address sudden crises. For example, during the COVID-19 pandemic, the G7 coordinated the rapid funding and global distribution of vaccines (COVAX) before the WHO could get broader international consensus.

What are the Challenges faced by the G-7?

1. **Shrinking Economic Footprint:** In the late 1980s, the G7 controlled nearly 70% of global GDP. Today, that share has shrunk to around 43-44%. The rise of the **BRICS bloc** (Brazil, Russia, India, China, South Africa, and newer members) has dramatically shifted commercial power away from the West.
2. **Exclusion of Major Powers:** The exclusion of the world’s second-largest economy, China, is viewed as an oddity that makes the grouping less representative and effective. Some experts have long argued the G7 should be expanded to include countries like China, India, and Brazil to remain relevant.
3. **Enforcement Gap:** While the G7 issues ambitious pledges and communiqués on various global challenges (climate change, development aid, pandemic preparedness), critics often point to inconsistencies in the implementation of these pledges and a lack of accountability for commitments. For instance, progress on phasing out fossil fuels or delivering on climate finance pledges has been seen as slow.
4. **Historical Polluters:** G-7 accounts for **59% of historical CO2** emissions and pledged phase out fossil fuels. There has been no visible progress of the same and they **currently account for twice the CO2 emission** than African continent.
5. **Deep Transatlantic Rifts:** The relationship between the US and its traditional European allies is strained, with disagreements over trade, tariffs, and the approach to global conflicts . The US’ inclination towards unilateral action and “America First” policies has eroded trust.
6. **Populism and Nationalism:** The rise of populist and nationalist movements **within G7 countries challenge multilateral cooperation** and the G-7 group’s commitment to globalism and liberal democratic values for e.g. 2025 G7 Summit in Canada highlight difficulties in reaching a joint statement on issues like the Russia-Ukraine war due to differing views, and the early departure of a key leader like the US President further hindered substantive discussions.
7. **Divergent National Interests:** While united by shared democratic values, G7 members often have differing national interests, particularly on trade, climate policy, and approaches to geopolitical challenges for e.g. relations with China or Russia.
8. **Rise of the G20 and Other Forums:** The G20, which includes major emerging economies, has largely superseded the G7 as the premier forum for global economic governance. This broader representation makes the G20 better suited to address today’s interconnected global economic challenges. The proliferation of various **multilateral** and “**minilateral**” forums means the G7 is no longer the sole or even primary platform for discussing all global issues.
9. **China Challenge:** Managing the rise of China is perhaps the G7’s most complex strategic challenge:
 - Member states have deep **economic interdependence** with China even as they view it as a strategic rival.

- Coordinating a unified policy on trade, technology, Taiwan, and human rights is extremely difficult.
- China actively promotes alternative institutions (BRICS, SCO, BRI) that contest G7-led global order.

10. Geopolitical Challenges:

- **Russia's War in Ukraine:** While the G7 has shown remarkable unity in its response to Russia's aggression, sustaining this unity amidst economic pressures, energy concerns, and differing views on long-term strategies remains a challenge.
- **West Asia Instability:** The G7 has faced immense criticism from global human rights organizations and developing nations for its handling of the conflicts in Gaza and Lebanon as well as escalating Iran crisis. Even when diplomatic progress is made (such as recent tentative U.S. negotiations over the conflict with Iran and the blockade of the Strait of Hormuz), the G7 struggles to control the ground reality.

11. **Failure to Reach Consensus:** The group has repeatedly struggled to issue unified joint communiqués, a sign of fundamental discord. This failure was noted at the 2025 summit, and expectations for 2026 are similarly low.

What is the significance of India's association with G-7 Countries?

1. **India's Economic Significance:** According to the IMF, India is one of the fastest-growing economies in the world. India's economy is larger than 3 G-7 member countries – France, Italy, and Canada. India's abundant young and skilled workforce, coupled with its market potential, low manufacturing costs, and favourable business climate, makes it an attractive investment destination. This makes India's role vital in discussions on global economic stability and supply chain security.
2. **India's growing strategic importance in the Indo-Pacific:** India has emerged as a major strategic partner for the Western G-7 countries. This has helped in containing China's expanding influence, particularly in the Indian Ocean.
3. **Addressing Global Crises:** Whether it's the Russia-Ukraine conflict, West Asia tensions, or international terrorism, India's nuanced diplomatic approach and its influence among various global actors make it a valuable interlocutor and potential facilitator for conflict resolution and stability.
4. **De-risking Global Supply Chains (The "China+1" Strategy):** A massive priority for the G7 is reducing its heavy economic reliance on China, particularly for semiconductors, pharmaceuticals, and critical minerals. The G7 views India as the only democratic nation with the scale, workforce, and tech ecosystem capable of acting as an alternative global manufacturing hub.
5. **Advanced Tech and AI Collaboration:** Global policy is rapidly trying to keep up with Artificial Intelligence, deep tech, and cyber security. India's massive software engineering talent pool and digital infrastructure (like its UPI digital payments system) mean the G7 cannot set global tech standards or AI safety rules without India's alignment.
6. **Representation for Developing Nations (Voice of Global South):** The G7 has been criticized for being an exclusive "rich countries' club." India's consistent presence helps to bridge this gap, bringing the perspectives, challenges, and priorities of the Global South to the table. This is particularly vital for issues like climate finance, development aid, food security, and technology transfer.

What are the major challenges in expanding India's engagement with the G7 bloc?

1. **Non-inclusion of India as a permanent member:** G-7 has an obsolete membership structure which does not include the emerging economies like India. India is always an "invitee" or "outreach partner," not a formal member. This means India doesn't have a permanent seat at the core decision-making

table, nor does it participate in all G7 ministerial meetings or preparatory discussions throughout the year. Its influence is limited to the specific outreach sessions it's invited to.

2. **Navigating Competing Forums:** India is a key player in the G7, the BRICS bloc, the Quad, and the Shanghai Cooperation Organization (SCO). This flexibility, while a source of leverage, makes it unlikely to consistently endorse Western priorities. India's participation in BRICS and its deep engagement with Russia are seen as points of friction with the G7's goals.
3. **Climate Change Responsibilities:** While India is committed to climate action, it often pushes for common but differentiated responsibilities, emphasizing the historical emissions of developed nations and their obligation to provide finance and technology. G7 nations, while committed to climate goals, may face domestic political pressures regarding these commitments.
4. **Energy Transition vs. Energy Security:** India's immediate energy needs are massive, and while it's rapidly expanding renewables, it still relies heavily on fossil fuels. G7 nations often push for faster transitions, while India emphasizes the need for a just transition that balances energy security and affordability for its large population.
5. **Relations with Russia:** India maintains a neutral stance on the Russia-Ukraine war, advocating for dialogue and diplomacy, and continuing its economic ties with Russia. This position often differs from the unified condemnation and sanctions approach of the G7. While the G7 might appreciate India's role as a bridge, it also puts India in a position where it may face pressure to align more closely with the G7's stance.
6. **West Asia Crisis:** While the G7 leans heavily into specific Western frameworks when responding to security shocks in the West Asia, India has to delicately balance its massive diaspora and trade relations across both Israel and the Arab world.
7. **Market Sticking Points:** Long-standing disagreements over India's high tariffs on American agricultural and industrial goods, alongside Western demands for greater access to Indian digital markets and stricter intellectual property protections, have repeatedly slowed down major trade deals.
8. **Data and Tech Sovereignty:** The G7 is pushing to establish strict global standardizations for Artificial Intelligence and cross-border data flows. India frequently resists these if they infringe on its data sovereignty or hinder its domestic tech growth.
9. **Bilateral Issues with G7 Members:** Last year's G7 summits has highlighted specific bilateral tensions. For example, the **India-Canada relationship** has been strained due to issues like the Hardeep Singh Nijjar killing and concerns about pro-Khalistan elements in Canada. While the G7 summit offers a platform for dialogue, these bilateral issues can overshadow broader cooperation.
10. **Double standards of developed countries on terrorism:** Indian PM highlighted the double standards of developed countries on terrorism as, on one hand, they are quick to impose sanctions on certain countries based on their preferences, while on the other hand, they openly reward countries like Pakistan which promote cross-border terrorism.

What Should be the Way Forward?

1. **Deepening Economic Ties:** Encouraging investment in sectors like **renewable energy, technology, infrastructure** and **enhancing trade liberalization efforts** can bolster economic relations between India and G-7 group.
2. **Strategic Collaborations:** Strengthening defense cooperation through **joint exercises, intelligence sharing,** and **technology transfers** can address common security challenges.
3. **Multilateral Engagement:** India's active participation in G7 forums can contribute to shaping inclusive global governance frameworks. **Joint efforts in climate action, focusing on sustainable development and green technologies,** can set benchmarks for global environmental policies.

4. **Technological Innovation:** Collaborative efforts in **digital infrastructure development**, **cybersecurity**, and **artificial intelligence** can drive the next wave of technological advancements. Joint research initiatives in fields like **biotechnology**, **space exploration**, and **renewable energy** can foster innovation.
5. **Push for Equitable Frameworks:** India has already signaled it will push back on frameworks that disadvantage developing nations. For instance, it is critical of the EU's Carbon Border Adjustment Mechanism (CBAM), which acts as a trade barrier, and will advocate for climate finance to be delivered as grants, not loans.
6. **Balance Multiple Engagements:** India's participation in both the G7 and the BRICS bloc is not a conflict but a feature. Its ability to engage with multiple power centers allows it to influence debates in the G7 before they harden into practices that affect the wider world.
7. **G7 Expansion (Long-Term):** While unlikely in the short term, India should continue to subtly advocate for a more representative G7 (or a G7+ model) that formally includes major emerging economies.

Some Key Outcomes of G-7 Group Summit (2026):

1. **Endorsing the Iran-US Deal:** The most prominent outcome of the summit was the G7's **collective endorsement of the preliminary U.S.-Iran agreement** to end their conflict. The G7 leaders' declaration confirmed their refusal to accept a nuclear-armed Iran and their support for the deal's implementation. They backed a French and British-led maritime initiative to secure shipping and remove mines from the strategic Strait of Hormuz. Leaders emphasized the right of free and toll-free passage through the strait and committed to diversifying global energy supply routes to reduce dependence on this critical chokepoint.
2. **Support to Ukraine:** Despite internal friction, the G7 reaffirmed its **"unwavering support for Ukraine"**. Leaders agreed to increase military support, including the delivery of additional air defense interceptors and long-range capabilities.
3. **Global AI Frameworks:** Leaders agreed on establishing technical and ethical frameworks to facilitate the safe and rapid implementation of Artificial Intelligence, prioritizing secure and accessible digital tools globally.
4. **Economic Stability:** Member states established joint commitments to reduce macroeconomic imbalances, curb predatory competition, and address industrial overcapacity to strengthen and secure vulnerable international supply chains.
5. **Environmental & Biodiversity Action:** The summit featured the five-year progress review of the G7 2030 Nature Compact, the expansion of the Nature and People Finance Alliance, and the formal classification of land degradation, drought, and desertification as systemic security threats.
6. **Development Finance Overhaul:** The G7 adopted strategies to catalyze private capital mobilization, ease debt vulnerabilities, and make development finance more catalytic and responsive to partner countries' priorities.
7. **Strengthened Global Partnerships:** The summit placed an emphasis on reinvigorating international solidarity and dialogue among major powers to address the ongoing geopolitical crises and conflicts.
8. **Global Health - Ebola & Cancer:** Leaders adopted a coordinated call for response to the Bundibugyo Ebola outbreak, as well as a declaration on the fight against cancer, reflecting a broader commitment to global health sovereignty and pandemic preparedness.

Conclusion:

India's evolving relationship with the G7 signifies its growing importance in global economic and strategic

affairs. The synergies between India and G7 nations, driven by shared values and mutual interests, present vast opportunities for collaborative growth. As India continues to rise on the global stage, its partnership with the G7 will play a pivotal role in shaping a balanced and inclusive world order.

Read More: [Indian Express](#)

UPSC Syllabus- GS Paper 2- Important International Organisations

Unpaid Domestic Work – Explained Pointwise



Unpaid domestic work, such as childcare, eldercare, cooking, and household management, forms the invisible foundation of economies and societies, yet remains largely excluded from conventional economic measurements. The recent judgement of the Supreme Court of India has renewed attention to recognizing the economic and social value of such work. Understanding the concept and developing methods to estimate its monetary contribution are essential for ensuring gender justice, informed policymaking, and a more accurate assessment of national economic output.

What is Unpaid Domestic Work?

- **Unpaid domestic work** refer to essential household and caregiving tasks performed by family members without monetary compensation. Often referred to as housework or unpaid care work, this labor is vital for a household's daily functioning and well-being, though it is usually excluded from official economic measurements like the GDP.
- Globally, there is a massive imbalance in how this work is split. According to data from the International Labour Organization (ILO):
 - Women perform roughly **76.2%** of all unpaid care work globally.

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- On average, women spend **4 hours and 25 minutes** per day on unpaid domestic work, compared to **1 hour and 23 minutes** for men.

What are the impacts of Unpaid Domestic Work on individuals and society?

<p>Impact on Individuals</p>	<ul style="list-style-type: none"> ● Lost Wages: Every hour spent on unpaid domestic work is an hour not spent in paid employment. Over a lifetime, this translates to millions of dollars in foregone income. ● Pension Gap: Because they earn less or take career breaks, primary caregivers contribute less to social security or retirement funds. In old age, they are significantly more likely to live in poverty than their male counterparts. ● Physical Toll: Unpaid domestic work is physically demanding. Constant bending, lifting (children, laundry, groceries), and standing for hours leads to higher rates of back pain, joint issues, and repetitive stress injuries. ● “Burnout” and Mental Load: The mental load due to domestic work creates chronic cognitive overload. This is linked to higher rates of anxiety, depression, and sleep deprivation. Unlike paid work, domestic work has no breaks, no weekends, and no vacations, leading to a state of perpetual exhaustion. ● Reduced Personal Agency and Identity: Individuals often lose the time and energy needed for self-care, hobbies, education, or civic engagement. Their identity becomes tethered to their “role” (mother, wife, caretaker), rather than their personal aspirations. This can lead to a profound loss of autonomy and self-worth.
<p>Impact on Society</p>	<ul style="list-style-type: none"> ● Perpetuation of the Gender Pay Gap: Because women perform the vast majority of unpaid domestic work, they are more likely to seek flexible, part-time, or lower-paying jobs closer to home. This occupational segregation is one of the primary drivers of the structural gender wage gap. ● Demographic Shifts and Declining Birth Rates: In many developed nations, the realization that having children results in an overwhelming, unequal burden of unpaid labor has led many couples to delay or completely forego having children. This accelerates population aging and creates future labor shortages. ● Intergenerational Cycles: Children who grow up in households with a highly traditional, unequal split of domestic labor often internalize these roles, passing the same expectations and limitations onto the next generation.
<p>Impact on Economy</p>	<ul style="list-style-type: none"> ● Suppressed Economic Growth (GDP): When highly skilled individuals (disproportionately women) are forced out of the formal labor market to care for children or elderly relatives, society loses out on their productivity, innovation, and tax contributions. Economists view this as a massive underutilization of human capital.

	<ul style="list-style-type: none"> ● Gender Wealth Gap: Because women do more unpaid work, they accumulate less wealth. This directly contributes to the global gender wealth gap (women own roughly only 32% of global wealth).
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Why is it important to estimate the value of Unpaid Domestic Work?

Estimating the economic value of unpaid domestic work matters because, in the world of policy and economics, **what doesn't get measured doesn't get managed**. Hence, assigning a monetary value to this work is crucial because of the following reasons:

1. **Exposing Time Poverty:** Women perform roughly 75% to 76% of all unpaid care work globally. Quantifying this burden exposes how “time poverty” directly restricts women’s capacity to pursue paid careers or education.
2. **Dismantling Patriarchal Biases:** Assigning monetary value challenges deep-rooted cultural beliefs that label domestic labor as purely feminine or economically valueless.
3. **Enhancing Household Bargaining Power:** Identifying the exact financial value of a homemaker’s work increases their recognition, self-confidence, and decision-making leverage within the family structure.
4. **Tracking Total Labor Productivity:** Measuring household tasks alongside paid work highlights how societies balance their time and resources to sustain a productive workforce.
5. **Smarter Resource Allocation:** Knowing the value of unpaid work changes how governments prioritize infrastructure investments. For example, building accessible water systems or modern energy grids directly liberates millions of hours previously spent on manual domestic chores.
6. **Equitable Divorce Settlements:** Measuring domestic contributions ensures that matrimonial property and assets are split fairly during asset division, recognizing that a career-focused spouse cannot succeed without the domestic support of the other.
7. **Accurate Insurance and Wrongful Death Claims:** If a primary caregiver is injured or dies in an accident, insurance companies and courts use these economic estimations to calculate the actual financial cost of replacing those services (cooking, childcare, household management) for the surviving family.

What are the key challenges in estimating the value of Unpaid Domestic Work?

1. **Conceptual and Definitional Hurdles:** One of the most fundamental challenges is simply defining what counts as “work.” While cooking or cleaning are relatively straightforward, other tasks blur the lines between work, leisure, and personal care.
2. **Cost and Burden of Time-Use Surveys:** The methods used to collect data on time use are themselves a major obstacle to creating reliable estimates. The most reliable way to collect this data is through specialized Time-Use Surveys (TUS), where respondents meticulously record their activities in a diary. However, these surveys are expensive to conduct, complex to administer, and place a significant burden on respondents.
3. **Challenge of Valuation:** Assuming time-use data is available, the most debated challenge is how to put a price on that time. There is no single, accepted method, and each has its own flaws:
 - a. **The Opportunity Cost Approach:** This method estimates the value of unpaid domestic work based on the market wage a homemaker forgoes by choosing household responsibilities over paid employment. However, it can lead to distortions, as the same domestic task – such as

cooking a meal – would be valued much higher if performed by a lawyer than by a high-school graduate, despite producing an identical outcome.

- b. **The Replacement Cost Approach:** This method estimates the value of unpaid domestic work by calculating the cost of hiring paid workers to perform the same tasks. However, there is no consensus on whether to use the wage of a general domestic worker or that of specialized professionals such as cooks, childcare providers, or nurses. The choice of wage rate can significantly influence the estimated value of unpaid work and, consequently, its contribution to the economy.
4. **Infrastructure Deficits:** In developing nations or rural regions, a vast amount of time is spent on fundamental survival tasks like fetching water or gathering firewood. Standard economic toolkits designed for developed nations fail to cleanly categorize these combined agricultural and domestic survivals.
5. **Simultaneous Activities (Multitasking):** A person frequently cooks dinner while supervising a child's homework and waiting for the washing machine to finish. Surveys that ask for a person's "main activity" fail to capture the full scope of this simultaneous labor, making it hard to assign time and value to each individual task.

What are the key Supreme Court judgments on the value of Unpaid Domestic Work?

<p>Lata Wadhwa v. State of Bihar (2001)</p>	<ul style="list-style-type: none"> ● This was one of the earliest instances where the Supreme Court explicitly assigned a monetary value to a homemaker's labor. ● The Court fixed a notional income of ₹3,000 per month for homemakers aged 34 to 59.
<p>Kirti v. Oriental Insurance Co. Ltd. (2021)</p>	<ul style="list-style-type: none"> ● This landmark judgment challenged the patriarchal mindset of calculating a homemaker's worth based merely on minimum wage for unskilled labor. ● The Court recognized that just as a salaried employee's income rises with experience and inflation, the value of a homemaker's work also increases over time. ● It mandated an addition of up to 40% to the notional income for homemakers under the age of 40 to account for inflation and growing domestic responsibilities.
<p>Shishu Pal @ Shishu Ram & Ors v. Surjeet (2026)</p>	<ul style="list-style-type: none"> ● The Court described homemakers as "Nation Builders" whose unpaid caregiving contributes an estimated 15% to 17% of India's GDP. ● To ensure dignity and fairness, it created a brand-new compensatory head titled "Loss of Domestic Care". ● The Court fixed a baseline minimum notional income of ₹30,000 per month for homemakers to calculate accident death compensation. ● The ruling also mandated that this base amount be increased by 10% every three years to account for changing economic realities.

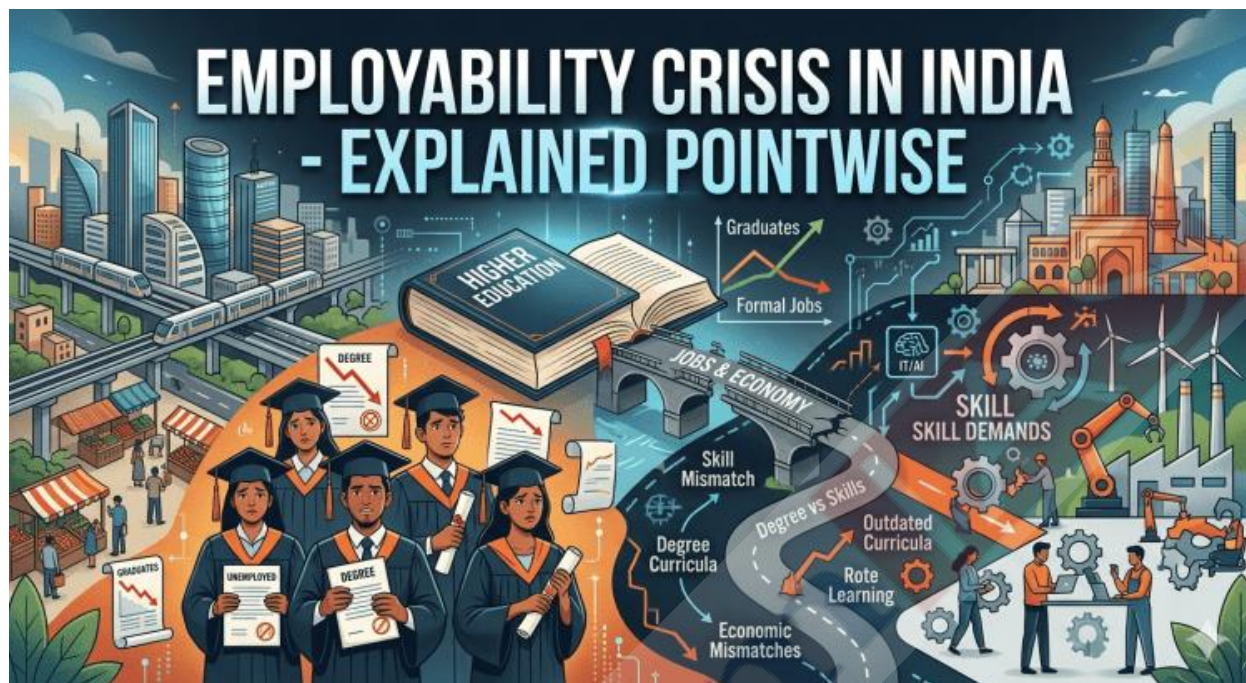
What should be the Way Forward?

1. **“4Rs” Framework: Recognize, Reduce, Redistribute, and Reward:** To address the issue of unpaid domestic work sustainably, organizations like the United Nations and the International Labour Organization (ILO) point to a foundational roadmap known as the **“4Rs” Framework:**
 - **Recognize (Make the Invisible Visible):** Measuring domestic labor via time-use surveys and factoring its value into legal contexts.
 - **Reduce (Lower the Burden of Physical Work):** Investing in public physical infrastructure, such as clean piped water, local childcare facilities, and household automation tech.
 - **Redistribute (Shift the Burden Equitably):** Changing social norms to shift responsibilities equally between partners and implementing mandatory paid paternity leaves.
 - **Reward:** Ensuring decent, formal wage conditions and standard social security protections for professional care and domestic workers.
2. **Investing in Care Infrastructure:** Valuing domestic work is not just about money; it’s about providing alternatives. The most direct way to reduce the burden of unpaid care is to build systems that take on part of that work. This include:
 - **Expand Affordable, Quality Childcare:** A primary barrier to women’s workforce participation is childcare. The UNDP is piloting innovative models in India, such as community-based and workplace crèches in MSME clusters, and promoting **“carepreneurship”**. These models need to be scaled.
 - **Invest in Elderly and Differently-Abled Care:** With an ageing population and more nuclear families, the demand for formal elder care is set to rise. Developing this infrastructure now is essential for future sustainability.
 - **Improve Basic Enabling Infrastructure:** Access to clean water, reliable electricity, and cooking fuel can save women hours of manual labor every day, directly freeing up their time.
3. **Activate Labour Codes:** The new Labour Codes contain provisions for mandatory crèches, work-from-home options, and social security for informal workers. The central and state governments must finalize the rules to implement these effectively. Without this, the potential benefits remain theoretical.
4. **Formalize the Care Workforce:** India’s potential demand for care workers could exceed 30 million by 2050. This is a huge employment opportunity if the sector is professionalized. This requires a **national skilling and certification system** for care workers, creating pathways to better wages and formal employment.
5. **Promote Equal Sharing at Home:** This is the most fundamental change. Redistributing unpaid work within the household can transform women’s “second shift” into a shared responsibility, breaking the cycle that limits their potential.

UPSC GS-1: Society, Social Justice

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Employability Crisis in India – Explained Pointwise



Despite an unprecedented expansion of higher education, India faces a severe employability crisis, with nearly one in three graduates remaining unemployed. This stark mismatch between academic credentials and industry readiness highlights an urgent need to reform curricula, integrate vocational training, and align education with evolving market demands.

What is the employability crisis in India?

- India's employability crisis is a central **paradox** of its economy: despite being one of the world's fastest-growing nations with a young population, millions of graduates lack the skills needed to find jobs. This crisis is not about a shortage of jobs or degrees, but a profound mismatch between the skills graduates possess and what the industry demands.
- According to the **India Skills Report 2026**, India's graduate employability stands at **56.35%**. This means nearly half of all graduates enter the market without the readiness to perform an entry-level job.

What are the major factors contributing to the employability crisis in India?

1. **Rote Learning Over Applied Application:** The Indian higher education framework historically measures success via written exams that prioritize memory and theoretical recall over hands-on application. For example, simulations testing real-world engineering problem-solving often find that a massive chunk of technical graduates cannot perform practical tasks in their own specialization.
2. **Social Prestige vs. Aptitude:** In India, the choice of academic streams at the secondary level is often shaped more by societal expectations and parental influence than by a student's aptitude or interests. High-performing students are frequently steered towards science and engineering streams irrespective of their aspirations or strengths. As a result, many graduates enter the workforce with

qualifications in fields that do not align with their abilities, leading to reduced motivation, lower productivity, and diminished employability.

3. **Severely Outdated Curricula:** Except for premier institutes (like the IITs or IIMs), the vast majority of India's colleges use course designs engineered decades ago, leaving core technological competencies like Artificial Intelligence, data analytics, cloud computing, and advanced digital marketing out of standard classrooms.
4. **Exponential Technological Shifts:** The explosion of generative AI, automation, and advanced data analytics has shifted the hiring landscape overnight. While tech heavy-weights like Computer Science (80% employability) and IT (78%) hold strong because they adapt quickly to digital-first shifts, generalist degrees – including traditional MBAs – have seen their employability slide.
5. **Weak Industry-Academia Linkages:** There is minimal continuous collaboration between corporate employers and the academic institutions. Fewer than **8%** of institutions regularly involve industry experts in their programs, leaving students disconnected from real-world expectations.
6. **The Soft Skills Deficit:** Students are rarely trained in analytical problem-solving, structured reasoning, or data interpretation. Only about **50%** of graduates are considered employable for communication-based roles, while creative thinking skills are even lower. Traits like teamwork, problem-solving, and adaptability are often missing from the curriculum.

What are the socio-economic consequences of low employability among India's youth?

1. **Jobless Growth:** India's high GDP growth is not creating enough quality jobs. Even graduates with credentials face unemployment; data shows only **under 7%** secure permanent salaried jobs within a year of graduating, and less than **4%** land white-collar positions. The unemployment rate for graduates is roughly **29.1%**, nine times higher than for illiterate individuals.
2. **Wasting the Demographic Dividend:** India has a limited window (until about 2030) to capitalize on its young population. If this generation is not productively employed, the country will miss its chance to become a global economic powerhouse and may instead face the burden of a large, unproductive population.
3. **The "Missing Middle" in the Labor Market:** The formal economy is not generating enough mid-skill, white-collar roles. Many young people are forced into a "**gig trap**" – a rapidly expanding gig workforce projected to reach 23.5 million by 2030. This work often provides little to no social security or career progression, trapping workers in a "low-skill trap". This also contributes to **underemployment**, where highly educated individuals are forced into low-productivity jobs in agriculture or informal sectors just to survive.
4. **Erosion of the "Return on Investment" in Education:** As a degree increasingly fails to guarantee a stable job, families, especially poorer ones, are questioning the value of higher education. The proportion of young men in school is declining as they are forced to take informal jobs to meet immediate household needs, creating a cycle of low skill and low pay.
5. **Deepening Inequality:** The crisis is not uniform. Women face a "qualitative divide" - a small, educated elite finds opportunities, while a far larger number are pushed into self-employment, unpaid family work, or agricultural labor. For example, **64% of working women are in agriculture**, many with degrees that were meant to lift them out of such work.
6. **Corporate Training Tax:** Companies have to waste massive capital running internal finishing schools. They must spend months teaching basic writing, coding, and office etiquette to new hires.
7. **Brain Drain Acceleration:** Top-tier talent with the means to relocate exit the country rapidly. This leaves the domestic market starved of high-caliber innovators and entrepreneurs.

What measures has the government undertaken to improve employability in India?

1. **Structural Education Reforms:**
 - a. **Mandatory Internships:** Under the **National Education Policy (NEP 2020)**, the University Grants Commission (UGC) enforces mandatory internship credits (2 to 4 credits) for all undergraduate students after their fourth semester to bridge classroom theory with corporate reality..
 - b. **National Higher Education Qualifications Framework (NHEQF):** This framework standardizes the learning outcomes across higher education, prioritizing practical skill application, critical thinking, and technical readiness over traditional rote learning.
2. **National Apprenticeship Promotion Scheme (NAPS):** The government provides financial incentives to private organizations to absorb technical graduates and ITI trainees, expanding formal on-the-job training tracks across various domains. It has successfully engaged over **51 lakh apprentices** in recent years.
3. **Introducing Future-Focused Curricula:** The government has introduced courses in modern technologies. For instance, new-age job roles under PMKVY and the Craftsman Training Scheme (CTS) now include fields like **AI/ML, Cybersecurity, Drone Technology, and 5G Network Technician**.
4. **Strengthening Industry Linkages:** 36 Sector Skill Councils (SSCs), led by industry experts, have been established to identify skill needs and set competency standards. The government has also signed MoUs with major tech companies like IBM, Cisco, and Microsoft to ensure training is aligned with current industry practices.
5. **National Scheme for Upgradation of ITIs:** Under this initiative, the government is transforming 1,000 public ITIs into modern digital hubs (establishing 200 hub centers and 800 spoke networks). These upgraded schools feature smart classrooms, specialized simulation labs, and updated short-term certification modules tailored explicitly to **Future Skills** like Artificial Intelligence (AI), the Internet of Things (IoT), 3D printing, and green energy maintenance.
6. **Early Exposure (AVGC Labs):** To cultivate creative and tech-focused careers early on, the latest structural rollouts include establishing **AVGC (Animation, Visual Effects, Gaming, and Comics) Content Creator Labs** across 15,000 secondary schools and 500 regional colleges.
7. **FutureSkills PRIME:** Orchestrated by the Ministry of Electronics and Information Technology (MeitY), this specialized initiative focuses on upskilling and re-skilling the country's workforce in 10 crucial emerging technologies, including Artificial Intelligence, cybersecurity, blockchain, and cloud computing.
8. **AI-Powered Learning:** The collaboration between the Ministry of Skill Development, Google, and Chaudhary Charan Singh University to create India's first AI-enabled university is a major pilot. It aims to use AI for personalized learning, skill-gap analysis, and to break down barriers of language and geography.

What should be the way forward?

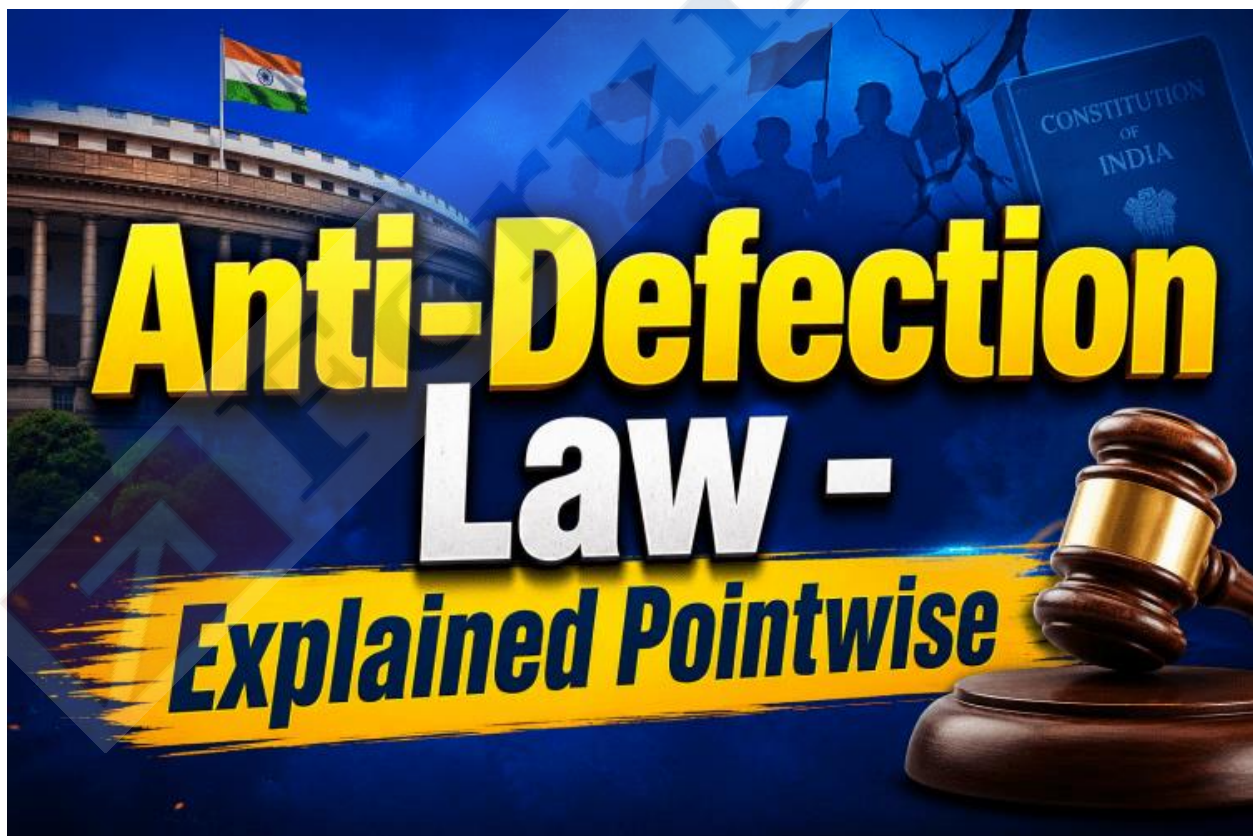
1. **Employer-Designed Curricula:** Having businesses help design course content, equipment standards, and apprenticeship programs to ensure training matches real-world needs. The new **PM-SETU** program is an example of this model, aiming to forge genuine partnerships between ITIs and industry.
2. **Strengthening Sector Skill Councils (SSCs):** These councils, led by industry leaders, need to be reorganized and given clear performance goals to ensure they effectively set skill standards.
3. **Elevating ITIs:** A key recommendation from the **Economic Survey 2026** is to upgrade ITI diplomas to bachelor-level degrees. This would make vocational pathways more attractive and valuable, and allow for lateral entry into higher education, which was previously closed to vocational graduates.

4. **A Unified Apprenticeship Mission:** Apprenticeships are a proven path from school to work. The government is being urged to bring all existing apprenticeship schemes under one unified framework to simplify the system and expand opportunities into new-age and gig economy sectors like green manufacturing and digital services.
5. **Sector-Specific Demand Creation:** Employability improvements mean little without job creation; complementary push needed in labour-intensive manufacturing (apparel, leather, electronics assembly), construction, and care economy sectors, alongside PLI (Production Linked Incentive) schemes calibrated for employment intensity, not just output.
6. **Formalize the Informal Sector:** Extend social security, skill certification (via RPL – Recognition of Prior Learning), and productivity incentives to informal workers, improving both employability signaling and job quality.

Conclusion: Thus, to significantly improve youth employability, India needs a multi-pronged approach that redefines skill development and integrates it tightly with industry needs.

UPSC GS-3: Indian Economy
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Anti-Defection Law – Explained Pointwise



India's Anti-Defection Law, enshrined in the Tenth Schedule, aims to deter political opportunism and ensure government stability. However, its effectiveness faces constant scrutiny during leadership crises. Recent intra-party splits in Maharashtra-based factions and large-scale desertions within West Bengal's Trinamool Congress highlight how rebels frequently exploit structural loopholes to bypass disqualification. In this context, it becomes important to understand the Anti-Defection Law in a comprehensive manner.

What is Anti-Defection Law?

- The 10th Schedule of the Constitution, also known as **Anti-Defection Law**, addresses disqualification of **MPs and MLAs for defection**, a response to the political instability of the late 1960s when “**party-hopping MLAs**” toppled multiple state governments.
- Under the 10th Schedule, a member of either Parliament (MPs) or a State Legislature (MLAs/MLCs) can be disqualified if:
 1. **Voluntary Resignation:** They voluntarily give up their membership of the political party on whose ticket they were elected.
 2. **Defying the Whip:** They vote or abstain from voting in the House contrary to the directions (the “whip”) issued by their political party without prior permission.
 3. **Independent Members:** An independent candidate joins any political party after being elected.
 4. **Nominated Members:** A nominated member joins a political party after **six months** from the date they took their seat.
- **Exceptions:**
 1. **Merger:** If at least **two-thirds** of the members of a legislative party agree to merge with another party, they are not disqualified.
 2. **Presiding Officers:** A person elected as the Speaker or Chairman can resign from their party to maintain neutrality and can rejoin it after they leave the office without facing disqualification.
- **Deciding Authority:** The power to decide on disqualification rests with the **Presiding Officer** of the House (the Speaker in the Lok Sabha/Assemblies and the Chairman in the Rajya Sabha/Councils).
- **Judicial Review:** Originally, the law stated the Presiding Officer's decision was final and could not be challenged in court. However, in the **Kihoto Hollohan case (1992)**, the Supreme Court ruled that the Speaker acts as a tribunal, meaning their decision is subject to **judicial review** by High Courts and the Supreme Court.

Evolution of the Anti-Defection Law:

Pre-1985	<p><u>The Era of “Aaya Ram, Gaya Ram”:</u></p> <p>In the 1960s and 70s, Indian politics was plagued by frequent floor-crossing. The most famous instance occurred in 1967, when Haryana MLA Gaya Lal changed parties three times in a single day. This instability led to the fall of multiple state governments and created a culture of opportunism where legislators would jump ship for cabinet positions or other incentives.</p>
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1985	<p><u>52nd Amendment Act:</u></p> <p>The Tenth Schedule of the Indian Constitution, also known as the Anti-Defection Law, was inserted by the 52nd Constitutional Amendment Act, 1985, to curb the growing menace of political defections & to provide a legal framework for disqualifying defectors.</p>
1992	<p><u>Kihoto Hollohan Case:</u></p> <p>This landmark judgment upheld the constitutional validity of the Tenth Schedule. Crucially, it declared that while the Speaker has the power to decide disqualification cases, their decision is not immune from judicial review. Courts can intervene in cases of <i>mala fide</i> intent or jurisdictional error.</p>
2003	<p><u>The 91st Amendment (2003):</u></p> <ul style="list-style-type: none"> ● Removed the “Split” provision: Previously, a “split” by one-third of a party’s members was protected. This was removed to prevent mass defections. ● Ministerial Limit: It capped the total number of ministers (including the PM/CM) at 15% of the total strength of the Lok Sabha or State Assembly. ● Holding Office: A member disqualified under the 10th Schedule cannot hold any remunerative political post or ministerial position until they are re-elected.
2020-2025	<p>Keisham Meghachandra Singh v. Speaker, Manipur (2020) and the recent Padi Kaushik Reddy v. Telangana (2025) case, the Supreme Court directed Speakers to decide disqualification petitions within a “reasonable period,” explicitly stating a three-month timeline.</p>

What was need for introducing the Anti-Defection Law?

1. **Ensuring Political Stability:** Between the general elections of 1967 and 1971, nearly **50% of the 4,000 odd legislators** in Central and State assemblies defected. State governments were collapsing like houses of cards. When a government is constantly worried about losing its majority to a rival party’s “offer,” it focuses on survival rather than policy-making. By making it difficult for individuals to defect without losing their seats, the law ensures that the government can focus on long-term administration rather than constant survival tactics.
2. **To Curb the Influence of Money and Power:** Defections were rarely driven by ideology; they were driven by **“Horse Trading”** (Political Corruption). Legislators would defect in exchange for a Cabinet berth in the new government. Large sums of money being paid to “buy” the loyalty of independent and small-party candidates to tip the scales during a floor test.
3. **To Prevent the Breach of Electorate’s Trust:** When a citizen votes for a candidate, they are often voting for the **party’s manifesto and ideology**. Defection of a candidate effectively nullifies the mandate of the voters. The law was intended to ensure that a representative remains accountable to the platform they were elected on.

4. **Party Discipline and Cohesion:** The law gives legal teeth to the **Political Party** as an institution. Through the system of “Whips,” parties can ensure that their members vote as a unified block on crucial Bills. This prevents internal sabotage and ensures that the legislative agenda of the party in power can actually be implemented.
5. **Constitutional Legitimacy to Political Parties:** Until the Tenth Schedule was added, political parties had no formal mention in the Indian Constitution. The Anti-Defection Law provided **constitutional recognition** to political parties, acknowledging them as the fundamental units of Indian democracy.
6. **Saving of Taxpayer’s Money:** Frequent defections and floor-crossings often led to mid-term elections. By preventing governments from collapsing every few months, the law helped save the enormous expenditure of conducting frequent elections and the cost of President’s Rule (which often followed unstable assemblies).

What have been the concerns/issues raised against the Anti-Defection Law?

1. **Suppression of Legislative Dissent:**
 - Since every member *must* vote according to the party whip (under threat of disqualification), the outcome of most debates is a foregone conclusion. This reduces the significance of individual arguments and logical persuasion on the floor of the House.
 - It also creates a conflict of interest. A legislator may feel that a specific Bill (e.g. a controversial land acquisition law) is bad for their specific constituency, but they are legally forced to vote for it if their party commands it.
2. **Partisanship of the Speaker:**
 - **Lack of Neutrality:** Speakers usually belong to the ruling party and do not resign from their party upon taking office. This often leads to biased decisions where disqualification petitions against opposition members are fast-tracked, while those against members supporting the ruling party are delayed.
 - **Indefinite Delays:** The law originally set no timeline for the Speaker to decide. This has allowed Speakers to “sit on” petitions for years, effectively allowing defecting members to complete their terms without consequences.
3. **Wholesale Defection:** The law only punishes “retail” (individual) defection but incentivizes “wholesale” (mass) defection. Under the 91st Amendment, if **two-thirds** of a party’s legislators defect together, it is labeled a “merger” and they face no penalty. Thus, despite the law, defections continue due to inducements and intimidation, with legislators often kept in “**resorts**” during political crises.
4. **Resignation over Defection:** Instead of voting against the whip, legislators simply **resign** from the House. This brings down the government’s majority. Once the government falls, these members often contest by-elections on the ticket of the opposing party and return to the House as ministers. This bypasses the spirit of the law while following its letter.
5. **Lack of Intra-Party Democracy:** The law gives supreme power to the party leadership via the “Whip,” it discourages internal democracy. Rank-and-file members are afraid to criticize the leadership or policy decisions within the party because an expulsion could end their career.

What are the reforms that should be introduced into the Anti-Defection Law?

1. **Neutral Decision-Making Authority:** The law gives power to disqualify a member to the Speaker of the Legislature. This should be replaced with:
 - a. **Election Commission:** Both the **Election Commission of India** and the **2nd Administrative Reforms Commission (ARC)** suggest that the President (for MP’s) or Governor (for MLA’s) should decide defection cases based on the **binding advice of the Election Commission**.

Women Representation in Judiciary - Significance & Challenges - Explained Pointwise



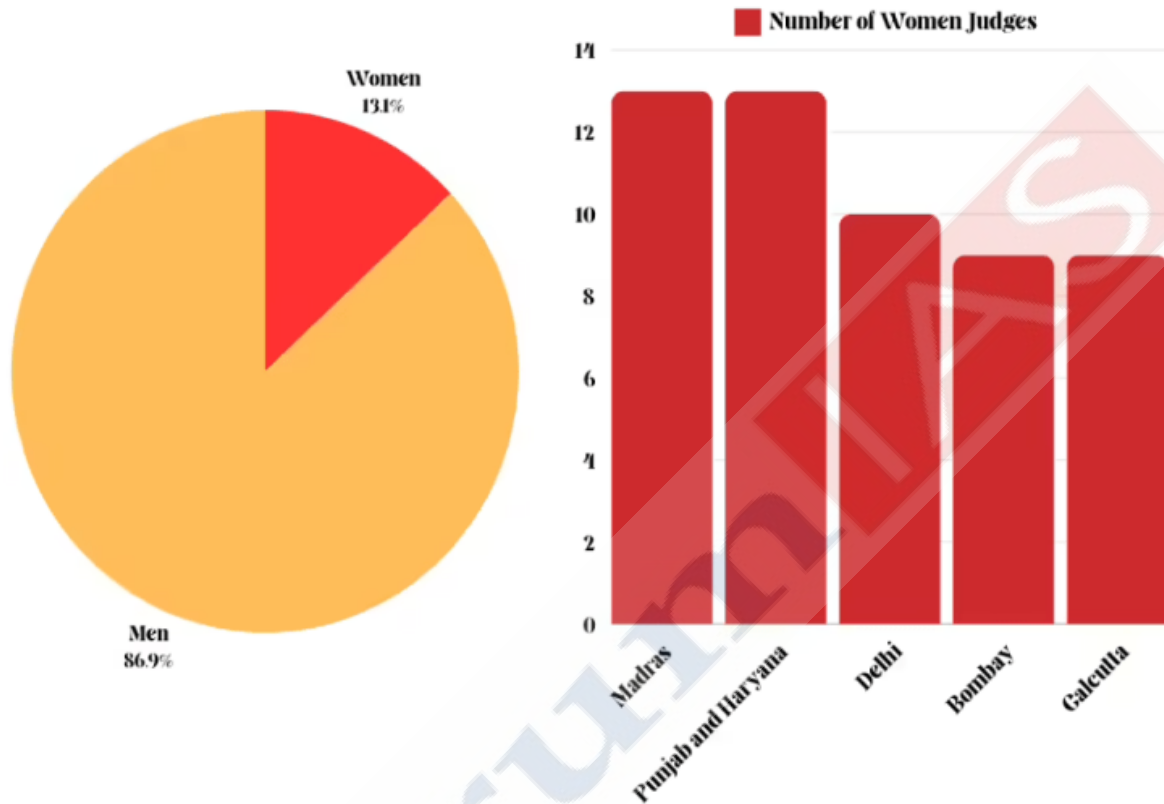
The recent appointment of Justice V. Mohana as a Supreme Court judge has renewed attention on the issue of women's representation in India's higher judiciary. As only the 12th woman judge in the Supreme Court's 76-year history, her elevation marks progress toward gender diversity, yet women remain significantly underrepresented in judicial leadership positions. The "glass ceiling" remains strong for women judges, especially in promotions to higher courts. Minority and marginalized women face even greater barriers to advancement.

What is the Status of Representation of Women in Judiciary?

- **Supreme Court:**
 - As of June 2026, only 2 woman judges (Justice B.V. Nagarathna & Justice V. Mohana) serves out of 37 judges, yielding a representation of just **5.4%**.
 - In its entire history since 1950, only 12 women judges have ever been appointed to the Supreme Court (Of them, 6 have been appointed since 2014 and 5 since 2018) — just **3.8%** out of 287 total appointments.
 - No woman has held the Office of **Chief Justice of India**.
- **High Courts:**

- Collectively for all High Courts, Women Judges constitute only 13.1% of the Judges.

Women in High Court (2023)

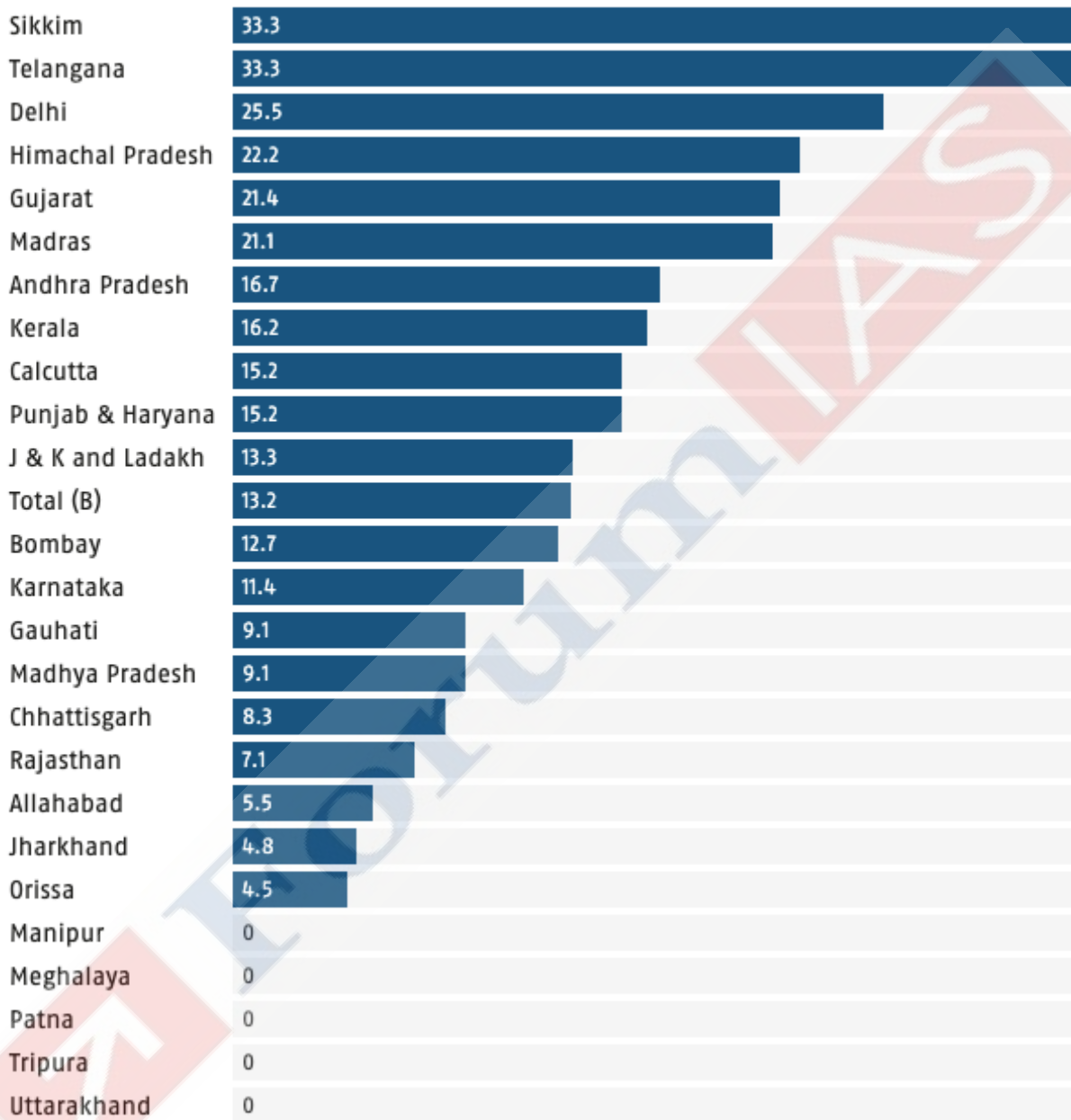


- However, there are considerable variations among High Courts (HCs). 5 HCs have not a single woman Judge. Another 7 HCs have < 10% women judges. Sikkim and Telangana HCs have the highest

representation at 33.3%.

Five HCs did not have a single woman judge

(women, % of total working strength of judges in High Courts)



- **District & Subordinate Judiciary:**

- Women Judges constitute ~35% of the Judges in the lower courts. Here the proportion varies from 19.5% in Gujarat to 70% in Goa.
- As of 2025, 7,852 women judges serve in district and subordinate courts.
- 17 of the 36 States and UTs had a smaller proportion of women in the lower judiciary than the national average.

- Out of 1.7 million advocates in the country only 15% are women. Only 2% elected representatives in the State Bar Councils are women.

What are the reasons for Low Representation of Women in Judiciary?

1. Judicial Rules:

- **Article 233** puts the condition of **7 years** of practice as an advocate to be eligible for appointment as District Judge. The Judiciary has interpreted this as 7 years of continuous practice.
- Most States' Judicial rules dictate a minimum age of **35 years** for entry as a district judge through direct recruitment.
- No one below the age of **55 years** can be appointed as a judge in the Supreme Court. Marriage and family responsibilities in this age group reduces the ability of women to compete for roles in the Judiciary.

2. 'Leaking Pipeline' Syndrome:

- The leaking pipeline syndrome is often used as a metaphor for the way **women disappear as they move from lower to higher levels**.
- The phenomenon of the leaking pipeline is witnessed across a spectrum of careers including the Judiciary (~35% Judges in Lower Courts to ~11% in the SC).
- Family responsibilities, personal choices, long working hours and work-life conflict, working conditions, lack of access to employment opportunities, barriers to advancement, inadequate support from family results in women frequently dropping out mid-career.
- This 'voluntary withdrawal' masks the tacit consent given to patriarchally prescribed gender roles.

3. Opaque Recruitment Process (Collegium System):

Unlike lower courts, where entry is based on transparent, merit-based competitive exams (Judicial Services Examinations), appointments to the High Courts and the Supreme Court are managed by the **Collegium system**. Because the process lacks institutionalized, objective criteria for selection, it heavily relies on existing professional networks. Historically dominated by men, these networks create an unconscious bias that favors male candidates, often overlooking highly competent women.

4. Shorter Tenures and the Seniority Trap:

High Court judges retire at 62, and Supreme Court judges at 65. Because of their late entry, women frequently have **shorter judicial tenures**. This prevents them from gaining the seniority required to enter the Supreme Court or to sit on the internal Collegium councils that choose future judges, perpetuating the cycle.

5. Bar Councils and Bar Associations:

Women are significantly underrepresented in Bar Councils and Bar Associations, which can provide a pathway to visibility and leadership. The Bar Council of India, for instance, has no women members, and only 9 out of 441 State Bar Council representatives are women.

6. Hostile Courtroom Culture:

Women lawyers frequently report facing patronizing attitudes, casual sexism, and a lack of mentorship from senior male colleagues. This everyday friction makes litigation an exhausting space for women to sustain a multi-decade career.

7. Lack of Supportive Infrastructure:

The dearth of supportive provisions and infrastructure, from toilets to maternity leave, also contribute to a high attrition rate amongst women lawyers. In 6,000 courts across the country, 22% of them do not have separate toilets for women. As a result, many women law graduates prefer to join the corporate sector.

8. Lack of Enabling Provisions:

While quotas for women have been implemented in the lower courts of many states, these policies are yet to be implemented in the higher judiciary. States like Assam,

Rajasthan, Andhra Pradesh, Telangana, Odisha have these enabling provisions and have > 40% women judges.

What are the impacts of Low representation of Women in Judiciary?

- Gender Bias in Judgements:** The absence of diverse perspectives on the bench often results in a narrow understanding of social dynamics and gender-based violence. Historically, this has led to problematic judicial reasoning:
 - Victim-Blaming:** Courts have sometimes granted bail to perpetrators under archaic conditions (e.g., asking the attacker to get a *rakhi* tied by the victim).
 - Patriarchal Expectations:** Judges have made rulings assessing whether a woman's post-rape behavior fits the standard of an "ideal" rape victim rather than focusing on the criminality of the act itself.
 - The basis of such judgements is limited to the ideal dignity of a woman, and not on the criminal nature of the act itself.
- Narrowing the Scope of Law:** Women judges often bring lived experiences that push the boundaries of jurisprudence, introducing new legal concepts related to **equal opportunity, sexual harassment (e.g. Vishaka Guidelines in India)**, and reproductive rights. Low representation means these vital areas of law may progress slowly or remain undeveloped.
- Deficiencies in Legal Reasoning:** The ability of the legal system to understand and respond to different social circumstances and experiences is enriched by more judicial diversity. If there is not adequate women's representation, the justice system will not be able to meet the needs of women and other underserved communities.
- Impact on Access to Justice:** Women litigants, especially those from economically weaker sections, often feel more comfortable and confident presenting their cases before a female judge. The lack of women on the bench can deter women from seeking legal recourse in sensitive matters, contributing to a **justice gap**.
- Undermining of Gender Equality & Causing Trust Deficit:** Lack of women representatives in courts give rise to questions about the courts' legitimacy as representatives of the societies they serve. A judiciary that does not reflect nearly half the population lacks legitimacy and fails the principle of representative justice.
- Lack of Role Models:** High-ranking women judges serve as powerful **role models and sources of inspiration** for young girls and women entering the legal profession and other fields. Their visibility breaks stereotypes about women's capacity for leadership and high office.
- Reinforcement of Societal Stereotypes:** The lack of visible, high-ranking women in the judicial system reinforces the societal stereotype that women are incapable of holding top leadership or adjudicatory roles. Conversely, a robust presence of women on the bench breaks these biases and promotes egalitarianism.

How are different countries promoting greater representation of women in the judiciary?

Belgium	Belgium amended its laws governing the Constitutional Court to implement a strict gender quota . The law mandates that at least one-third of the judges must belong to each gender. Till the court reached the composition of one-third women judges, it was mandated that after every 2 male appointees, the third appointment would have to be of a woman.
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South Africa	Section 174(2) of the South African Constitution explicitly mandates that the judiciary must broadly reflect the racial and gender composition of the country. Driven by this constitutional obligation, South Africa's Constitutional Court achieved a female majority (6 out of 11 judges), headed by a woman Chief Justice.
The United Kingdom	The UK created an independent Judicial Appointments Commission (JAC) . The JAC is legally required to actively seek out and encourage applications from underrepresented groups, including women and ethnic minorities. It publishes transparent selection criteria, uses blind grading for initial assessments, and actively tracks gender metrics across all levels of courts.
Canada	Canada relies on an open, merit-based application process through independent advisory committees. This transparent process has effectively pushed women's representation to approximately 50% across its federal courts .
France	Imposed a 50% gender parity quota at the local and municipal election levels . This has profoundly "feminized" the baseline of the French legal framework, naturally spilling over into a high volume of senior female magistrates and judges in courts of first and second instance.
Rwanda	Rwanda implemented constitutional quotas requiring at least 30% women in all decision-making bodies. Combined with targeted legal education funding, this mechanism was so successful that nearly half of all judges in Rwanda are now women .

What should be the way forward?

- Gender-Based Affirmative Action:** Implement a policy where a certain percentage (e.g. 30% where feasible) of judicial positions, particularly at the **District and High Court level**, are reserved for women. While the Supreme Court appointments are based on seniority and merit, High Court recommendations must proactively seek out qualified women candidates.
- Mandatory Inclusion in Selection Committees:** Ensure that all shortlisting and selection bodies, including the Collegium (at the Supreme Court level) and State-level committees, include **at least one woman member**. This inclusion brings diversity to the decision-making process itself, challenging inherent biases during candidate evaluation.
- Reforms in State Bar Councils and Bar Associations:** State Bar Councils and Bar Associations must implement structural support systems. Recent Supreme Court directives mandating **30% seat reservations for women in Bar Council and Association elections** must be strictly enforced. Empowering women at the litigation stage ensures they are visible, mentored, and naturally positioned for direct bench elevations.
- Broaden the Zone of Consideration:** Collegiums can proactively consider capable women advocates practicing in the Supreme Court who belong to different states, ensuring a wider talent pool when suitable state-level candidates are scarce.

5. **Lateral Entry from Academia:** Encourage and facilitate the lateral entry of women with strong academic backgrounds (law professors, legal scholars) into the mid-level judiciary or as judges in specialized tribunals. This broadens the entry point beyond traditional litigation tracks.
6. **Addressing Family and Work-Life Balance:** The biggest hurdle for women in the legal field is often the lack of institutional support for work-life balance. Judicial academies and the bar associations should advocate for:
 - **Childcare Facilities** within court complexes.
 - **Flexible Timings** for female lawyers and judges, particularly during early motherhood.
 - **Adequate Maternity Leave** policies that do not negatively impact seniority or career progression.
7. **Better Infrastructure:** Provide basic, dignified infrastructure in all courts, especially at the lower judiciary level (e.g. separate, well-maintained washrooms and retiring rooms and fully subsidized institutional childcare facilities), to support the comfort and safety of women lawyers and judges.
8. **Eliminating Gender Bias Training:** Introduce mandatory, regular **gender sensitization and unconscious bias training** for all sitting judges, law clerks, and court staff. This is essential to create a neutral and respectful court environment for female advocates and litigants.
9. **Mentorship and Support Networks:** Establish formal mentorship programs where senior women judges and lawyers mentor junior female colleagues, helping them navigate the systemic challenges and stay in the profession long enough to be considered for elevation.

Conclusion:

Bridging the gender gap in the judiciary will ensure that the judiciary is not only *independent* but also truly *representative* of the society it is tasked with serving.

UPSC GS-2: Indian Judiciary

Read More: [Indian Express](#)

Urban Fire Disasters in India – Reasons & Solutions – Explained Pointwise



Rapid urbanisation, overcrowded buildings, and poor compliance with fire safety norms have led to a worrying rise in fire incidents across Indian cities. The recent devastating fire in Lucknow's Aliganj area, which claimed at least 15 lives, has once again exposed critical gaps in safety enforcement and emergency preparedness. The tragedy underscores the urgent need to strengthen fire safety regulations, conduct regular audits, and build resilient urban infrastructure to prevent the recurrence of such avoidable disasters.

What are fire disasters, and why are they considered a major urban hazard in India?

- A **fire disaster** is an uncontrolled, large-scale outbreak of fire that spreads rapidly, causing extensive property damage, severe economic losses, environmental harm, and most critically, injuries or loss of human life. Unlike slow-onset disasters, fires spread rapidly and can be catastrophic within minutes.
- According to the **National Crime Records Bureau (NCRB)**, India records over **1.5-2 lakh fire accidents annually**, resulting in thousands of deaths. Fire-related deaths consistently rank among the leading causes of accidental fatalities.
- They are considered a major urban hazard because the rapid and often unplanned growth of Indian cities has created a "perfect storm" of conditions that make fires both more likely and more deadly.

What are the different types of fire-related disasters in India?

<p>Urban and Structural Fires</p>	<ol style="list-style-type: none"> 1. Commercial & High-Rise Fires: Occur in shopping malls, office complexes, and high-rise apartments. They are typically caused by electrical short-circuits, overloaded meters, or poorly maintained centralized air conditioning (HVAC) systems. 2. Educational Institutions & Assembly Fires: Fires in schools, private coaching institutes, and movie theaters. These frequently turn into disasters due to overcrowding, highly flammable false ceilings, and a lack of secondary emergency exits. 3. Slum Fires: Highly frequent in mega-cities. Because slums are built using combustible materials (tarpaulin, wood, plastic) and rely heavily on illegal electrical hookups or domestic LPG cylinders, a single spark can wipe out an entire neighborhood in hours. 4. Hospital Fires: Particularly tragic as victims have limited mobility. They are often triggered by the continuous, heavy electrical load required for life-support systems, ventilators, and oxygen-rich environments.
<p>Industrial and Chemical Fires</p>	<ol style="list-style-type: none"> 1. Chemical & Pharmaceutical Plant Fires: These are incredibly dangerous because they involve toxic chemicals that release poisonous gas clouds when burned, requiring specialized chemical-foam firefighting rather than water. 2. Textile and Paper Mill Fires: These facilities stock massive inventories of highly flammable raw materials. Once a fire catches, the airborne fibers accelerate the spread rapidly across the shop floor. 3. Illegal Firework Factory Explosions: A recurring disaster type, particularly in hubs like Sivakasi (Tamil Nadu). They usually happen in unorganized, small-scale units operating without any safety clearance, where gunpowder is handled manually.
<p><u>Wildfires (Forest Fires)</u></p>	<ol style="list-style-type: none"> 1. Himalayan Pine Forest Fires: Highly prevalent in Uttarakhand and Himachal Pradesh during the dry pre-monsoon months (March to June). The dry, fallen needles of <i>Pinus roxburghii</i> (Chir Pine) are highly resinous and catch fire instantly. 2. Central and Southern Deciduous Fires: Occur in states like Madhya Pradesh, Chhattisgarh, and Odisha. They are often triggered naturally by lightning, or by humans accidentally when burning dry leaves to collect forest produce like Mahua flowers or Tendu leaves.

Transport and Infrastructure Fires	<ol style="list-style-type: none"> Railroad Fires: Break out in passenger trains, often due to short-circuits in air-conditioned coaches, pantry car gas leaks, or passengers illegally carrying inflammable materials like firecrackers or kerosene. Electric Vehicle (EV) Battery Fires: Thermal runaway in Lithium-ion batteries – often caused by poor thermal management or low-quality cell sorting – has led to sudden, explosive fires in electric two-wheelers and buses. Oil & Gas Pipeline/Refinery Fires: Rare but catastrophic incidents involving crude oil pipelines or storage depots. They cause intense, high-temperature blazes that can burn for days.
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Why Fires Are a Severe Major Hazard in Indian Cities?

- Extreme Population & Spatial Density:** Urban spaces in India, especially commercial hubs like Delhi's Chandni Chowk or Burrabazar in Kolkata, feature highly congested buildings packed tightly together. Once a fire starts, it easily leaps from one building to the next.
- Haphazard Overhead Wiring & Electrical Infrastructure:** Electrical short-circuits are the root cause of over **70-80%** of all urban fires in India. Walk down almost any older urban street, and you will see a chaotic web of tangled electrical wires. Overloaded transformers and poorly maintained commercial meters frequently spark explosions.
- Inadequate Emergency Access (The "Narrow Lane" Problem):** Many fire disasters turn tragic simply because massive fire tenders (engines) cannot physically navigate the extremely narrow, winding lanes of older city centers or informal settlements (slums).
- Widespread Violations of the National Building Code (NBC):** Many high-rises, coaching hubs, and commercial complexes skimp on safety. Common violations include missing fire exits, blocked staircases used as storage, absent or non-functional sprinkler systems, and the use of cheap, highly flammable building and interior materials.
- Mixed Land-Use Anomalies:** It is very common in India to find small-scale manufacturing units, chemical storage facilities, or illegal commercial kitchens operating inside purely residential buildings. This brings highly combustible materials right into people's homes.
- The "Flue" Effect in High-Rises:** When high-rise buildings are constructed without proper fire barriers between floors, open stairwells, elevator shafts, and internal utility ducts act like giant chimneys. If a fire starts on the ground floor, the heat and toxic smoke are sucked violently upward, trapping hundreds of people on upper floors.
- The "Chalta Hai" (Casual) Attitude toward Audits:** Fire NOCs (No Objection Certificates) are legally required for commercial buildings, but regular compliance audits are frequently bypassed. Building owners often install fire extinguishers to pass an initial inspection, but fail to maintain them, leaving them depressingly useless when a real crisis strikes.
- Illegal and Unauthorized Construction:** A pattern emerges in many fire tragedies: buildings operating with far more rooms, or for entirely different purposes, than they were approved for. The recent deadly fire at a bed-and-breakfast in Delhi's Malviya Nagar is a prime example, where a building licensed for six rooms was allegedly operating with 25, with a single blocked exit and a basement kitchen where the fire likely started. These "clandestine modifications" often bypass safety rules for wider roads, setbacks, and fire escapes, creating death traps.
- Modern Security as a Trap:** Ironically, features meant to enhance security can become lethal in a fire. Electronic smart locks, biometric systems, and security grills can fail in extreme heat or lock occupants in, while locked terrace access and sealed balconies block potential escape routes.

What are the major initiatives undertaken by the government to improve fire safety and fire disaster management in urban areas?

1. **Modernization of Fire Services:** Backed by the 15th Finance Commission recommendations, the central government is providing Rs 5,000 crore to states to procure modern firefighting equipment (e.g., hydraulic platforms and turntable ladders), expand infrastructure to local levels, and implement legal reforms.
2. **Disaster Management Framework:** The Disaster Management Act, 2005 established the National Disaster Management Authority (NDMA) and the National Disaster Response Force (NDRF) to provide rapid, specialized responses to both natural and human-induced disasters, including fires.
3. **The National Building Code (NBC):** Issued by the Bureau of Indian Standards (BIS), Part 4 of the NBC deals exclusively with 'Fire and Life Safety'. It mandates structural requirements like compulsory fire exits, automated sprinkler systems, fire-resistant construction materials, and clear setback spaces.
4. **Mandatory Fire Risk Assessments and Audits:** Across states, authorities have vastly intensified the frequency of surprise checks. Properties like high-rises, factories, hotels, and schools are legally required to perform regular electrical and fire audits to maintain their **Fire NOC (No Objection Certificate)**.
5. **NDRF and SDRF Specialized Battalions:** The **National Disaster Response Force (NDRF)** consists of highly trained battalions strategically stationed across India. They are uniquely equipped to handle industrial and **CBRN (Chemical, Biological, Radiological, and Nuclear)** fire emergencies that are beyond the capacity of local municipal firefighters.
6. **Dial 112 Emergency Response Support System (ERSS):** This pan-India unified emergency number integrates police, fire, and medical services to reduce emergency response times drastically.
7. **Aapda Mitra Scheme:** A community-oriented program dedicated to training 100,000 local volunteers in highly vulnerable multi-hazard districts to act as first responders during fire and other emergencies.
8. **National Fire Service Week:** Observed annually across the country, this initiative is used by public and private sectors to run massive mock evacuation drills, test internal hydrant networks, and train normal citizens on how to operate basic fire extinguishers.

What measures are needed to improve fire preparedness and emergency response systems in urban areas?

1. **Enacting a Uniform National Fire Safety Code:** Fire services are currently treated as a state or municipal subject, resulting in highly fragmented regulations. India needs a uniform, legally binding National Fire Safety Code implemented stringently across all states.
2. **Third-Party Digital Fire Audits:** Rather than relying on sporadic manual checks by understaffed departments, cities should mandate annual, independent third-party fire safety audits. These audit reports should be linked to an online public database, meaning a building's commercial license or insurance automatically expires if they fail compliance.
3. **Mandatory Building Compartmentalisation:** Large floors must be structurally divided into independent fire zones using fire-rated doors and fire-resistant walls. This traps the flame and smoke in one specific zone for at least 60–120 minutes, giving occupants time to escape.
4. **Anti-Smog and Smoke Management Systems:** Since smoke inhalation causes the vast majority of fatalities, urban high-rises must feature automated mechanical ventilation systems that actively extract toxic gases from corridors during a fire.
5. **Tactical "Mini-Tenders" for Congested Areas:** For dense, historic markets and informal settlements, traditional heavy fire trucks are useless. Municipalities must invest in fleets of agile, customized mini-tenders and motorcycle-mounted water mist systems capable of threading through narrow alleyways.

6. **Mandatory Neighborhood Fire Drills:** Much like earthquake drills in prone areas, schools, high-rises, and major commercial hubs should legally be required to conduct seasonal evacuation drills so occupants intuitively know exit routes.
7. **Curriculum-Level Education:** Fire safety literacy – understanding electrical overloading, how to properly handle LPG cylinders, and how to operate an extinguisher – needs to be embedded directly into school curricula across the country.

UPSC GS-3: Disaster Management

Read More: [The Hindu](#)

Foreign Contribution (Regulation) Act (FCRA) – Significance & Concerns – Explained Pointwise



The Foreign Contribution (Regulation) Act (FCRA), 2010 regulates the acceptance and utilisation of foreign funds by individuals, associations and NGOs to ensure transparency and safeguard national interests. The government's newly notified **FCRA Amendment Rules 2026** significantly tighten compliance. They mandate purpose-specific and geographical registration, hold “key functionaries” personally liable, expand social media disclosures, and require utilizing 75% of existing funds before receiving new installments.

What is the Foreign Contribution (Regulation) Act (FCRA)?

- The Foreign Contribution (Regulation) Act (FCRA) is a law that regulates the acceptance and utilization of foreign contributions or hospitality by individuals, associations, and companies to ensure they do not adversely affect national security, public order, or national interest.
- Enforced by the **Ministry of Home Affairs**, it prevents foreign entities from influencing India's internal politics, media, and public discourse.

What are some of the important provisions of the FCRA?

1. **Mandatory Registration or Prior Permission:** Organizations with cultural, educational, economic, or social programs must be officially registered with the Central Government to receive foreign contributions. Alternatively, they must obtain 'Prior Permission' for specific grants.
2. **Prohibited Entities:** Certain individuals and professions are entirely banned from accepting foreign contributions. These include election candidates, journalists, newspaper/media owners, judges, government servants, political parties, and members of legislative bodies.
3. **Registration and Renewal:** The Central Government grants registration, which is valid for **five years** and must be renewed within six months of expiry to remain valid. Newer organizations can seek 'prior permission' for a specific project from a specific donor.
4. **Banking and Utilization Rules:**
 - All foreign contributions must be received in a **single, exclusive FCRA bank account** at the State Bank of India's main branch in New Delhi.
 - Organizations can open additional accounts in scheduled banks solely for the **utilization** of these funds, but they must report this within 45 days.
 - The law caps the use of foreign funds for administrative expenses at **20%**.
 - The funds cannot be used for speculative business and must be utilized strictly within India for the approved purpose.
5. **Accounting and Reporting:** Recipients must maintain separate accounting records and file an annual online return in **Form FC-4** by December 31st each year. The return must be certified by a chartered accountant and include a balance sheet and income/expenditure statement. Records must be preserved for six years.
6. **Surrender and Cancellation of Registration:** The Central Government can suspend or cancel an organization's FCRA registration if there are violations of the Act. Organizations can also voluntarily surrender their registration, after which their foreign funds and related assets are transferred to a designated government authority.

What are the key objectives of the FCRA?

1. **Regulating the Acceptance of Foreign Funds:** The FCRA provides a structured mechanism to monitor who is bringing money into the country from abroad. It ensures that any individual, association, or company receiving foreign hospitality or cash is strictly registered, verified, and trackable.
2. **Preventing Activities Detrimental to National Interest:** A major objective is to block foreign entities from funding proxy agendas inside India. The law seeks to prevent foreign contributions from being used for activities that could pose a threat to:
 - a. The sovereignty and integrity of India.
 - b. Public interest or internal security.
 - c. Strategic, scientific, or economic interests of the state.
 - d. Harmony between religious, racial, social, linguistic, or regional groups.


3. **Insulating India's Democratic Institutions:** By placing a blanket ban on political parties, candidates, judges, legislators, and mainstream journalists, the objective is to ensure that domestic policy and public opinion are shaped exclusively by Indian citizens, not foreign donors.
4. **Ensuring Accountability and Correct Utilization:** The Act forces NGOs and social organizations to be entirely transparent about how they use foreign aid.


What are the key changes introduced by the latest amendments to the FCRA Rules?

1. **Activity & Geographic Restrictions:** Registrations are now strictly activity-based and geography-based. Organizations must declare specific approved states/union territories of operation, utilize funds for designated purposes, and declare their social media accounts.

Funding check


Under the fresh changes to Rules of the Foreign Contribution Regulation Act, all NGOs are required to disclose specific activities and geographical scope of their programmes to receive contributions under 5 permitted categories:






EDUCATIONAL

- Schools, colleges, and libraries
- Scholarships
- Research institutions and think tanks
- Civic-awareness and constitutional-rights programmes




ECONOMIC

- Livelihood generation
- Skill development
- Agricultural sectors
- Entrepreneurship and micro-enterprises
- Financial and digital inclusion




RELIGIOUS

- Places of worship
- Religious education
- Pilgrim services
- Meditation programmes
- Preservation of religious traditions



SOCIAL

- Public health
- Rehabilitation
- Sanitation and nutrition
- Disaster relief



CULTURAL

- Preservation of Indian arts and languages
- Museums, archives, and cultural festivals
- Heritage conservation

Source: The Hindu

2. **No Proselytisation:** While faith-based activities like maintenance of worship places, religious education, and community kitchens are permitted, they strictly exclude proselytisation or religious conversion.
3. **Reasonable Activity Clause:** Organizations must utilize a minimum of ₹10 lakh in foreign funds over two financial years to demonstrate active operations.
4. **Vesting of Assets:** If an organization's FCRA registration is cancelled, surrendered, or expires without renewal, its foreign contributions and physical assets provisionally vest in a government-appointed Designated Authority.
5. **Permanent Takeover:** If registration is not restored, the assets permanently vest with the Authority, which may sell them or transfer them to government bodies, with proceeds credited to the Consolidated Fund of India.
6. **Expanded Definitions:** The definition of "key functionaries" now encompasses trustees, partners, governing body members, and anyone controlling the organization.

7. **Foreigner Restrictions:** Organizations with foreign nationals (other than OCI or Persons of Indian origin) as key functionaries are generally ineligible for registration unless specifically cleared by the central government.
8. **Usage Caps & Staged Receipts:** Subsequent installments of foreign funds can only be released after at least 75% of the prior installment has been spent and verified.
9. **Restrictions on “News” Activities:** Organizations must declare if they publish any books or articles, as they are prohibited from producing or broadcasting “news or current affairs” under the Act.

What is the significance of the FCRA?

1. **Sovereignty and National Security:** The primary purpose of FCRA is to protect the sovereignty & national security. It was enacted to ensure that the foreign money cannot be used to:
 - Fund **political destabilisation** or influence electoral outcomes.
 - Support **separatist or secessionist movements** (e.g., concerns about foreign funding to organisations in Kashmir, Northeast India).
 - Advance **religious conversion** activities that may cause communal friction.
 - Undermine **strategic national interests** through NGO-led campaigns against defence, nuclear, or infrastructure projects.
2. **Regulation of Civil Society and NGO Ecosystem:** India has one of the world’s largest NGO sectors. FCRA is the **primary regulatory lever** governing the approximately 16,000–22,000 organisations registered to receive foreign funds.
3. **Ensuring Transparency and Accountability:** The Act creates a strict compliance regime. It requires NGOs to register, report their foreign receipts and expenditures in detail, and use funds only for their stated purposes, thereby making the flow and use of foreign money transparent.
4. **Enforcing Compliance:** In recent years, the government has used the FCRA to significantly increase scrutiny. This is evident in the cancellation of over 20,000 FCRA registrations of organizations for non-compliance.

What are the major criticisms of the FCRA framework in India?

1. **Vagueness of Key Provisions:** The Act prohibits activities “detrimental to national interest” or affecting “public order, security of State, harmony between religious, racial, linguistic or regional groups” — but these terms are **not defined** in the Act.
2. **Weaponisation Against Dissent:** The FCRA has often been criticised for being selectively enforced to silence organisations critical of government policies. Between 2014 and 2022, over **20,000 FCRA registrations** were cancelled — a scale critics argue cannot be explained by genuine security concerns alone.
3. **The Sub-Granting Ban:** India’s civil society ecosystem historically functioned on a **hub-and-spoke model** — larger, registered organisations received foreign funds and channelled them to smaller, specialised grassroots groups. The ban effectively **severs this ecosystem**, leaving smaller organisations — often working with the most marginalised communities — without funding.
4. **The 20% Administrative Cost Cap:** The reduction of the administrative expense ceiling from **50% to 20%** of foreign contributions has drawn sharp criticism. The cap does not reflect **ground realities** of non-profit operations in India, where costs of compliance, rent, travel to remote areas, and staff training are substantial. For many organisations — particularly advocacy, legal aid, and research bodies where **human capital is the primary resource** — staff salaries alone exceed 20% of total expenditure.
5. **SBI New Delhi Main Branch Requirement:** The mandatory requirement that all FCRA-registered organisations maintain their **designated account only at SBI’s New Delhi Main Branch** has been

widely criticised. Organisations based in **Chennai, Kolkata, Ahmedabad, or rural areas** must operate a bank account 1,000+ kilometres away from their operations. It creates **severe practical difficulties** — physical banking, cheque clearing, cash management, and local vendor payments all become complicated.

6. **Due Process Deficits:** The procedural framework for **suspension and cancellation** of FCRA registration has been criticised for inadequate safeguards:
 - The MHA can **suspend registration for 180 days** on the basis of pending inquiry — effectively shutting down an organisation for six months without any finding of wrongdoing.
 - The **appellate mechanism** (appeal to the High Court) is expensive and slow — organisations may cease to exist financially before judicial relief is obtained.
 - There is **no independent adjudicatory body** — the MHA is simultaneously the regulator, prosecutor, and decision-maker, violating basic principles of **natural justice and institutional separation**.
7. **Chilling Effect on Legitimate Civil Society Activities:** Organisations avoid taking on **controversial causes** — environmental litigation against state projects, minority rights cases, anti-corruption campaigns — for fear of FCRA action. This progressively **depoliticises Indian civil society**, leaving only service-delivery organisations (which are less threatening to state power) while advocacy and rights organisations are weakened.
8. **Disproportionate Impact on Marginalised Communities:** The cumulative effect of FCRA restrictions falls most heavily on **India's most vulnerable populations**. Organisations working with **Adivasi communities** on land and forest rights — which frequently conflict with state and corporate interests — face disproportionate FCRA scrutiny.
9. **International Law and Human Rights Concerns:** The FCRA framework has been criticised as incompatible with India's **international human rights obligations**:
 - The **UN Declaration on Human Rights Defenders** (1998) recognises the right of civil society to seek and receive funding — including from foreign sources — for legitimate rights work.
 - The framework potentially violates **Article 22 of the ICCPR** (freedom of association), to which India is a party.

What reforms are needed to make the FCRA regime more effective and balanced?

1. **Expedite Processing Times:** Introduce strict, legally binding service-level agreements (SLAs) for processing FCRA registration, renewal, and prior permission requests to prevent administrative backlogs and project disruptions.
2. **Grievance Redressal Mechanisms:** Establish an independent ombudsman or a dedicated grievance redressal cell within the Ministry of Home Affairs (MHA) to allow non-governmental organizations (NGOs) to appeal licensing delays or arbitrary cancellations transparently.
3. **Rationalize Administrative Caps:** Revisit the restriction that caps administrative expenses at 20% of foreign funds. Many specialized development and advocacy organizations require higher operational and administrative budgets to function efficiently.
4. **Re-permit Sub-Granting:** Reintroduce sub-granting but attach strict **“chain-link responsibility”** to it. The primary recipient NGO would remain legally and financially accountable for verifying the end-use of the funds by the smaller partner. This maintains transparency without cutting off the financial lifeblood of micro-level community organizations.
5. **Standardize & Define Vague Terminology:** Terms like “national interest,” “public order,” and “harmonious relations” must be given **precise, narrow definitions**. Clear legal definitions eliminate

ambiguity, giving NGOs a transparent blueprint of boundaries they cannot cross, rather than leaving them vulnerable to shifting political definitions of what is “acceptable” work.

6. **Rationalising the SBI New Delhi Main Branch Requirement:** The mandatory SBI New Delhi Main Branch account should be **replaced with a designated account at any scheduled commercial bank**, with real-time reporting to a central FCRA monitoring system.
7. **Adoption of the UN Framework on Civil Society Funding:** India should align FCRA with the **UN Declaration on Human Rights Defenders** and the recommendations of the **UN Special Rapporteur on Freedom of Association**, which recognise the right of civil society to **seek, receive, and utilise resources** — including from foreign sources — for legitimate rights work.

Conclusion: A reformed FCRA should rest on three foundational principles – **Proportionality, Institutional independence & Democratic legitimacy**. A framework built on these principles would better serve India’s twin interests: protecting national sovereignty from genuine foreign interference while preserving the civil society ecosystem that is indispensable to a functioning democracy.

UPSC GS-2: Civil Society
Read More: [The Hindu](#)

India’s Bid for Permanent Membership of the UNSC – Explained Pointwise



India's bid for a permanent UNSC seat reflects its status as the world's most populous nation, largest democracy, and a leading economic power. Securing this seat is crucial for global governance to mirror contemporary geopolitical realities. However, structural inertia, China's persistent veto, and procedural hurdles within the UN remain major challenges.

Why has the issue of UNSC reform gained renewed importance in the context of emerging global challenges?

1. **Shifting Power Dynamics & Representation:** The current structure grants permanent membership and veto power exclusively to the **P5** (US, UK, France, Russia, and China), a configuration that excludes modern economic and demographic heavyweights. Emerging nations – such as the **G4** (India, Brazil, Germany, and Japan) – and the **African Union** contend that the council's legitimacy requires a balance of power reflective of today's multipolar world.
2. **The Veto Problem:** The frequent use of the veto by permanent members (P5) has effectively frozen the Council's primary mandate to maintain international peace and security. Recent wars in Ukraine and the Gaza Strip, along with regional escalations in the West Asia, have seen competing P5 vetoes foil humanitarian aid and ceasefire resolutions.
3. **Irrelevant Output:** The Council's output has dropped significantly, with fewer unanimous resolutions being passed as geopolitical polarization deepens. This paralysis has forced countries to look for alternative security frameworks outside the UN, threatening the organization's relevance.
4. **Populational Mismatch:** The P5 represent a shrinking minority of the world's population, making a system where they hold absolute veto power over the remaining 188 member states increasingly indefensible and illegitimate.
5. **Shift from Traditional to Non-Traditional Security Threats:** When the UN Charter was signed, security was defined strictly by state-on-state military conflict. Today's most destabilizing challenges are cross-border, non-traditional, and require fluid, rapid global cooperation, such as:
 - **Emerging Technologies & AI:** The rapid integration of Artificial Intelligence, autonomous weapons, and cyberwarfare into state statecraft has created a regulatory vacuum. The UNSC lacks the consensus and specialized framework to govern the international security implications of AI.
 - **Climate Change and Scarcity:** Climate-induced migration, resource scarcity (like water crises), and natural disasters are increasingly driving regional conflicts.
 - **Transnational Threats:** Issues like pandemics, supply chain vulnerabilities, and transnational repression cannot be solved by 1945-era definitions of national sovereignty.

What factors strengthen India's case for permanent membership in the UNSC?

1. **Demographics and Democratic Values:** Representing approximately one-sixth of humanity, India is the world's largest functional democracy. Combined, the current five permanent members (P5) represent less population than India alone. Its inclusion would make the UNSC more representative of the global populace.
2. **Economic Clout:** India is one of the world's largest economies (the 5th largest by nominal GDP and 3rd by Purchasing Power Parity). Its economic growth and role in global trade and development make it an influential player on the world stage.
3. **Global Peacekeeping:** India is historically one of the largest troop and police contributors to UN Peacekeeping Operations. It has deployed over 250,000 personnel across dozens of missions globally since the UN's inception. India has suffered the highest number of casualties among all troop-

contributing nations, demonstrating a profound, tangible commitment to upholding international peace and security under the UN banner.

4. **Voice of the Global South:** As a leader of developing nations and active participants in platforms like the G20, India advocates for an equitable international order and improved representation for underrepresented regions.
5. **Strategic Independence:** India maintains robust diplomatic relationships across major geopolitical divides. It maintains strong ties with the West (via groupings like the Quad), historic strategic partnerships with Russia, and active leadership within the Global South (such as BRICS and G77). Its independent foreign policy and constructive approach to complex international issues make it an essential mediator for world peace.
6. **Founding Member:** India was a founding member of the United Nations, signing the Declaration by United Nations in 1942 before even attaining independence and has faithfully upheld the principles of the UN Charter throughout its history.
7. **Proven Track Record:** India has served multiple terms as an elected, non-permanent member of the UNSC (most recently in 2021–22). During these tenures, it has consistently advocated for counter-terrorism frameworks, maritime security, and democratic majority-building rather than obstructionism.
8. **Nuclear-Armed Status with Responsibility:** As a nuclear-armed state with a declared “No First Use” policy and a commitment to a moratorium on testing, India presents itself as a responsible nuclear power. Its membership in key export control regimes like the Missile Technology Control Regime (MTCR) is also highlighted to demonstrate its commitment to non-proliferation norms.

Examine the challenges faced by India in securing a permanent seat in the UNSC.

1. **The P5 Monopoly:** The existing permanent members (USA, UK, France, Russia, and China) are highly reluctant to dilute their exclusive privileges, including the veto power.
2. **Rigid Amendment Process (Article 108):** Any expansion requires amending the UN Charter, which mandates a two-thirds majority in the UN General Assembly followed by ratification by all P5 members. This sets a virtually insurmountable barrier, as any single P5 nation can block the reform.
3. **China’s Reluctance:** While China publicly advocates for greater representation of the Global South, it remains the only one of the five permanent members (P5) that has not explicitly endorsed India’s permanent membership bid. This stance is widely seen as a strategic move to maintain its status as the sole Asian power with permanent membership and veto power in the Council.
4. **The “Coffee Club” (Uniting for Consensus):** This coalition – led by countries like Italy, Pakistan, Turkey, and Mexico – actively opposes the expansion of permanent seats. They advocate instead for expanding only the non-permanent, elected categories to prevent an exclusive club of new powers.
5. **The Veto Dilemma and “Second-Class” Status:** To bypass gridlock, some international factions have proposed granting India permanent status *without* veto power. India (along with its G4 partners: Brazil, Germany, and Japan) rejects this, arguing it would create a second-tier, unequal permanent membership.
6. **India’s Strategic Autonomy as a Double-Edged Sword:** India’s tradition of **strategic autonomy** paradoxically complicates its UNSC membership campaign. Western nations have occasionally questioned whether a permanently seated India would be a **reliable partner** in upholding the rules-based international order, or whether its autonomy would introduce new unpredictability.
7. **The IGN Process: Institutionalised Stalemate:** The **Intergovernmental Negotiations** framework, established in 2009, was designed to advance reform but has become an instrument of delay. The IGN is plagued by a lack of official records, a lack of a single negotiating text, and endless bureaucratic delays used by opposing countries to stall progress.

How would permanent membership in the UNSC enhance India's role in global governance?

1. **Amplified Voice for the Global South:** As the largest democracy and a major economy, India would ensure that the interests of developing nations – such as climate finance, food insecurity, and global health inequities – are central to international security and decision-making. It would break the Eurocentric and post-WWII dominance of the P5, creating a more multipolar and democratically representative global governance architecture.
2. **Reforming Global Institutions:** With formal leverage, India could fast-track its advocacy for broader reforms across international governance architectures, including the World Trade Organization and International Financial Institutions, pushing for fairer representation.
3. **Direct Influence on Rule-Making:** Holding veto power would allow India to proactively shape the UN Security Council agenda on international peace and security and global counter-terrorism frameworks, cementing its status as an undisputed global power.
4. **Insulation from Adversarial Resolutions:** Currently, India relies on strategic partners (historically Russia) to block unfavorable resolutions regarding its sovereign matters, such as the Kashmir issue. A permanent seat would give India the independent capability to safeguard its core national security interests at the highest level.
5. **Counter-Terrorism:** India has long championed a comprehensive global framework against terrorism. Permanent membership would allow New Delhi to institutionalize stricter sanctions on cross-border terror networks and prevent adversaries from placing technical holds on blacklisting known terrorists.
6. **Maritime and Cyber Security:** India could spearhead global governance frameworks for emerging frontiers – such as securing vital Indo-Pacific sea lanes, regulating AI in warfare, and setting norms for state-sponsored cyberattacks.
7. **Nuclear Governance and Non-Proliferation:** As a responsible nuclear state with a clean proliferation record, India could **strengthen rather than weaken** the non-proliferation regime from within. It could advocate for a **universal, non-discriminatory disarmament framework** – challenging the NPT's inherent asymmetry between nuclear haves and have-nots – with the institutional weight of a permanent member.
8. **Peacekeeping Reform:** As a permanent member, India could **directly shape peacekeeping mandates** — ensuring missions are operationally realistic, properly resourced, and designed with input from nations that actually deploy troops. India could drive the **professionalisation and accountability** of peacekeeping.

What diplomatic strategies should India adopt to strengthen its prospects for permanent membership in a reformed UNSC?

1. **Demanding Text-Based Negotiations:** India is calling for formal, **text-based negotiations with clear milestones and timelines**, arguing that the current format of open-ended discussions is no longer acceptable. This is a strategic move to make the reform process more substantive and result-oriented.
2. **Deepening and Operationalising G4 Cohesion:** India should **institutionalise G4 coordination** through dedicated diplomatic working groups that meet regularly, not merely at the margins of UNGA sessions. India should leverage its **growing strategic partnerships** with Germany (Indo-German partnership), Japan (Quad), and Brazil (BRICS, G20) to embed UNSC reform coordination within broader bilateral frameworks.
3. **Engagement with the African Bloc:** No reform can pass the UN General Assembly without the support of Africa, which commands 54 votes – nearly 30% of the entire UN membership. India must continue

to deepen its footprint in Africa through lines of credit, digital public infrastructure (like UPI and Aadhaar-style tech transfers), and capacity building.

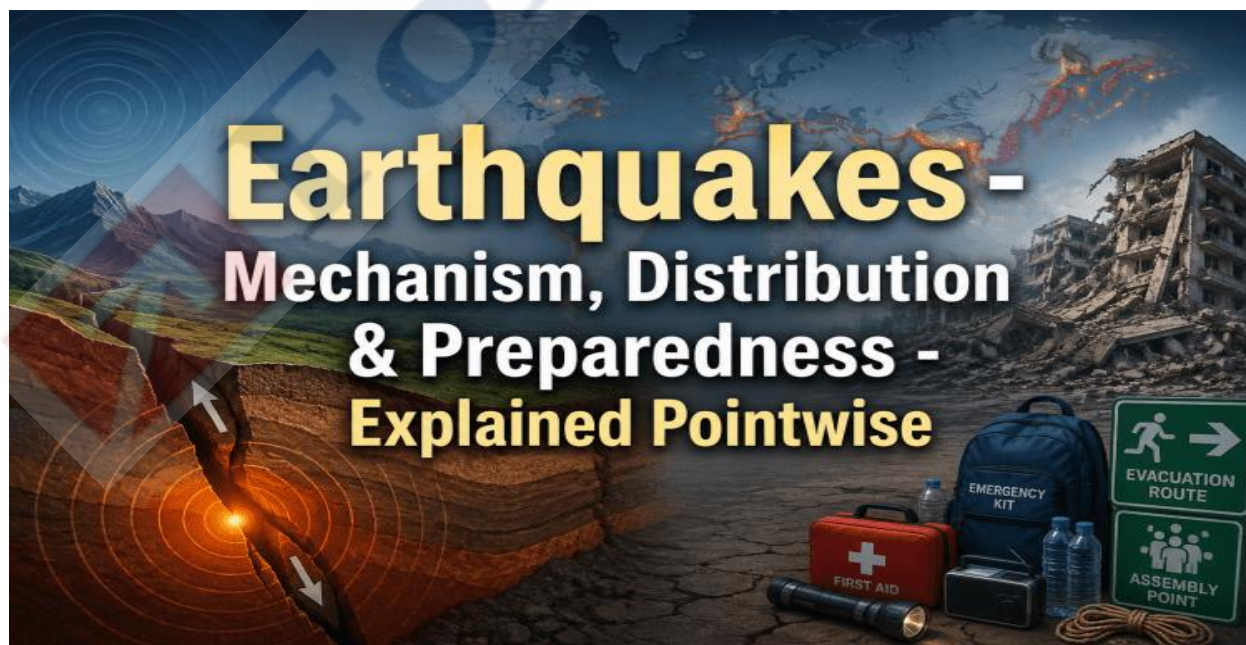
4. **Neutralising or Circumventing Chinese Opposition:** On issues where China seeks Indian cooperation – **climate negotiations, WTO reform, G20 financial architecture** – India should make cooperation contingent on Chinese movement on UNSC reform.
5. **Strategic Engagement with the Islamic World:** India's deepening relationships with **UAE, Saudi Arabia, Qatar, and Egypt** – built on energy partnerships, diaspora remittances, and investment flows – should be leveraged to extract explicit UNSC reform support.
6. **Support Most Vulnerable Nations:** India should **champion SIDS (Small Island Developing States)** concerns – climate vulnerability, ocean governance, debt sustainability – giving small nations material reasons to support Indian permanent membership despite size asymmetries.
7. **Leveraging Multilateral Forum Leadership:** India should use its **current multilateral leadership positions** to build reform momentum. India's leadership in the **Global Biofuels Alliance, International Solar Alliance, and Coalition for Disaster Resilient Infrastructure** should be framed as evidence of its capacity and willingness to lead global governance institutions.

Conclusion: A permanent seat for India in the UNSC would help align the institution with contemporary geopolitical realities and enhance the legitimacy of its decisions by making it more representative and credible. As an emerging global power aspiring to play the role of **Vishwamitra**, India is well-equipped to contribute meaningfully to addressing the evolving challenges confronting the UNSC and the broader international order.

UPSC GS-2: International Relations

Read More: [Indian Express](#)

Earthquakes – Mechanism, Distribution & Preparedness – Explained Pointwise

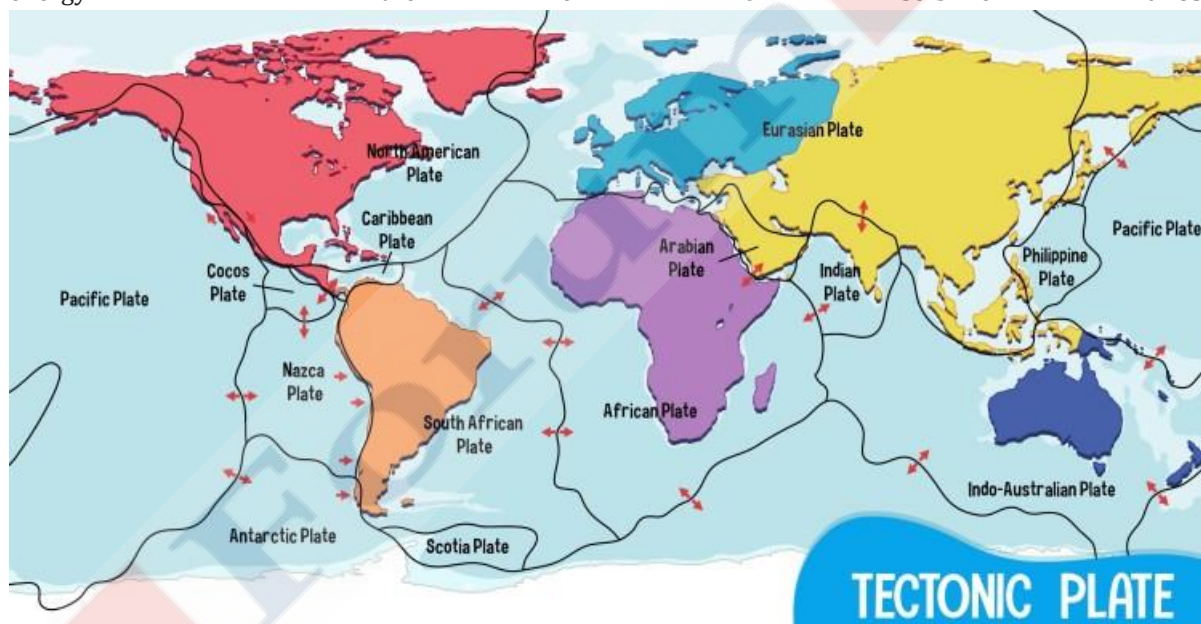


The recent twin earthquakes that struck Venezuela, measuring 7.2 and 7.5 in magnitude within seconds of each other, caused widespread devastation and renewed global attention to seismic hazards. The US geological Survey described the disaster as a “**seismic doublet**”. This disaster underscores the need to understand the mechanism, distribution, and impacts of earthquakes, while strengthening preparedness, resilience, and disaster-management strategies.

What is an EARTHQUAKE?

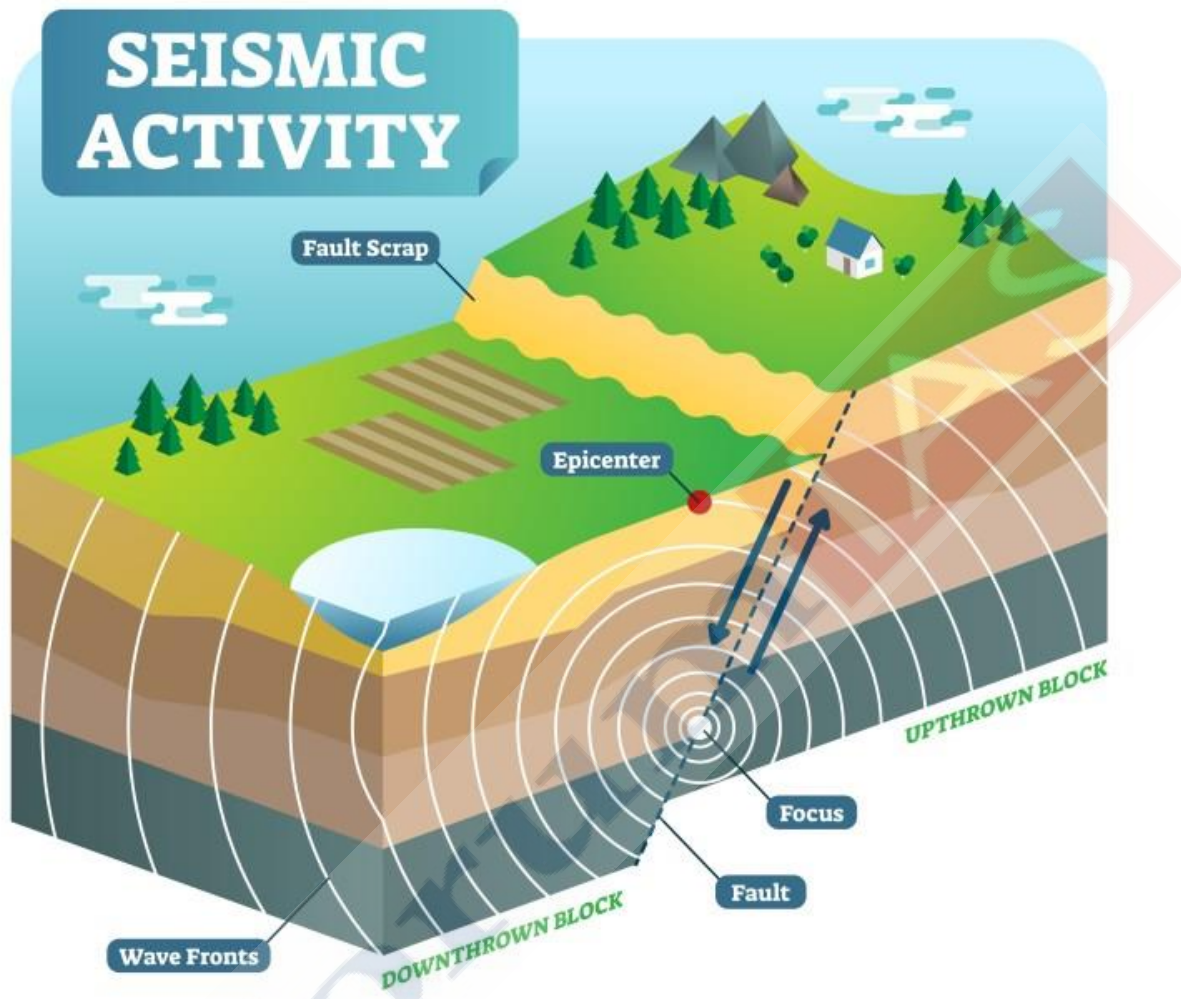
- An earthquake (also known as a quake, tremor or temblor) is a type of diastrophic movement which involves shaking of the Earth surface, resulting from the sudden release of energy in the Earth's lithosphere that creates seismic waves.

The Earth's outer layer (the lithosphere) is not one solid shell; it is broken up into giant puzzle pieces called **tectonic plates**. These plates are constantly, very slowly drifting. As they move, they grind against, pull apart from, or collide into each other. The edges of these plates are rough, so they often get stuck while the rest of the plate continues to move. This builds up immense pressure and stress over decades or even centuries. Eventually, the stress becomes too great, and the stuck rocks suddenly break and **snap** past each other along a crack in the Earth's crust called a **fault line**. This sudden movement releases the stored-up energy in the form of **seismic waves**.



- **Important terms related to earthquake:**
 - **FOCUS** (also known as the **HYPOCENTER**) = The point inside the earth where the energy is released is called the **FOCUS**.
 - **EPICENTRE** = The point on the surface, nearest to the focus, is called **EPICENTRE**.
 - **SEISMIC WAVES** (aka **EARTHQUAKE WAVES**) = The waves of energy that travel through the Earth's layers, causing the ground to shake.

FAULT: The fracture or zone along which the slip occurs.



What are SEISMIC WAVES?

- Earthquake shaking and damage is the result of 2 basic types of seismic waves:
 1. **Body Waves** = Travel through the **interior of the Earth**.:
 - a. **P-waves** = Longitudinal (compressional) waves
 - b. **S-waves** = Transverse (shear) waves
 2. **Surface Waves** = Travel along the **Earth's surface** (cause most destruction):
 - a. **L-waves** = Horizontal shear motion (side-to-side)
 - b. **R-waves** = Rolling motion (like ocean waves) – both vertical and horizontal
- **P-waves** = The faster of these body waves is called the primary or P wave. Its motion is the same as that of a sound wave in that, as it spreads out, it alternately pushes (compresses) and pulls (dilates) the rock. These P waves are able to travel through both solid rock, such as granite mountains, and liquid material, such as volcanic magma or the water of the oceans.
- **S-waves** = The slower wave through the body of rock is called the secondary or S wave. As an S wave propagates, it shears the rock sideways at right angles to the direction of travel. If a liquid is sheared

sideways or twisted, it will not spring back, hence S waves cannot propagate in the liquid parts of the earth, such as oceans and lakes.

- **L-waves** i.e. **Love waves** = Its motion is essentially that of S waves that have no vertical displacement; it moves the ground from side to side in a horizontal plane but at right angles to the direction of propagation. The horizontal shaking of Love waves is particularly damaging to the foundations of structures.
- **R-waves** i.e. **Rayleigh waves** = They are like rolling ocean waves. Rayleigh waves move both vertically and horizontally in a vertical plane pointed in the direction in which the waves are travelling.

What are the TYPES OF FAULTS ASSOCIATED WITH EARTHQUAKES?

- There are 3 main types of faults:
 1. **Normal Fault**
 2. **Reverse (Thrust) Fault**
 3. **Strike-slip Fault**
- Normal and reverse faulting are examples of dip-slip, where the displacement along the fault is in the direction of dip and movement on them involves a vertical component.
- **Normal faults** occur mainly in areas where the crust is being extended such as a divergent boundary. **Reverse faults** occur in areas where the crust is being shortened such as at a convergent boundary. **Strike-slip faults** are steep structures where the two sides of the fault slip horizontally past each other. Transform boundaries are a particular type of strike-slip fault.
- Reverse faults, particularly those along convergent plate boundaries are associated with the most powerful earthquakes, megathrust earthquakes, including almost all of those of magnitude 8 or more.

What are the different TYPES OF EARTHQUAKES?

Shallow-Focus Earthquakes	<p>Depth: 0 – 70 km</p> <p>Occurrence: Most common type (~80% of all earthquakes).</p> <p>Impact: Most destructive because the energy is released close to the Earth's surface.</p> <p>Examples: Nepal earthquake (2015), Bhuj earthquake (2001).</p>
Intermediate-Focus Earthquakes	<p>Depth: 70 – 300 km</p> <p>Occurrence: About 12% of earthquakes.</p> <p>Impact: Less destructive than shallow-focus but can still cause significant damage over a wide area.</p> <p>Examples: Earthquakes in subduction zones (e.g., Peru-Chile Trench).</p>

Deep-Focus Earthquakes	<p>Depth: 300 – 700 km</p> <p>Occurrence: About 3% of earthquakes.</p> <p>Impact: Rarely cause surface destruction due to great depth, but can be very powerful.</p> <p>Examples: Earthquakes in the Tonga Trench and Mariana Trench regions.</p>
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What are the different ways in which earthquakes are measured?

Earthquakes are measured in two principal ways: **Magnitude & Intensity:**

Magnitude	<p>The magnitude of an earthquake refers to the amount of energy released at the earthquake's focus (hypocentre) during seismic activity.</p> <p>It is a quantitative measure, usually expressed on a logarithmic scale.</p> <p>It is measured by using RICHTER SCALE.</p> <p>The magnitude is expressed in absolute numbers, 0-10.</p>
Intensity	<p>The intensity of an earthquake refers to the measure of the effects and damage caused by the earthquake at specific locations on the Earth's surface. The intensity scale takes into account the visible damage caused by the event.</p> <p>Intensity is a qualitative measure of the shaking at a given location.</p> <p>Two scales most commonly used for intensity are the Modified Mercalli Intensity scale and MSK scale, both of which classify earthquakes from I (least perceptible) to XII (most severe). These readings are based on factors such as how people perceive the shaking. The same earthquake will have different intensity readings at different places; the farther one moves away from the epicentre, the less intense the shaking.</p>

How are Earthquakes distributed across the earth's surface?

Circum-Pacific Belt (Ring of Fire)	<p>Location: Surrounds the Pacific Ocean (Japan, Indonesia, Philippines, Chile, Alaska, California).</p> <p>Share: ~70–80% of the world's earthquakes.</p> <p>Cause: Subduction zones and transform faults.</p>
Alpine-Himalayan Belt	<p>Location: From the Mediterranean → Middle East → Himalayas → Southeast Asia.</p> <p>Share: ~15–20% of earthquakes.</p> <p>Cause: Collision between Eurasian Plate and African/Indian Plates.</p>

Mid-Atlantic Ridge (Oceanic Ridges)	Location: Runs down the Atlantic Ocean; includes Iceland. Cause: Divergent plate boundaries (sea-floor spreading). Earthquake type: Mostly shallow-focus.
Intraplate Earthquakes	Occur within tectonic plates, away from boundaries. Examples: New Madrid Seismic Zone (USA), Kutch Region (India)

What is a SEISMIC DOUBLET?

- A seismic doublet is a rare phenomenon in which **two major earthquakes of similar magnitude** strike close together in both time and geographic location.
- Key Characteristics of Seismic Doublet:
 - **Similar Magnitudes:** Unlike aftershocks (which are typically one or more magnitudes smaller than the main earthquake), the two events in a doublet are nearly equal in magnitude.
 - **Rapid Time Separation:** The twin quakes occur one after another with no time for the initial tectonic stress to settle. This can happen seconds apart.
 - **Distinct Yet Linked Ruptures:** The quakes originate from separate but contiguous or adjacent fault segments. The rupture of the first fault transfers stress to a nearby fault, rapidly triggering the second event.
 - **Shared Waveform Characteristics:** Because both events originate from the same general rupture zone and stress field, seismograms often display nearly identical seismic waveforms.
 - **High Destructiveness:** Doublets are vastly more dangerous than individual earthquakes. The second major shock frequently strikes before structural assessments can be made, causing structurally compromised buildings to collapse during prolonged shaking.

Why Are They So Dangerous?

1. **Compounded Structural Damage:** Buildings, bridges, and dams that managed to survive the first earthquake with minor, invisible structural cracks are frequently brought down entirely by the second, equally powerful shock.
2. **Hazard to Rescue Teams:** First responders and rescue workers are often actively searching through the rubble of the first event when the second major shock hits, creating extreme peril for emergency operations.
3. **Psychological Impact:** Because communities expect aftershocks to get progressively weaker, a second massive shock creates severe panic and disrupts emergency sheltering plans.

What are some notable examples of seismic doublets?

Venezuela (2026)	Two back-to-back quakes, a magnitude 7.2 foreshock followed 39 seconds later by a magnitude 7.5 mainshock, struck along the boundary of the Caribbean and South American plates, causing widespread destruction.
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Turkey & Syria (2023)	A magnitude 7.8 mainshock was followed about nine hours later by a second devastating magnitude 7.7 earthquake on an adjacent segment of the East Anatolian Fault.
California, USA (1987)	Two major strike-slip earthquakes hit the Superstition Hills in the Imperial Valley about 11 to 12 hours apart on intersecting faults.
Peru-Brazil Border (2015)	A deep-focus seismic doublet occurred at a depth of over 650 kilometers, consisting of a magnitude 7.4 event followed five minutes later by a magnitude 7.5 event.

How SEISMICALLY VULNERABLE is INDIA?

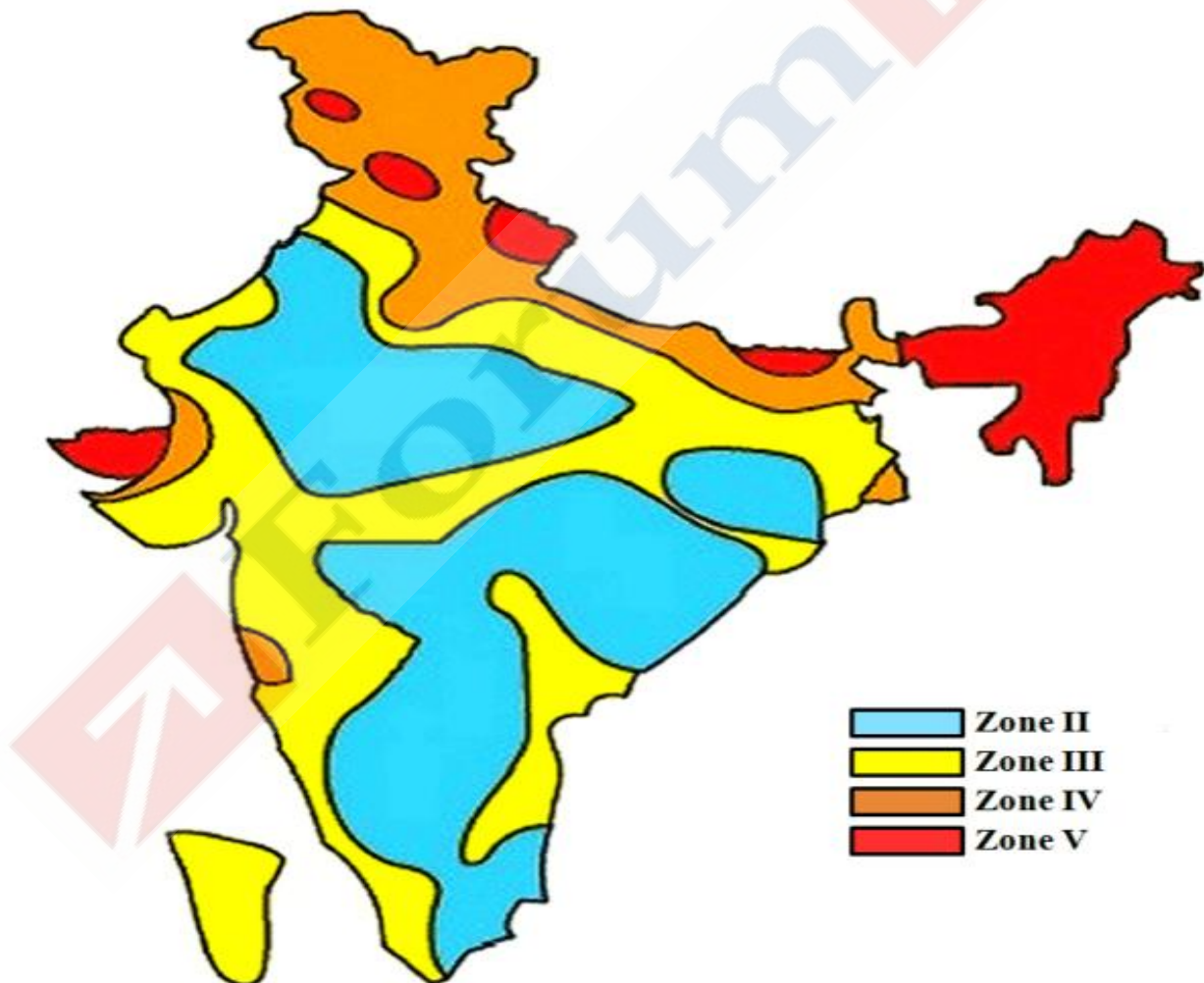
- Around **58% of India's landmass** is vulnerable to moderate or severe seismic hazard.
- India's seismic risk is rooted in the northward drift of the Indian Plate, colliding with the Eurasian Plate at 4-5cm a year.
- **Great Himalayan Earthquake** = Himalayas are one of the most tectonically active regions of the world. An earthquake of magnitude 8 or higher is long overdue in the region according to various seismic studies. The Himalayan '**Seismic Gap**' where strain has built since the Kangra earthquake (1906) & Gorkha earthquake (2015), are a ticking clock.
- Factors increasing the vulnerability:
 - Unplanned urbanization and poor construction practices.
 - High population density in hazard-prone regions.
 - Lack of earthquake-resistant design in many buildings.
 - Low awareness and preparedness.

What are the different EARTHQUAKE ZONES IN INDIA?

Zone 5	<p>Zone 5 covers the areas with the highest risk zone that suffers earthquakes of intensity MSK IX or greater.</p> <p>It is referred to as the Very High Damage Risk Zone.</p> <p>The region of Kashmir, the Western and Central Himalayas, North and Middle Bihar, the North-East Indian region, the Rann of Kutch and the Andaman and Nicobar group of islands fall in this zone.</p>
Zone 4	<p>This zone is called the High Damage Risk Zone and covers areas liable to MSK VIII.</p> <p>Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, parts of Indo-Gangetic plains (North Punjab, Chandigarh, Western Uttar Pradesh, Terai, North Bengal, Sundarbans) and the capital of the country Delhi fall in Zone 4.</p> <p>In Maharashtra, the Patan area (Koyanagar) is also in Zone 4.</p>

	In Bihar the northern part of the state like Raxaul, near the border of India & Nepal, is also in Zone 4.
Zone 3	This zone is classified as Moderate Damage Risk Zone which is liable to MSK VII. Zone 3 = Gujarat, Goa, West Bengal, parts of Andhra, Tamil Nadu
Zone 2	This region is liable to MSK VI or less and is classified as the Low Damage Risk Zone . Zone 2 = Southern Deccan Plateau, Karnataka, Kerala

Since the current division of India into earthquake hazard zones does not use Zone 1, no area of India is classed as Zone 1.



What PREPAREDNESS MEASURES have been undertaken to mitigate the impact of earthquakes?

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1. **Seismic Zoning Map:** The Bureau of Indian Standards (BIS) has classified India into four seismic zones (Zone II, III, IV, and V) based on historical earthquake data and geological features. This map guides earthquake-resistant design. Zone V is the most seismically active, while Zone II is the least.
2. **Earthquake-Resistant Building Codes:** The National Building Code of India includes stringent guidelines for designing earthquake-resistant structures, especially in high-risk zones.
3. **Retrofitting of Buildings:** A major focus has been on retrofitting and strengthening existing older buildings, particularly critical infrastructure (hospitals, schools, government buildings) and those in highly vulnerable areas, to withstand seismic events. Financial grants are sanctioned to support these efforts.
4. **Expansion of Seismic Observatories:** The National Centre for Seismology (NCS) has aggressively expanded its tracking footprint. The number of national seismic observatories has grown from just 80 in 2014 to **168**, vastly improving the accuracy and speed of detecting tremors.
5. **BhooKamp App:** Launched by NCS, this mobile application provides real-time earthquake information to users.
6. **Earthquake Risk Indexing (EDRI):** NDMA's EDRI project assesses earthquake risks in Indian cities, evaluating hazard, vulnerability, and exposure to guide mitigation efforts. Phase I covered 50 cities, and Phase II targets 16 more.
7. **Seismic Microzonation:** Major metro areas (like Delhi, Mumbai, and Bengaluru) are progressively undergoing microzonation, which maps soil behavior and seismic hazards down to specific neighborhoods, ensuring safer local zoning laws.
8. **Mass Mock Drills:** Regular large-scale simulation exercises are carried out across regions. Initiatives like the integrated **Exercise Suraksha Chakra** simulate massive earthquakes across multiple locations in the Delhi-NCR zone to test the coordination between local police, hospitals, and disaster teams.

What should be the WAY FORWARD?

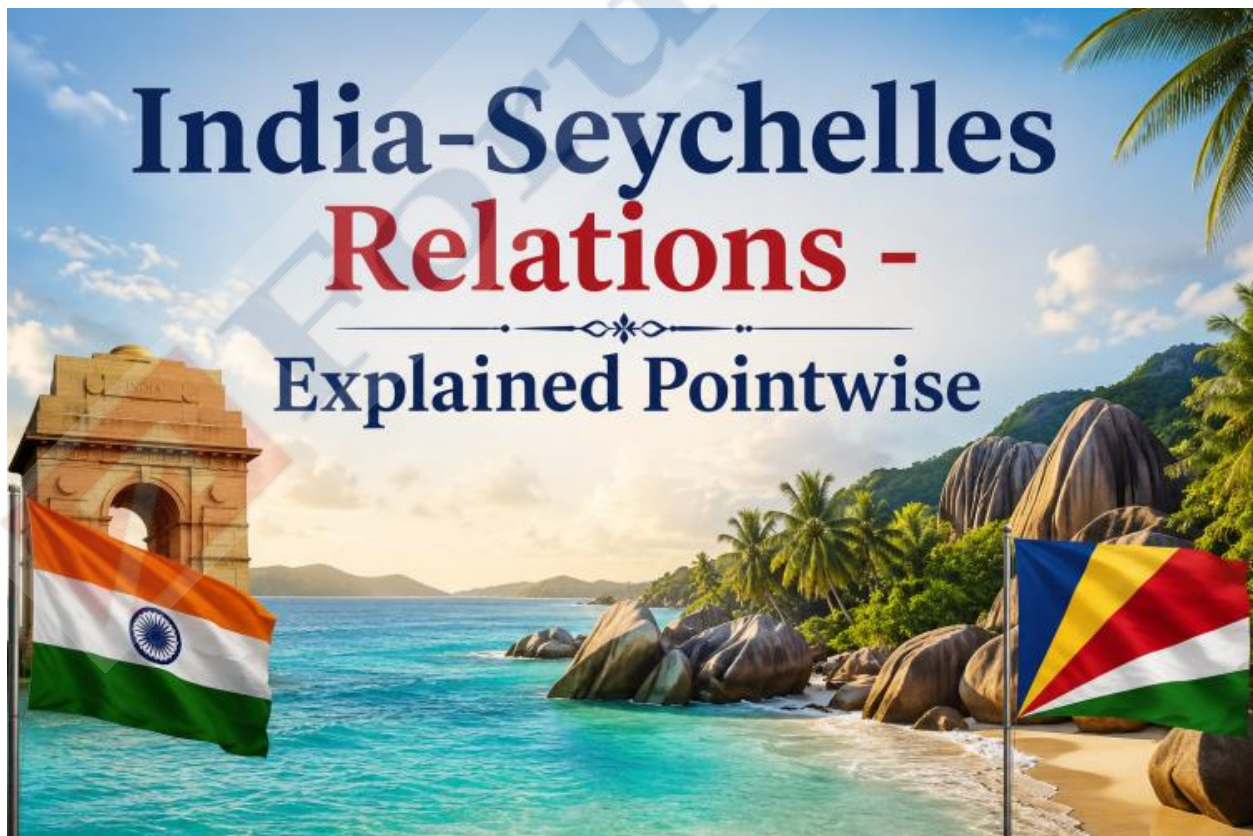
1. **Strict Compliance and Audits:** Implement stricter enforcement mechanisms for existing earthquake-resistant building codes (e.g., IS 1893:2016) for all new constructions. This includes mandatory structural safety certificates and regular, independent structural audits, especially for critical infrastructure, schools, hospitals, and high-rise buildings.
2. **Mandatory Retrofitting of Old Structures:** Accelerate and expand the retrofitting program for the vast inventory of older, non-compliant buildings, particularly in high-risk seismic zones and densely populated urban centers. This will require significant budgetary allocation, government incentives, and public-private partnerships.
3. **Risk-Informed Urban Planning:** Enforce stringent land-use regulations to avoid construction in high-risk liquefaction zones and active fault lines. Promote urban planning that includes adequate open spaces for evacuation and resilient infrastructure development.
4. **Accelerate EEW System Deployment:** Expedite the research, development, and deployment of robust Earthquake Early Warning (EEW) systems, particularly in the Himalayan region and other Zone IV and V areas. Focus on "last-mile connectivity" to ensure timely alerts reach communities effectively.
5. **International Collaboration:** Strengthen collaboration with earthquake-prone countries (e.g., Japan, Chile) to share best practices, research, and technology in earthquake monitoring and early warning systems.
6. **Continuous Awareness Campaigns:** Sustain and intensify public awareness campaigns using diverse media to educate citizens on earthquake risks, safe building practices, and the "Drop, Cover, and Hold On" technique.

7. **Seismic Insurance and Risk Financing:** Explore and promote government-backed earthquake insurance schemes for homes and businesses, potentially with incentives for adopting earthquake-resistant measures, to transfer financial risk and aid faster recovery.
8. **Traditional & Light Architecture in Hill States:** In highly vulnerable eco-sensitive zones like the Himalayas and Northeast India, heavy concrete construction must be discouraged. Traditional, flexible, and lighter architecture (like the *Khasi* houses of Meghalaya or *Dhajji Dewari* of Kashmir) should be modernized and incentivized.
9. **Deepening Microzonation:** Complete the seismic microzonation of all Tier-1 and Tier-2 cities in high-risk zones. This data must be seamlessly integrated into Geographic Information Systems (GIS) used by urban planning authorities to forbid high-rise zoning on unstable or liquefaction-prone soil.

Conclusion:

The seismic activity intensifying globally as well as regionally, from Greece to Indonesia to Chile-Argentina border & Ecuador signals a dynamic earth. India cannot afford delay & must bridge the enforcement gap to prevent large-scale devastation.

Read More: [Indian Express](#), [Wikipedia](#)
USPC GS-1: Geography

India-Seychelles Relations – Explained Pointwise

India and Seychelles share a longstanding, time-tested partnership rooted in historical, cultural, and robust maritime ties. Elevating this relationship, Prime Minister Narendra Modi is embarking on a historic state visit to Seychelles as the Guest of Honour for the Golden Jubilee celebrations of their National Day from June 27–29, 2026.



Evolution of India-Seychelles Relations:

<p>Pre-Independence Period (1770-1975)</p>	<ul style="list-style-type: none"> ● The First Inhabitants: In 1770, a small group of five Indians landed in Seychelles as plantation workers alongside French colonists and African slaves, becoming recorded among the very first inhabitants of the islands. ● Colonial Governance: Under British rule, Seychelles was administered for a period from the Bombay Presidency. This fostered regular shipping routes, facilitating the migration of an Indian trading community (predominantly from Tamil Nadu and Gujarat) that integrated tightly into the Creole social fabric.
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<p>Post-Independence Period</p> <p>(1976-2014)</p>	<ul style="list-style-type: none"> ● Diplomatic Relations: When Seychelles achieved independence on June 29, 1976, India immediately established diplomatic ties, marked symbolically by the participation of the Indian Naval Ship <i>INS Nilgiri</i> in the celebrations. ● Operation Flowers are Blooming (1986): India actively supported the stability of Seychelles. In June 1986, the Indian Navy deployed <i>INS Vindhyagiri</i> to Victoria to help abort an attempted coup against President France-Albert René. ● Anti-Piracy & EEZ Patrols: In response to escalating piracy in the late 2000s, the Indian Navy began regularly patrolling Seychelles' Exclusive Economic Zone (EEZ) to secure global shipping lanes.
<p>Recent History</p> <p>(2015-)</p>	<ul style="list-style-type: none"> ● The SAGAR Launch (2015): Prime Minister Modi's landmark 2015 visit (the first by an Indian PM in 34 years) saw the rollout of India's SAGAR (<i>Security and Growth for All in the Region</i>) vision, with Seychelles placed at its core. India inaugurated the Coastal Surveillance Radar System (CRS) during this visit. ● The Assumption Island Friction: In 2015, both nations signed a pact to develop a joint naval facility on Seychelles' Assumption Island. However, internal political changes and sovereignty concerns within Seychelles led to the project being stalled. ● The MAHASAGAR Era (2024): The bilateral dynamic has evolved into a sophisticated, multi-aligned model under India's upgraded Vision MAHASAGAR (<i>Mutual and Holistic Advancement for Security and Growth Across Regions</i>). Rather than pure military posturing, the focus has shifted toward tackling climate change, digital governance, and maritime scientific research.

What is the significance of Seychelles for India?

1. Geopolitical Importance:

- Strategic Location:** Situated in the Indian Ocean, Seychelles acts as a key maritime neighbor to India. Its location provides India with a critical foothold in the region to counteract influences from other powers, particularly China.
- Security Cooperation:** India and Seychelles have strengthened military and security ties, conducting joint exercises and sharing intelligence to tackle piracy and other maritime security challenges.

2. Economic Importance:

- Trade Relations:** Seychelles is a growing market for Indian goods and services, including pharmaceuticals, food products, and construction materials. The bilateral trade has seen significant growth over the years.
- Investment Opportunities:** Indian companies are investing in sectors like tourism, renewable energy, and fisheries in Seychelles, contributing to the country's economic development.

3. Environmental Cooperation:

- a. **Conservation Efforts:** Seychelles is known for its biodiversity and unique ecosystems. India collaborates with Seychelles in conservation efforts, especially concerning marine ecosystems and threatened species.
 - b. **Climate Change:** Both countries share concerns regarding climate change impacts in the Indian Ocean region and work together on sustainability initiatives.
4. **Cultural Connections:**
- a. **Diaspora Ties:** About 5% of the Seychellois population is of Indian origin, creating a strong cultural bridge and “soft power” influence that stabilizes the political relationship. This community plays a vital role in strengthening bilateral relations.
 - b. **Cultural Exchange Programs:** Various cultural initiatives, including festivals and art exhibitions, enhance mutual understanding and build goodwill.

What is the significance of India for Seychelles?

1. **Economic Importance:**
 - a. **Trade Relations:** India is one of Seychelles’ significant trading partners. Indian goods, particularly in pharmaceuticals, food products, and textiles, are vital for the local market.
 - b. **Foreign Investment:** Indian investments in sectors like tourism, energy, and infrastructure have contributed to Seychelles’ economic growth and development, enhancing local business opportunities.
2. **Strategic & Security Cooperation:**
 - a. **Geopolitical Stability:** India’s presence in the Indian Ocean helps Seychelles counterbalance potential risks from other regional powers, enhancing the nation’s strategic security framework.
 - b. **Military Partnerships:** Seychelles and India conduct joint naval exercises and training, reinforcing military ties that aid Seychelles in maintaining maritime security, particularly against piracy.
3. **Environmental Collaboration:**
 - a. **Sustainable Development:** Both nations work together on initiatives for environmental protection, focusing on the conservation of marine biodiversity and combating climate change, which is particularly impactful for island nations like Seychelles.
 - b. **Disaster Relief:** India has provided assistance during natural disasters, showcasing its commitment to supporting Seychelles in times of need.
4. **Cultural & Social Connections:**
 - a. **Diaspora Influence:** A historical Indian diaspora enriches Seychelles’ cultural landscape, promoting cultural exchanges and fostering connections between the two nations.
 - b. **Educational Initiatives:** India offers scholarship programs for Seychellois students in various fields, enhancing educational opportunities and fostering long-term relations.

What are the challenges in the India-Seychelles relations?

1. **Geopolitical Tensions:**
 - a. **Chinese Influence:** Seychelles has been increasingly engaging with China, which raises concerns for India. Beijing’s growing presence in the Indian Ocean can challenge India’s strategic interests in the region.
 - b. **Naval Competition:** The presence of foreign naval forces, particularly from China, could complicate India’s military and maritime strategies in the region, potentially leading to tension.

2. Economic Issues:

- a. **Trade Imbalance:** While trade relations have grown, a significant trade imbalance favoring India persists. This could lead to concerns in Seychelles regarding dependency on Indian goods.
- b. **Investment Challenges:** Implementation of Indian investments can face bureaucratic hurdles or local resistance, slowing down developmental projects.

3. Environmental Concerns:

- a. **Sustainable Development Pressures:** Intensive development driven by foreign investments, including from India, might lead to environmental degradation, affecting Seychelles' rich biodiversity and ecosystems.
- b. **Climate Change Vulnerability:** As a low-lying island nation, Seychelles is particularly vulnerable to climate change, and coordinating effective environmental initiatives can be challenging.

4. Cultural & Social Issues:

- a. **Perceptions of Influence:** Some citizens of Seychelles perceive Indian influence as overwhelming, which can lead to social tensions or anti-foreign sentiments, complicating diplomatic relations.
- b. **Cultural Integration:** Balancing local culture with influences from India may sometimes create friction, as the local identity is an important aspect of Seychelles' society.

5. Political Factors:

- a. **Domestic Opposition to Infrastructure Projects:** A prominent challenge has been domestic friction within Seychelles over joint agreements, such as the proposed joint coast guard facility on the Assumption Island. Concerns over compromising sovereignty have led to public and political debates within the island nation.
- b. **Regional Instability:** Political instability in neighboring countries or within Seychelles itself can complicate wider regional cooperation and affect bilateral dynamics.

6. **Maritime Security Threats:** The region remains highly vulnerable to non-traditional threats, including piracy, drug trafficking, and Illegal, Unreported, and Unregulated (IUU) fishing, requiring continuous, resource-heavy coordination.

What are the various initiatives to boost the bilateral ties?

1. **Special Economic Package:** India announced a \$175 million economic assistance package to fund public housing, social infrastructure, e-mobility, health services, and capacity building.
2. **Investment in Infrastructure:** India has engaged in various infrastructure projects in Seychelles, including roads, hospitals, and housing, fostering development and strengthening economic ties.
3. **The Assumption Island Project:** India and Seychelles signed an agreement to develop a naval facility there. This would allow India to extend its reach in the Western Indian Ocean.
4. **Joint Military Exercises:** Regular naval exercises are conducted, such as the "Varuna" exercises, focusing on maritime security and anti-piracy operations, which enhance military collaboration.
5. **Coast Guard Cooperation:** India has trained Seychelles' Coast Guard personnel and provided equipment, enhancing Seychelles' capabilities to protect its maritime interests.
6. **Digital India Initiative:** India has extended its expertise in IT and digital technologies to help Seychelles improve its digital infrastructure and services. India is actively exporting its "Digital Public Infrastructure" (DPI) model to Seychelles such as UPI & other digital governance initiatives.
7. **Training Programs:** India facilitates regular deputation of experts and professional training schemes, with over 1% of Seychelles' population having received professional or vocational training in India.

8. **Participation in Multilateral Forums:** Both nations collaborate on various global platforms, such as the Indian Ocean Rim Association (IORA), Colombo Security Conclave, where they can collectively address regional issues. Seychelles has officially joined the Colombo Security Conclave as a full member, solidifying a regional security bloc with India, Sri Lanka, Mauritius, and the Maldives.
9. **Blue Economy & Climate Action:** As part of India's **MAHASAGAR** vision (Mutual and Holistic Advancement for Security and Growth Across Regions), both countries are focusing on:
 - a. **Ocean Research:** Agreements for joint ocean observation and maritime scientific research to protect coral reefs and manage fisheries.
 - b. **Renewable Energy:** India is providing technical assistance for power grid management and e-mobility solutions (electric buses/cars) to help Seychelles meet its climate goals.

What Should be the Way Forward in India-Seychelles Relations?

1. **Strengthen Maritime Security, Non-Maritime Security and Defense:**
 - a. **Operationalize Strategic Infrastructure:** Accelerate the joint development of facilities on Assumption Island to combat piracy, drug trafficking, and illegal fishing.
 - b. **The Colombo Security Conclave (CSC):** With Seychelles actively participating as a full member of the CSC, India should leverage this platform to institutionalize joint efforts against maritime crimes, including illegal, unreported, and unregulated (IUU) fishing, narcotics trafficking, and marine pollution.
 - c. **Expand Real-Time Data Sharing:** Integrate Seychelles more deeply into India's Information Fusion Centre-Indian Ocean Region (IFC-IOR) for enhanced maritime domain awareness.
 - d. **Increase Hydrographic Cooperation:** Emphasize on joint hydrographic surveys, capacity building for the Seychelles People's Defence Forces (SPDF), and shared Maritime Domain Awareness (MDA) to protect Seychelles' massive 1.3-million-square-kilometer Exclusive Economic Zone (EEZ).
2. **Accelerate Green Energy and Climate Resilience:**
 - a. **Scale Up Solar Infrastructure:** Deploy distributed solar grids and solar-powered desalination plants across Seychelles' remote islands using Indian line-of-credit funding.
 - b. **Enhance Disaster Risk Management:** Train Seychellois first responders through India's National Disaster Management Authority (NDMA) to build resilience against sea-level rise and extreme weather.
 - c. **Invest in Blue Carbon Projects:** Collaborate on mangrove restoration and marine conservation projects to monetize blue carbon credits.
3. **Export Digital Public Infrastructure (DPI):**
 - a. **Deploy the India Stack:** Assist Seychelles in building unified biometric ID systems, digital payment gateways (like UPI), and paperless governance portals.
 - b. **Boost Cybersecurity Support:** Establish a joint cyber-security center in Mahé to protect Seychelles' financial and telecommunications infrastructure from state-sponsored threats.
4. **Diversify Economic and Cultural Ties:**
 - a. **Promote Medical Tourism:** Establish seamless medical visa pathways and direct healthcare referral networks between Seychellois hospitals and Indian medical centers.
 - b. **Expand Small and Medium Enterprise (SME) Links:** Create B2B matchmaking platforms for Indian textile, pharmaceutical, and IT firms to partner with local Seychellois businesses.
 - c. **Enhance Educational Exchange:** Increase the number of Indian Technical and Economic Cooperation (ITEC) scholarships specifically tailored to marine biology, tourism management, and artificial intelligence.

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MSMEs – Significance & Challenges – Explained Pointwise



The United Nations designated 27 June as **Micro, Small and Medium-sized Enterprises (MSME) Day**. The observance raises awareness of the significant contribution of MSMEs towards achieving the **United Nations Sustainable Development Goals**. The Micro, Small, and Medium Enterprises (MSME) sector is a crucial pillar of the Indian economy, contributing significantly to industrial output, employment generation, and exports. **Driven by formalisation, digital transformation and sustained policy interventions**, the sector continues to expand. It is strengthening its contribution to the economy while advancing the vision of *Aatmanirbhar Bharat* and *Viksit Bharat 2047*.

What are MSMEs?

- **MSMEs:** MSME stands for **Micro, Small, and Medium Enterprises**. They are businesses classified by their size, based on investment in plant, machinery, or equipment and annual turnover.
- **MSME Regulation in India:** MSMEs are regulated under the Micro, Small & Medium Enterprises Development (MSMED) Act, 2006. In 2007, the Ministry of Small Scale Industries and the Ministry of Agro and Rural Industries were merged to form the Ministry of Micro, Small & Medium Enterprises.

What is the role of MSMEs in India's economic growth?

1. Job Creation & Livelihood Opportunities:

- After agriculture, the MSME sector is the **largest employer** in India. They absorb unskilled, semi-skilled, and skilled labor, acting as a major safety net for India's growing workforce.
- Government programs like PM Vishwakarma and Mudra Yojana have expanded self-employment prospects.
- Currently, more than 1 crore registered MSMEs employ nearly 7.5 crore people across the country.

2. Contribution to GDP & Industrial Development:

- MSMEs play a pivotal role in India's economic framework, accounting for around 30% of the GDP and 45% of the total manufacturing output.
- They play a crucial role in industrial clusters by supplying raw materials and intermediates to large industries.
- The Udyam portal has streamlined the formalization of MSMEs, promoting a more structured and organized industrial sector.

3. Rural Development: 51% of MSMEs are located in rural areas. In contrast to large corporations, MSMEs have aided in the industrialization of rural areas at a low capital cost. The sector has made significant contributions to rural socio-economic growth while also supplementing major industries.

4. Enhancing Exports & Foreign Exchange Reserves:

- MSMEs contribute significantly to export promotion by manufacturing a wide range of goods and services for international markets. They often specialise in niche products and cater to specific market demands, enhancing the country's export competitiveness and widening its global market reach.
- Schemes such as the Government e-Marketplace (GeM) and the Production-Linked Incentive (PLI) program have strengthened MSMEs' integration into global supply chains.

5. Advancing Digital & Technological Innovations:

- Initiatives like the Open Network for Digital Commerce (ONDC) are fostering digital transformation within the MSME sector.
- Currently, 72% of MSME transactions are conducted digitally, enhancing financial inclusion and operational efficiency.

6. Social Inclusion: According to the Annual Report of The Ministry of MSMEs (2021-22), the socially backward groups owned almost 66.27% of MSMEs. In rural areas, almost 73.67% of MSMEs were owned by socially backward groups.

Statement No. 2.4: Percentage Distribution of enterprises by social group of owner in rural and urban Areas.

Sector	SC	ST	OBC	Others	Not known	All
Rural	15.37	6.70	51.59	25.62	0.72	100.00
Urban	9.45	1.43	47.80	40.46	0.86	100.00
All	12.45	4.10	49.72	32.95	0.79	100.00

Source: Annual Report, Ministry of MSMEs (2021-22)

7. Promoting Women & Social Entrepreneurship:

- Women-led MSMEs are contributing to gender equality and economic empowerment.
- Under the Mudra Yojana, loans worth ₹32.36 lakh crore have been sanctioned, benefiting 51.41 crore entrepreneurs, with 68% of them being women.

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Source: PIB

What are various government initiatives for MSMEs?

1. **Revised Classification Criteria:** To help MSMEs scale operations and access better resources, the investment and turnover limits for classification have been increased by 2.5 times and 2 times, respectively.

Category	Investment in Plant & Machinery/ Equipment	Annual Turnover
Micro Enterprise	Up to ₹ 2.5 crore	Up to ₹ 10 crore
Small Enterprise	Up to ₹ 25 crore	Up to ₹ 100 crore
Medium Enterprise	Up to ₹ 125 crore	Up to ₹ 500 crore

Source: PIB

2. Udyam Registration Portal:

- A paperless, free digital portal for formalizing MSMEs, integrated with PAN and Aadhaar.
- Provides simplified, online registration giving MSMEs formal recognition, essential for availing benefits across schemes.
- **Registrations** under the Udyam Registration Portal and Udyam Assist Platform crossed **8.7 Crore as on June 2026**.
- The expansion of the formal enterprise base improved access to institutional finance, government schemes and market opportunities for millions of micro and small businesses.

3. Enhanced Credit Availability:

- **Pradhan Mantri MUDRA Yojana (PMMY):** It was launched in April, 2015 for providing loans up to INR 10 lakh to the non-corporate, non-farm small/micro enterprises. It encompasses 3 financing loans: **Tarun** (loans up to INR 10 Lakhs), **Kishore** (loan up to INR 5 Lakhs), **Shishu** (loan up to INR 50,000).

- **Credit Guarantee:** The credit guarantee cover for micro and small enterprises has been increased from ₹5 crore to ₹10 crore, enabling an additional credit infusion of ₹1.5 lakh crore over five years.
 - **Credit Cards for Micro Enterprises:** A customized Credit Card scheme to provide ₹5 lakh in credit to micro enterprises registered on the Udyam portal.
 - **Credit Guarantee Trust Fund for Micro and Small Enterprises (CGTMSE):** It provides collateral-free credit to the micro and small enterprise sector.
 - **Special Credit Linked Capital Subsidy Scheme (SCLCSS):** This scheme was launched to help the enterprises in the services sector meet various technology requirements. It also has a provision to grant 25% capital subsidy for procurement of plant & machinery and service equipment through institutional credit to MSMEs owned by SC/ST entrepreneurs without any sector specific restrictions on technology upgradation.
 - **PMEGP (Prime Minister's Employment Generation Programme):** A credit-linked subsidy scheme aimed at creating employment. It provides subsidies ranging from 15% to 35% on bank loans for setting up new micro-enterprises (up to ₹50 lakhs for manufacturing and ₹20 lakhs for services).
 - **Self- Reliant India (SRI) Fund:** Launched under the Aatmanirbhar Bharat package, the SRI Fund is a Fund of Funds (FoF) initiative aimed at providing **equity support to promising MSMEs**. It is helping them overcome funding constraints, scale operations and attract further investment. The SRI Fund has assisted **761 MSMEs** by way of investment worth **₹2,851 crore** (as of May 2026).
4. **Raising and Accelerating MSME Performance (RAMP):** The scheme aims at strengthening institutions and governance at the Centre and State, improving Centre-State linkages and partnerships and improving access of MSMEs to market and credit, technology upgradation and addressing issues of delayed payments and greening of MSMEs.



Source: PIB

5. Skill Development:

- **A Scheme for Promotion of Innovation, Rural Industry & Entrepreneurship (ASPIRE):** The objectives of this scheme are to create new jobs, promote entrepreneurship culture in the country, and promote innovation in the MSME sector.
 - **Entrepreneurship and Skill Development Programmes (ESDP):** Under this, the Ministry of MSME has been organising several programmes focusing on the process of improving skills and knowledge of entrepreneurs, and enhancing the capacity to develop, manage and organise a business venture.
 - **PM Vishwakarma Scheme:** Launched to support traditional artisans and craftspeople (like weavers, blacksmiths, and potters). It provides end-to-end support, including skill upgradation, toolkit incentives, collateral-free enterprise development loans, and digital transaction incentives.
6. **Scheme of Fund for Regeneration of Traditional Industries (SFURTI):** The objectives are to organise traditional industries and artisans into clusters to make them competitive and provide support for their long-term sustainability, enhance marketability of products of such clusters, build innovative products, improve technologies etc.
7. **Entrepreneurship & Inclusion:**
- **Stand-Up India:** Loans of ₹10 lakh–1 crore to support women and SC/ST entrepreneurs in setting up new businesses.
 - **First-Time Entrepreneurs Scheme:** Loans up to ₹2 crore and capacity-building for disadvantaged groups.
 - **PM Vishwakarma:** Focuses on enabling traditional artisans and crafts people through training and access to markets, with special financial support.
8. **Technology & Quality Upgradation:**
- **MSME Sustainable (ZED) Certification Scheme:** Encourages sustainable and high-quality manufacturing with incentives for adopting energy efficiency and zero-defect practices.
 - **Credit Linked Capital Subsidy Scheme (CLCSS):** Supports technology upgradation for MSMEs to make them globally competitive.
 - **MSME Champions Scheme:** An umbrella initiative helping small businesses modernize. It includes components like **Digital MSME** (promoting cloud computing and software adoption), **Lean Manufacturing** (reducing waste and increasing productivity), and **Design Clinics** (for product innovation).



Source: PIB

9. **Public Procurement Policy:** The government has mandated that Central Ministries, Departments, and Public Sector Undertakings (PSUs) must procure a **minimum of 25%** of their total annual purchases from MSEs (with specific sub-targets reserved for women and SC/ST entrepreneurs).
10. **SAMADHAAN Portal:** One of the biggest complaints of MSMEs is large buyers delaying payments. The MSME Samadhaan portal allows small entrepreneurs to directly file cases against buyers who delay payments beyond 45 days. Buyers are legally liable to pay compound interest at three times the bank rate notified by the RBI if they default.
11. **ONDC (Open Network for Digital Commerce):** A government-backed initiative aimed at breaking the monopoly of massive e-commerce platforms, allowing local micro-retailers and MSMEs equal access to digital consumer markets.

Digital Initiatives in the MSME Sector

- **Udyog Aadhar Memorandum:** It is a 1-page **online registration system** for MSMEs based on **self-certification**.
- **MSME Databank:** It enables the Ministry of MSME to **streamline and monitor the schemes** and pass on the benefits directly to MSMEs. MSMEs can update their enterprise information as and when required.
- **MY MSME:** It is a web-based application module in the form of a mobile app to facilitate the MSMEs to enjoy benefits of various schemes.
- **MSME Sampark:** It is a digital platform wherein jobseekers (students or trainees of MSME Technology Centres) and recruiters can register themselves for mutually beneficial interactions.
- **MSME Sambandh:** For effective implementation of the Public Procurement Policy, Central Ministries and Public Sector Enterprises (CPSEs) must procure 25% annual procurement from MSEs. The Ministry of MSME has launched MSME Sambandh.
- **MSME Samadhaan:** This portal gives information about pending payments with the Central Ministries, State Governments, with respect to micro and small enterprises (MSEs).
- **MSME Sambhav:** It is a national-level awareness programme to push economic growth by promoting entrepreneurship and domestic manufacturing.
- **Grievance Monitoring:** The Ministry of MSME has started an **MSME internet grievance monitoring system (e-Samadhan)** to help track and monitor the grievances and suggestions.

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What are the challenges faced by the MSME Sector?

1. **Lack of Formalisation:** Almost 86% of the country's manufacturing MSMEs are unregistered. Only about 1.1 crore of the 6.3 crore MSMEs are registered with the Goods and Services Tax (GST) regime, and the number of income tax filers is even lower. As a result of limited availability and access to data, as well as legacy underwriting methods, the credit requirements of Indian MSMEs have largely gone unmet.
2. **Access to Technology:**
 - The majority of MSMEs use outdated technology that prevents them from keeping up with the modern world. Adoption of new technology and training employees is difficult and expensive, especially in manufacturing where both physical equipment and software are involved.
 - Lack of access to IT education contributes to the technological gap.
 - Another significant factor is a **lack of awareness**, which **reduces willingness to invest in advanced technology solutions**.

3. **Regulatory and Compliance Burden:** Small businesses frequently struggle with navigating complex and overlapping legal, taxation, and environmental regulations. The resources and time required to manage these compliance tasks can drain a small firm's operational capacity.
4. **Cumbersome Registration Process:** Lengthy registration procedures and inefficient single-window clearance systems create bureaucratic hurdles for MSMEs, delaying their formalization and operational setup.
5. **Lack of Awareness About Government Schemes:** Many MSMEs struggle to navigate the complex landscape of government schemes due to inadequate awareness and poor coordination between the Centre and States.
6. **Financial Constraints:** Limited access to institutional finance, stringent collateral requirements, and high interest rates make it difficult for MSMEs to secure the funds necessary for expansion and modernization.
7. **Delayed Payments:** Large corporate buyers and Public Sector Undertakings (PSUs) frequently delay paying their MSME vendors far beyond the legally mandated 45-day limit. Although the *MSME Samadhaan* portal exists, many small suppliers hesitate to legally pursue large clients for fear of being blacklisted or losing future contracts.
8. **Export-Related Challenges:** Poor infrastructure, inadequate trade facilitation, and difficulty in meeting Environmental, Social, and Governance (ESG) standards restrict MSME participation in global markets.
9. **Labour Shortages and Skill Gaps:** A lack of skilled workers, wage disparities across regions, and inefficient training centers result in low productivity and reduced competitiveness for MSMEs.
10. **Marketing and Supply Chain Issues:** Smaller enterprises often have limited marketing budgets and lack the expertise to build strong brand identities. Furthermore, they struggle to penetrate distribution networks and supply chains, which are typically dominated by larger businesses.

What should be the way forward?

1. **Strengthening Credit Access & Financial Support:**
 - Expand collateral-free lending via fintech platforms and alternative credit assessment models.
 - Mandate strict payment timelines under the MSME Samadhan portal to ensure timely dues from large corporations and government agencies.
 - Enhance the role and reach of MUDRA and SIDBI to facilitate easier credit access.
 - Develop tailored fintech solutions and promote financial literacy programs for MSMEs.
2. **Reducing Compliance Burden & Regulatory Bottlenecks:**
 - Implement single-window clearance for faster approvals and streamlined processes.
 - Establish state-level MSME facilitation councils for quicker grievance redressal.
 - Simplify GST registration and reduce the frequency of regulatory amendments to ensure ease of doing business.
 - Set up a dedicated MSME Coordination Council to streamline policy implementation and address sector-specific challenges.
3. **Enhancing Digital & Technological Adoption:**
 - Expanding schemes like *RAMP* to provide direct, hassle-free subsidies for green energy adoption (like solar rooftops), smart manufacturing tools, and cloud-based inventory management.
 - Facilitate adoption of AI, IoT, and automation through MSME technology hubs.
 - Launch Digital MSME 2.0 to improve cybersecurity, cloud computing access, and digital marketing capabilities.

- Strengthen the Credit Linked Capital Subsidy Scheme (CLCSS) to support MSMEs investing in advanced technologies.
 - Promote MSME Innovation & Incubation Hubs in collaboration with academic and research institutions.
4. **Workforce Development & Skilling Initiatives:**
- Ensure uniform labor wages and introduce affordable labor insurance schemes for MSME employees.
 - Align skill training programs under Skill India, PMKVY, and NAPS to address MSME workforce needs.
 - Promote women entrepreneurs through targeted vocational training and credit linkage schemes.
5. **Infrastructure Development & Cluster-Based Growth:**
- Strengthen MSME clusters under the Micro & Small Enterprises – Cluster Development Programme (MSE-CDP).
 - Encourage Public-Private Partnerships (PPPs) to set up Common Facility Centers (CFCs) for shared resources.
 - Develop MSME Industrial Parks with subsidized utilities, logistics support, and better last-mile connectivity.

Conclusion:

MSMEs can play a vital role in growth of the economy as India enters the *Amrit Kaal* phase. They can help in inclusive and balanced development and make India a global manufacturing hub. The Government has been supporting the MSMEs through various initiatives, the need is to focus on the implementation and realizing the outcomes.

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Food Safety Regulations in India – Explained Pointwise



Food safety is a critical public health concern in India, directly affecting nutrition, health, and economic productivity. The recent rise in food poisoning incidents across schools, restaurants, and public gatherings has highlighted persistent gaps in food handling, storage, and regulation. Ensuring safe food is essential for protecting public health and consumer confidence.



FSSAI Initiatives For Food Safety

<p>Eat Right India Movement</p>	<p>This movement has been launched to transform the country's food system in order to ensure safe, healthy and sustainable food for all Indians. It is aligned to the National Health Policy 2017 with its focus on preventive and promotive healthcare.</p>
<p>Eat Right Station Certification</p>	<p>It is awarded by FSSAI to railway stations that set benchmarks (as per the Food Safety and Standards Act, 2006) in providing safe and wholesome food to passengers.</p>
<p>Food Hygiene Rating Scheme</p>	<p>It is a certification system developed by FSSAI for food businesses supplying food directly to consumers, either on or off-premise.</p>
<p>Food Safety Mitra scheme</p>	<p>The scheme aims to create an ecosystem of Food Safety Mitras (FSM) who will help Food Business organisations (FBO) with licensing and registration, training and auditing hygiene among others</p>
<p>State food safety index</p>	<p>It is an index developed by FSSAI to measure the performance of states on five significant parameters of food safety- compliance, Human resources and institutional data, Food testing- infrastructure and surveillance, training & capacity building and consumer empowerment</p>

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What are the operational Food Safety regulations in India?

- **Food Safety:** Food safety refers to the **procedures, practices, and regulations** implemented to **ensure that food is safe for consumption**. It **encompasses all measures** taken to **prevent foodborne illnesses, contamination, and other hazards** that may arise during the **production, processing, storage, distribution, and preparation of food**.
- **Food Safety Regulator in India:** Food Safety and Standards Authority of India (FSSAI) is the food safety regulator in India. Food Safety and Standards Authority of India (FSSAI) is an **autonomous statutory body** established under the **Food Safety and Standards Act, 2006** (FSS Act). **Ministry of Health & Family Welfare, Government of India** is the administrative Ministry of FSSAI. Its headquarter is in Delhi.

- **Role of FSSAI:** The main role of the authority is to **regulate and monitor** the **manufacturing, processing, distribution, sale and import of food** while ensuring **safe and wholesome food to the consumers**.

Food Safety Regulations in India:

<p>Food Safety and Standard Act, 2006</p>	<ul style="list-style-type: none"> ● The parent Act that outlines the responsibilities of Food Business Operators (FBOs), consumer rights, penalties for adulteration, and established the FSSAI. ● The Act aims to establish a single reference point for all matters relating to food safety and standards, by moving from multi- level, multi-departmental control to a single line of command. ● The Act established FSSAI and the State Food Safety Authorities for each State.
<p>Food Safety and Standards (FSS) Regulations, 2011</p>	<ul style="list-style-type: none"> ● The Food Safety and Standards (FSS) Regulations, 2011 is the core rulebook. It consolidates standards for various food product categories, including dairy, spices, and cereals, into a single comprehensive document. ● These rules outline the procedures for the appointment of food safety officers, functioning of the Food Safety Appellate Tribunal and the Registrar of the Appellate Tribunal, food safety and standards on Organic Food and regulates Food Advertising in India. ● The rule prohibits and restrict sales or approval for Non- Specified Food and Food Ingredients. ● It also covers Licensing and Registration, Packaging and Labelling of Food Businesses, Food Product Standards and Food Additives Regulation.
<p>Licensing and Registration</p>	<p>The Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011 classifies food businesses based on size (petty, small, or large) and requires them to obtain either a registration or a state/central license to operate legally.</p>
<p>Packaging and Labeling</p>	<p>The Food Safety and Standards (Packaging and Labeling) Regulations, 2011 mandates specific information on food packages (e.g., ingredient lists, nutritional information, and vegetarian/non-vegetarian logos). There are also separate, specific regulations for Alcoholic Beverages and Food Additives.</p>

Contaminants, Toxins and Residues	The Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 sets maximum permissible limits for heavy metals, pesticide residues, and mycotoxins in food products.
Proprietary Foods and Novel Foods	The Food Safety and Standards (Proprietary Foods and Novel Foods) Regulations, 2019 governs foods that do not have a standardized category, requiring them to meet specific safety criteria before being sold.
Import Regulations	The Food Safety and Standards (Import) Regulations, 2017 details the procedure for customs clearance of food shipments, which often involves sampling and laboratory testing at the port of entry.

What are the challenges to food Safety in India?

- Rampant Adulteration:** Widespread and rampant adulteration of food products which includes milk, spices, and edible oils, remains a grave challenge to food safety in India. **For ex- A 2012 study conducted by the FSSAI across 33 states** found that **milk in India** was **adulterated with diluted water, detergent, fat and even urea**.
- Feeding of 'empty calories':** Major packed food brand products **contain items that have no nutritive value** like **added sugar**. These are major causes of diabetes, cardio vascular diseases and obesity in India.
- Weak Enforcement and Accountability:** The enforcement of food safety regulations is often lax in India. **Many food businesses operate without proper licenses** and **continue to compromise on safety standards**.
- Corrupt practices on part of FMCG players:** The Fast Moving Consumer Goods industry players are often **found to indulge in violation of the labelling requirements** about the ingredients in their products. **For ex- Maggi noodles ban due to high levels of lead and MSG**.
- Lack of Infrastructure and Resources:** The food safety standards domain in India suffers from the **challenge of shortage of laboratories, trained personnel, and funds necessary for regular and stringent food inspections**. **For ex- Use of synthetic sweetener in cake** leading to death of teenage girl in Punjab.
- Severe Manpower Shortage:** There is a critical shortage of food safety officers (FSOs) across the country, who are the primary enforcers of the law. In some states, vacancies have been as high as 93%. A Parliament committee has specifically criticized the FSSAI for its "non-serious" approach and lack of manpower. The vacancies in FSSAI saw an increase from 30% to almost 40% in last 5 years, on the other hand, only 2997 of the sanctioned positions of the 4208 Food Safety Officers (FSOs) have been filled as of the third quarter of FY 2025-26.
- Testing Facilities:** There is a shortage of well-equipped, accredited laboratories, especially in tier-2/tier-3 cities and rural areas, leading to delays in monitoring and quality control.
- Vast Informal Sector:** The bulk of India's food industry consists of small and medium-scale enterprises (SMEs) and street vendors. These operators often lack the knowledge, resources, or regulatory capacity to implement robust Food Safety Management Systems (FSMS).

9. **Limited Public Awareness:** A significant proportion of the Indian population remains unaware of food safety practices, including proper food handling, storage, and hygiene. **For ex- Over use of pesticides and fruit ripening agents in agriculture cause cancer.**
10. **Complex Regulatory Framework:** The complex regulatory framework for food safety makes it **difficult for small and medium enterprises businesses, to adhere to the necessary standards.** These also lead to **regulatory gaps and inconsistencies in enforcement.**

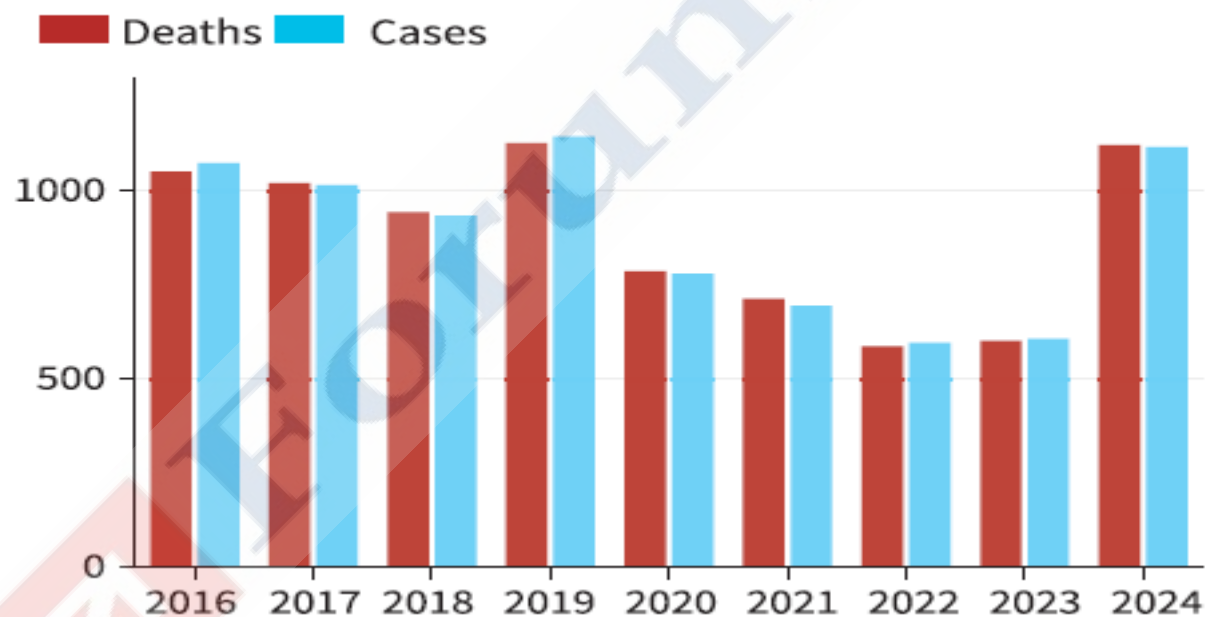
What are the consequences of the Decline in Food Safety Standards in India?

The deteriorating state of food safety and the violation of food safety standards in India have far reaching consequences, which are mentioned below:

1. Deterioration of Public Health:

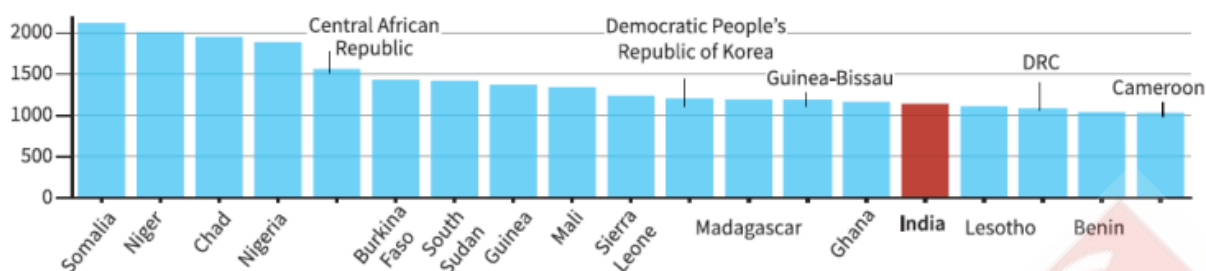
- Consumption of contaminated or adulterated food leads to a range of public health issues like **foodborne illnesses, gastrointestinal disorders, cardiovascular diseases, obesity and diabetes.** The impact is particularly severe on vulnerable populations like children and the elderly.
- As per the latest **Accidental Deaths & Suicides in India Report**, a total of 1122 people died due to food poisoning in India in 2024:

CHART 1: More than a thousand cases and deaths due to food poisoning were reported in 2024



Source: The Hindu

- Though, the total foodborne disease burden has declined since 2000, a country-wise analysis of the rate of years of life lost due to foodborne diseases showed that India ranked 15th, along with several low income African nations.

CHART 4: "Foodborne years of lives lost" per 1,00,000 persons. India is ranked 15th, along with many African countries

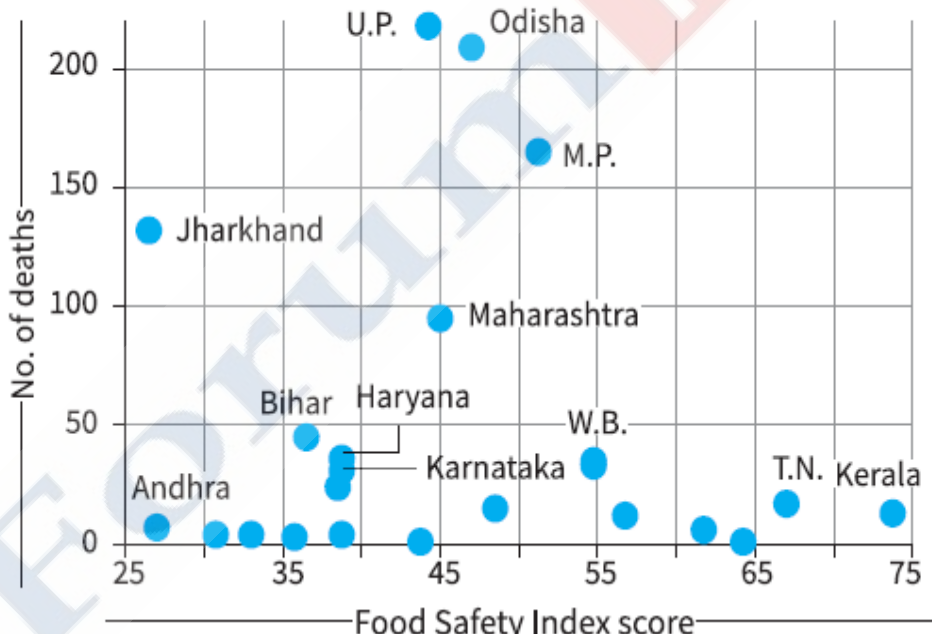
Source: The Hindu

- Economic Implications:** Contaminated and unsafe food products often leads to massive product recalls, loss of consumer trust, and damage to the reputation of the food brand. **For ex- Recall of Maggi after test results confirmed of high levels of lead and MSG. US FDA have halted shipments from major Indian spice brands due to issues like salmonella.**
- Undermining of 'Make in India' Initiative:** The **decline in food safety standards** become a significant roadblock in India's effort to promote indigenous manufacturing and boost exports under the 'Make in India' initiative. Safety concerns deter both domestic and international consumers from embracing Indian products. **For ex- Rejection of Indian agricultural and food products from EU markets on account of violation of food standards.**
- Environmental Impact:** The use of substandard and unsafe agricultural practices harm the environment through **soil and water contamination**. The overuse of pesticides and the mishandling of food waste contribute to **ecological degradation**.
- Loss of Consumer Trust:** In a hyper-connected digital market, a single safety warning or viral report about adulteration can destroy a brand's reputation overnight. Regulatory clampdowns by the FSSAI on prominent brands for misleading claims (e.g. using deceptive "100% Natural" or unproven medicinal claims) show that consumers and authorities are increasingly intolerant of transparency loopholes.
- Straining the Healthcare Infrastructure:** India's public healthcare system is already heavily burdened. A surge in foodborne illnesses or pesticide-linked chronic diseases exponentially increases the load on government hospitals, diverts critical medical funds, and lowers the overall productivity of the national workforce due to medical leaves and disability.

Read More- [In FSSAI index, nearly all major states slip on food safety](#)**What are the initiatives taken by the government and FSSAI to promote Food Safety?**

Eat Right India Movement	This movement has been launched to transform the country's food system in order to ensure safe, healthy and sustainable food for all Indians. It is aligned to the National Health Policy 2017 with its focus on preventive and promotive healthcare.
Eat Right Station Certification	It is awarded by FSSAI to railway stations that set benchmarks (as per the Food Safety and Standards Act, 2006) in providing safe and wholesome food to passengers.

Food Hygiene Rating Scheme	It is a certification system developed by FSSAI for food businesses supplying food directly to consumers, either on or off-premise.
Food Safety Mitra Scheme	The scheme aims to create an ecosystem of Food Safety Mitras (FSM) who will help Food Business Organisations (FBO) with licensing and registration, training and auditing hygiene among others.
Food Safety on Wheels (FSW)	FSSAI has deployed over 300 Mobile Food Testing Laboratories (MFTLs) nationwide. These mobile vans perform on-the-spot testing for everyday adulterants in milk, ghee, and spices, alongside conducting public awareness campaigns.
FoSCoS Portal (Food Safety Compliance System)	A unified digital platform that has completely paper-and-bureaucracy proofed the application for registrations and licenses, drastically boosting compliance and formalization.
FoSTaC (Food Safety Training and Certification)	A mandatory program designed to train food handlers across small, medium, and large FBOs. To date, over 3 lakh street food vendors have undergone free hygiene and cross-contamination training.
Waste Management (RUCO)	The Repurpose Used Cooking Oil (RUCO) initiative has led to the collection of over 55 lakh litres of used cooking oil, with 39 lakh litres converted into biodiesel, tackling both health and environmental issues.

<p>State Food Safety Index</p>	<p>It is an index developed by FSSAI to measure the performance of states on five significant parameters of food safety:</p> <ol style="list-style-type: none"> 1. Compliance 2. Human resources and institutional data 3. Food testing- infrastructure and surveillance 4. Training & capacity building 5. Consumer empowerment <p>The latest report of the Index showed that the States that saw high number of food poisoning cases also tend to have low or moderate scores on the index:</p> <p>CHART 2: States that saw a high number of food poisoning cases tended to have low or moderate scores on Food Safety Index</p>  <p>Source: The Hindu</p>
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What should be the Way Forward?

1. **Strengthen Infrastructure and Resources:** There must be an increase in the investment in food safety infrastructure, including laboratories, training facilities, and regulatory bodies. Adequate funding and resources are needed to conduct regular inspections and ensure compliance with safety standards.

2. **Simplification of Regulations:** The regulatory framework for food safety should be **made more accessible and business-friendly**. Simplification and streamlining of regulations **can encourage compliance**, especially among **small and medium-sized enterprises**.
3. **Strict Enforcement and Accountability:** Regulatory bodies must rigorously enforce food safety standards. This includes imposing stringent penalties for violations and taking legal action against non-compliant businesses. **For ex- Specification of an upper limit for added sugars**.
4. **India-Specific Research:** Launch Total Diet Studies (TDS) and localized toxicological analyses to ensure safety standards accurately reflect Indian dietary habits and agricultural practices.
5. **Empowering Third-Party Auditing:** Scaling up the network of certified, private third-party food safety auditors to regularly inspect mid-to-large restaurants and food factories, freeing up state resources to focus on unorganized sectors.
6. **Enhancement of Public Awareness:** A comprehensive public awareness campaign on food safety should be launched targeting both consumers and producers regarding the importance of food safety. A 24/7 consumer helpline, easier grievance redressal, and access to inspection reports are seen as vital for building public trust and enabling citizen participation in the system.
7. **Encouragement of Responsible Agricultural Practices:** **Promoting responsible and sustainable agricultural practices** can reduce contamination risks at the source. **Encouraging the use of organic farming, reducing pesticide usage, and implementing proper waste management** are essential steps.
8. **Aligning with Global Standards:** Continuously matching FSSAI standards with the *Codex Alimentarius* to ensure that Indian food products face zero entry barriers or chemical residue rejections in stringent international markets like the EU and the USA.

Conclusion: By bridging infrastructural gaps, empowering informal street vendors, and enforcing zero-tolerance policies against adulteration, India can secure public health and establish itself as a trusted global food exporter.

Read More: [The Hindu](#)

UPSC Syllabus- GS 2- Government Intervention and regulation of various sectors