

Forum IAS

7 PM COMPILATION

3rd and 4th week April, 2026

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Implications of Increasing Lok Sabha Size – Explained Pointwise

The government has circulated a set of 3 Bills related to delimitation & women's reservation in the Lok Sabha. These Bills, if passed, could significantly affect the working of the Parliament in future. So, it is important to understand the changes that will be introduced by these Bills & what would be their implications.

Which are the three Bills introduced by the government in the Lok Sabha?

1. **The Constitution (One Hundred and Thirty-First Amendment) Bill, 2026:** This Bill proposes a massive expansion of the Lok Sabha.
2. **The Delimitation Bill, 2026:** This Bill provides the framework for redrawing constituency boundaries based on population changes, ending a decades-long freeze on seat allocation.
3. **The Union Territories Laws (Amendment) Bill, 2026:** To amend laws governing Union Territories, including Delhi and Jammu & Kashmir, to align with the new seat allocation and reservation provisions.

What are the changes proposed in these Bills?

1. **Expansion of the Lok Sabha:** It proposes to increase the maximum strength of the Lok Sabha from 543 to **850 members**. This would consist of 815 seats for States and 35 seats for Union Territories.
2. **Establishment of a Commission:** It creates a powerful **Delimitation Commission** chaired by a retired Supreme Court judge to decide exactly where the new 850 seats will be placed.
3. **New Basis for Delimitation:** The Bill lifts the decades-old freeze on seat readjustment (which was based on the 1971 Census). It allows for a fresh delimitation exercise based on the **"latest published census figures,"** which Parliament will notify (in this case, the 2011 Census).
4. **Implementation of Women's Reservation:** It provides the constitutional mechanism to operationalise the 2023 women's reservation law (*Nari Shakti Vandan Adhiniyam*), enabling 33% of seats in the Lok Sabha and State assemblies to be reserved for women, likely from the 2029 general elections.
5. **Increased Strength for J&K Assembly:** The Bill proposes that the total strength of the J&K Legislative Assembly cannot fall below **114 seats**, which includes the 24 seats reserved for PoK (which are currently vacant).

What is the significance of the proposed changes?

1. **Outdated Representation:**
 - Since 1971, the allocation of Lok Sabha seats to states has been frozen based on the population census of that year. This was a temporary measure to encourage population control, but the freeze has been extended repeatedly.
 - As a result, while India's population has grown from 55 crore to over 140 crore, the number of seats has remained virtually unchanged. Some MPs now represent **3 million voters**, while others represent only **0.5 million**. This creates a "democratic deficit" where a citizen's vote in a high-population state (like Bihar) has less "weight" than a vote in a lower-population state.
 - The 850-seat expansion is meant to equalize this ratio – equalizing the value of vote of every citizen regardless of their State of residence.
2. **Fast-tracking Women's Reservation:** It decouples the implementation of the **Nari Shakti Vandan Adhiniyam** (33% women's quota) from the next official Census, allowing it to be implemented sooner (by the **2029 elections**) through immediate delimitation (using 2011 Census data rather than waiting for a future Census data). Under the original timeline, women might not have seen these seats until 2034.
3. **Ending the "Constitutional Freeze":**

- In 1976, during the Emergency, the government froze seat redistribution to ensure that states implementing family planning (mostly in the South) weren't "punished" by losing political power.
 - This was supposed to be a **temporary measure**, but it was extended in 2001 for another 25 years.
The freeze expires in 2026. For a healthy democracy, we cannot ignore 50 years of demographic shifts, urbanization, and migration.
 - The new Bills move India from a "**frozen**" system to a "**flexible**" one where Parliament can determine when to adjust seats.
- 4. Protect Southern States' Share:** The Bills propose to lift the freeze and conduct a fresh delimitation based on the **2011 Census**. To prevent southern states from losing political power in Parliament due to their successful population control policies, the government has proposed increasing the total strength of the Lok Sabha from 543 to **850 seats**, increasing every State's representation proportionally by 50%.
- 5. Integration of Jammu & Kashmir (The PoJK Clause):** The Delimitation Bill includes a provision to allow the Election Commission to conduct delimitation in Pakistan-Occupied Jammu & Kashmir (PoJK) **whenever the area ceases to be under Pakistani occupation**. This is a strong political and legal statement, reinforcing the Indian government's position that the entire region of the former princely state of Jammu & Kashmir is an integral part of India.

What are the challenges or concerns raised against the proposed changes?

- 1. North-South Imbalance:** Delimitation based on population (2011 Census) will change the relative of share of seats in the Lok Sabha for each State – effectively reducing Southern States' share of seats in Lok Sabha in comparison with the Northern States (biggest losers will be Kerala & Tamil Nadu and main gainers are Rajasthan, Bihar & UP). It will lead to MPs from UP & Bihar having significant power to shape national policy vis-a-vis the Southern states who have successfully lowered their population growth rates through better health and education policies.
- 2. Constitutional Freeze on Delimitation:** These Bills will provide Parliament with the flexibility to determine the periodicity of delimitation and the Census to be used for this purpose. However, since the government of the day typically commands a majority in the Lok Sabha, the decision would effectively rest with the government. Although approval from the Rajya Sabha would still be required, its role may be weakened by these very Bills.
- 3. Weakened Rajya Sabha:**
 - While the size of Lok Sabha is being increased by these Bills, there is no proposal to change the size of the Rajya Sabha. This affects the **relative importance** of the two Houses.
 - During **Joint Sittings**, each member of Parliament has one vote, the Lok Sabha with 815 seats will have 3.3 times the strength of the Rajya Sabha (at present, Lok Sabha with 543 seats has 2.2 times the votes of the Rajya Sabha with 245 seats).
 - This imbalance will not help the government of the day to get its Bills pass through a Joint Session, but will also play out in the elections to the **offices of the President** and the **Vice-President**.
- 4. Size of Council of Minister:** The Constitution was amended in 2003 to limit the Council's size to 15% of the Lok Sabha. If the Lok Sabha is expanded to have 815 MPs, the limit on the size of the Central Council of Minister will also increase from **81 to 122**.
- 5. Quality of Parliamentary Work:** The increased size of the Lok Sabha reduces the opportunity for an MP to participate in the deliberations of the House. MPs hold the Ministers accountable by asking questions, passing motions & resolutions, and raise important issues in Parliament in the Zero Hour.

However, Questions & Zero Hour interventions are chosen by lottery, and an increased size of the Lok Sabha reduces the probability of getting balloted.

6. Global Precedents:

- Other countries also have large legislatures, for e.g., the U.K. House of Commons has 250 members. However, it has also evolved processes to provide opportunities to MPs to participate in discussion. It averages over 150 sittings a year & also has a robust committee system – Parliament committees can supplement deliberations. Every Bill in UK Parliament has to be examined by the Committees of both the Houses.
- In comparison, the Indian Parliament, **sits for less than 70 days in a year**, and **less than a fifth of the Bills** are referred to the Committees.

7. **Impact on State Legislatures:** Though these Bills do not have similar provisions regarding the size of State legislatures, that decision will be taken by the Delimitation Commission. If they decide to follow the same rationale & increase the size by 50%, legislatures of some of the States will become oversized, for e.g. UP would have **600 seats**, while the legislatures of WB & Maharashtra would reach about **450 seats**.

What should be the Way Forward?

1. **The “Cap and Compensate” Formula:** Instead of distributing seats purely by raw population count, the government could include a “Performance Weightage” in the Delimitation Bill. States would get “bonus” weightage for high rankings in the **Human Development Index (HDI)**, **Total Fertility Rate (TFR) control**, and **economic contribution**. This ensures that states like Kerala or Tamil Nadu aren't politically marginalized for their social progress.
2. **All-Party Meeting and Wider Consultations:** Given that constitutional amendments require a two-thirds majority and ratification by half of the State Legislatures, send the Bills to a **Joint Parliamentary Committee** or convene an all-party meeting and conduct wider consultations with civil society, stakeholders, and all state governments before any decision is finalized. This will help build consensus, especially among regional parties that currently view the Bill as a threat.

Conclusion: These Bills will have a significant impact on the composition the Parliament & its functioning, thus, it is imperative that such Bills go through intensive deliberations, both inside & outside of the Parliament.

UPSC GS-2: Polity

Read More: [The Hindu](#)

Nutritional Security in India – Significance and Challenges – Explained Pointwise

Nutrition is closely linked to the development of human capital in the country, as improved nutrition contributes to better health, learning outcomes and productivity. As **POSHAN Abhiyaan** completes eight years, the mission reflects the growing emphasis on convergence, technology-enabled governance and community participation in addressing nutrition challenges. The transition to **Mission Poshan 2.0** underscores a continued focus on improving service quality, expanding early childhood care and strengthening last-mile delivery systems.



Source- The Hindu

What is Nutritional Security? What is the Status of Nutrition insecurity in India?

- **Nutritional Security:** According to the FAO (2009), nutrition security implies physical, economic and social access to balanced diet, clean drinking water, safe environment, and health care (preventive and curative) for every individual.
- **High Nutritional Insecurity in India (Malnutrition):** According to World Bank Report, despite the sharp decline in extreme poverty in India from 45.9% to 13.4% between 1993 and 2015, India still suffers from a high malnutrition burden.
- **Extreme Poverty according to WB:** Defined at \$1.9 per capita per day at the 2011 purchasing power parity rate (PPP).

Latest Findings of NHFS-5 regarding malnutrition:

- More than half the Indian women in the 15-49 age group are anemic.
- The prevalence of stunting (Low height-for-age) amongst children under five years is 35.5%.
- The prevalence of wasting (Low weight-for-height) amongst Children under five years is 19.3%.
- The proportion of underweight children in India is 32.1%.

Double Burden of Nutritional Insecurity: According to a new Lancet study, there has been a steady increase in obesity levels in India. India has become one of the countries with a high 'double burden of nutritional insecurity', with the increase in both malnutrition and the obesity levels.

Read More- [Obesity in India- Explained Pointwise](#)

Key Findings of the Household Consumption Expenditure Survey (HCES) Report Regarding Nutrition Security in India:

a. Nutritional Insecurity amongst the 10% Poorest Population: Average daily per capita calorie Intake (PCCI) for a healthy life is 2,172 kcal in rural India and 2,135 kcal in urban India. The calorie intake of the poorest 10% of the Indian population is below the average PCCI. The average daily PCCI of 10% poorest population is 1,564-1,764 kcal in rural areas and 1,607-1,773 kcal in urban areas.

b. Nutritional insecurity Variation amongst the 10% Poorest Population: There is variation in calorie intake amongst the 10% poorest population. The average PCCI for the poorest 5% in rural areas is 1,564 kcal, and for the next poorest 5% is 1,764 kcal. In urban areas, the figures are 1,607 kcal and 1,773 kcal, respectively.

c. Proportion of Poor/Deprived based on Nutritional Requirement: The proportion of poor based on the nutritional threshold of PCCI is estimated at 17.1% for rural areas and 14% for urban areas.

What are the reasons for the lack of Nutritional Security in India?

There are multiple reasons behind the lack of nutritional security in India. These are explained below:

- 1. Affordability Issues for the Poor Household:** Affordability of nutritious food products, such as green leafy vegetables, protein-rich diet, has become difficult for the poor households in India. The increasing wealth inequality, with top 10% of Indians holding 57% of the national income, has exacerbated nutritional insecurity.
- 2. Focus on Staple Crops:** Agricultural policies, like Green Revolution, have prioritized the production of staple crops like wheat and rice over diverse, nutrient-rich crops. This has led to micronutrient deficiencies amongst the population.
- 3. Calories Fundamentalism:** The focus of the Public Distribution Scheme has been limited to ensuring food security and calorie requirement. The need for nutritional development has not been taken into account.
- 4. Feminine marginalization in Nutrition:** The nutritional requirements of adolescent and young female in poor and lower middle income households are not prioritized. This leads to malnourished female population and their off-springs. For ex- Large prevalence of anemia due to inadequate focus on iron deficiency in female diet.
- 5. Laxity in effective implementation of Child Care practices:** Child caring practices, including exclusive breastfeeding, and introduction of complementary food and a diversified diet after the first six months, are not implemented properly. For ex- Only 55% of children in India were exclusively breastfed in 2015-16.
- 6. Growth of Fast-food and junk-food Culture:** Cheaper and easily available junk food has replaced the nutritious food in the dietary intakes of Indian population. For ex- According to recent Household Consumption Survey, Indians are spending less on cereals and pulses and more on beverages, refreshments and processed food.

7. **Increased income and urbanization:** Increased income levels have led to a rise in the consumption of foods high in **fats, sugar**, and **low physical activity**. According to a joint study conducted by WHO and ICRIER, India's ultra-processed food industry has grown at a **CAGR of 13.37%** in terms of retail sales value between 2011 and 2021.

What are the negative effects of malnutrition?

1. **Child Deaths:** According to a Lancet Study in 2019, a **staggering 68% of 1.04 million deaths of children under five years in India** were attributable to malnutrition.
2. **Improper development of Children in formative years:** Obesity in children results in **stunted physical** and **cognitive development**.
3. **Psychosocial Impact:** Malnourished individuals face psychosocial challenges like, **body image issues** and **mental health concerns** due to societal stigmas associated with weight.
4. **Economic Burden:** Malnutrition increases the economic burden due to **productivity losses** on account of **decreased work efficiency** and **absenteeism**.
5. **Social Inequality and Disparities:** Undernutrition and malnutrition perpetuates a cycle of health challenges and economic disadvantages amongst the **vulnerable sections**, exacerbates existing socio-economic disparities. **Women are disproportionately affected** by **malnutrition**, facing challenges related to reproductive health, maternal health, and overall well-being.

What Initiatives have been undertaken to provide for Nutritional Security in India?

<p>National Nutrition Strategy (2017)</p>	<p>NITI Aayog's National Nutrition Strategy emphasised convergence, improved monitoring and community participation, and recommended a mission-mode approach.</p> <p>It aims to reduce the prevalence of underweight children (0-3 years) by 3% every year by 2022 from NHFS 2015-16 estimates.</p> <p>Building on this, the POSHAN Abhiyaan was launched in 2018 as India's National Nutrition Mission to bring multiple ministries and schemes under a unified framework with time-bound targets, digital monitoring and a Jan Andolan approach.</p>
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<p>National Nutrition Mission (NNM) [POSHAN Abhiyan]</p>	<p>National Nutrition Mission (NNM), also known as POSHAN Abhiyan (Prime Minister's Overarching Scheme for Holistic Nourishment) is a flagship, multi-ministerial mission to place nutrition at the centre of India's national development agenda.</p> <p>POSHAN Abhiyaan recognizes that malnutrition cannot be addressed by the health or food sector alone — it requires simultaneous action on sanitation, education, water, women's empowerment, and income.</p> <p>POSHAN Abhiyaan was designed around a lifecycle and preventive approach — rather than solely addressing acute malnutrition after it occurs.</p> <p>The mission places special emphasis on the first 1,000 days — from conception to two years of age — as this period is critical for physical growth, brain development and long-term health outcomes.</p> <p>The defining character of POSHAN Abhiyaan is its positioning of nutrition improvement as a Jan Andolan — a genuine people's movement rather than a government-administered programme.</p>
<p>Mission POSHAN 2.0</p>	<p>The Union Budget 2021–22 consolidated India's fragmented nutrition initiatives under Mission Poshan 2.0 (Mission Saksham Anganwadi and Poshan 2.0), creating a unified and integrated framework.</p> <p>This restructuring subsumed the following schemes:</p> <ol style="list-style-type: none"> 1. Anganwadi Services 2. Scheme for Adolescent Girls 3. POSHAN Abhiyaan <p>The mission is re-structured & operates through the following primary verticals:</p> <ol style="list-style-type: none"> 1. Nutrition Support for children, pregnant women & lactating mothers & adolescent girls. 2. Early Childhood Care and Education (3-6 years) and early stimulation for (0-3 years) 3. Anganwadi Infrastructure including upgradation of centres into Saksham Anganwadi

Poshan Tracker App	<p>Poshan Tracker serves as the primary governance tool for monitoring infrastructure and service delivery. The application has facilitated near real-time data collection for Anganwadi Services, daily attendance of children, ECCE activities, and growth monitoring.</p> <p>Poshan Tracker Application now enables near real-time monitoring of over 14 lakh Anganwadi Centres & nearly 9 crore beneficiaries under the National Nutrition Mission.</p>
Poshan Pakhwada	<p>Observed annually since 2018, Poshan Pakhwada is a two-week intensive outreach campaign conducted in April to strengthen community mobilisation and reinforce key nutrition behaviours under POSHAN Abhiyaan.</p>
Rashtriya Poshan Maah	<p>To promote nutrition awareness, Poshan Maah is celebrated every September as a nationwide Jan Andolan. The campaign is implemented across all States and Union Territories through Gram Panchayats, Urban Local Bodies, schools, health facilities and Anganwadi Centres in convergence with partner ministries.</p>
National Breastfeeding Promotion Programs	<p>Programs like MAA- Mother's Absolute Affection and Vatsalya- Matri Amrit Kosh, aim to strengthen the regulation on breast milk substitutes and improve breastfeeding practice.</p>
Integrated Child Development Services (ICDS)	<p>The ICDS, launched in 1975, provided the foundational platform for supplementary nutrition, health services and early childhood care through Anganwadi Centres.</p> <p>Integrated Child Development Services provides nutritional meals, preschool education, primary healthcare, immunization, health check-up and referral services to children under 6 years of age and their mothers.</p>
Pradhan Mantri Matru Vandana Yojana (PMMVY)	<p>Recognising that the health of a mother is a critical factor in ensuring the health and nutrition of her child, PMMVY was launched in 2017. This scheme introduced maternity benefits through direct cash transfers, thus providing financial support for pregnant and lactating mothers.</p>
Midday Meal Scheme	<p>It aims to provide cooked meals to every child within the age group of six to fourteen years studying in classes I to VIII who enrolls and attends the school.</p>

What Should be the Way Forward?

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- 1. Change in the Policy Focus:** The agricultural policies and programmes should be leveraged to be more 'nutrition sensitive'. The focus of food distribution programmes need to shift from 'calories fundamentalism' to providing a more diversified food basket, including coarse grains, millets, and pulses to improve the nutritional status of pre-school children and women of reproductive age.
- 2. Innovative approaches:** Innovative techniques such as bio-fortification, which involves incorporating nutrients into the seeds of major food grains will help to improve the micro-nutrient intake. Various food-based safety nets such as PDS, MDM can include bio-fortified staples to provide a more diversified food basket.
- 3. Enhanced Focus on WASH initiatives:** Synergy between WASH initiatives (safe drinking water, sanitation and hygiene) and nutritional interventions will have a multiplier effect on nutritional outcomes. This will help in improving child nutritional outcomes and are key to the success of nutritional interventions.
- 4. Focus on Women education:** Targeted programs for improving the educational status of girls, particularly at the higher educational levels, need to be promoted. This will help in better implementation of child care practices like breastfeeding and nutritional needs of children.
- 5. Improving healthcare services:** Improvement of access and utilization of prenatal and post-natal healthcare services must be prioritized. It would play a significant role in curbing under-nutrition amongst children through comprehensive awareness programs and community participation.
- 6. Successful International Interventions:** India can draw key lessons from some of the developing countries to tackle the challenge of food insecurity and malnutrition. For ex- Brazil has transformed its food system and is investing in agricultural R&D and social protection programs to reduce the level of hunger in the country. China has attached great importance to early childhood development and has formulated a series of plans in this regard.

Conclusion: As India advances towards the vision of a Viksit Bharat by 2047, continued investments in nutrition, early childhood development and service delivery systems will remain critical for building a healthy, productive and resilient population.

Read More: [PIB](#)

UPSC Syllabus- GS Paper 2- Social Issues, Issues related to hunger and poverty

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 in Vedanta's thermal power plant in Chhattisgarh that killed 21 people. 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.

Some important INDUSTRIAL DISASTERS in India:

Bhopal Gas Tragedy (1984)	<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)
Jaipur IOC Depot Fire (2009)	<ul style="list-style-type: none"> ● Cause: Leak of petrol vapour at IOC oil terminal. ● Raised questions on oil depot safety near urban areas.
NTPC's Feroz Gandhi Thermal Power Plant (2017)	<ul style="list-style-type: none"> ● Cause: Pressure build-up in boiler due to excessive ash accumulation which led to tube failure.
Vizag Gas Leak (2020)	<ul style="list-style-type: none"> ● Cause: Styrene gas leak at LG Polymers chemical plant.
Neyveli Lignite Plant Explosion (2020)	<ul style="list-style-type: none"> ● Cause: Boiler explosion
Vedanta's Thermal Power Plant (2026)	<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: 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.

2. 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.

3. 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.

4. 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.

5. 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.

6. 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.

7. 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?

<p>Human Consequences</p>	<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.
<p>Environmental Consequences</p>	<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. ● 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.
<p>Economic Consequences</p>	<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.

	<ul style="list-style-type: none"> ● 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. ● Impact on agricultural economy: Contamination of land and water can destroy crops and make farming unsustainable, leading to loss of income for farmers.
<p>Social Consequences</p>	<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.

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

1. Factories Act, 1948: 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.

2. Environment (Protection) Act, 1986:

- 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.

3. Public Liability Insurance Act, 1991: 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.

4. Occupational Safety, Health and Working Conditions Code, 2020: 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.

5. Guidelines on Chemical Industrial Disaster Management (2007): These comprehensive guidelines provide a framework for all stakeholders (industry, government agencies, local authorities) for prevention, preparedness, response, and mitigation of chemical industrial disasters. Key elements include:

- 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.

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 must be a core business value, not just a compliance requirement. Senior management must visibly commit to and invest in safety.
- 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. The Bhopal Gas Tragedy led to a rethinking on industrial safety, this blast in Telangana should do the same by fixing accountability & strengthening the regulatory framework in our country.

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

Female Labour Force Participation – Explained Pointwise



India's Low Female Labour Force Participation rate is a big threat to India's Demographic Dividend. India still has not cracked the code of getting women to work in time. Any further delay in improving the female labour force participation in productive sector, will be detrimental to India's dream of becoming a developed nation by 2047.



Female Labour Force Participation Rate

- » Female Labour Force Participation Rate is a ratio of the number of women who are part of the labour force to the number of women in the working age (greater than 15 years of age). A woman is considered to be a part of the labour force if she/he is either employed or actively looking for work.
- » Female Labour Force Participation Rate (FLFPR) is consistently increasing in India over the years. It has increased from **24.5% in 2018-19** to **37% in 2022-23**.
- » However, according to the World Bank, Indian women's participation in the formal economy is among the lowest in the world. India needs to improve its low FLFPR to reap its rich demographic Dividend

Reasons for low FLFPR

- » The High Degree of Informalisation discourages women from participating in the labour force. **95% of India's working women are informal workers (ILO)**.
- » **Missing Manufacturing sector jobs** and limited number of jobs in services for women.
- » Gender Pay Gap and Glass ceiling. India has one of the **largest gender gap in median earnings** of full-time employees (ES 18)
- » **Pinkification of Jobs** limit the role of women to specific job profiles like nursing, teaching, gynaecologist.
- » **Unpaid care, child care and domestic chores**, has hindered women's ability to participate in the labour force
- » **Educated Unemployment phenomenon**- Unavailability of jobs that match the high female education levels
- » **Safety Concerns** like violence against women and sexual harrasment at workplace

For detailed Reading- [7 PM Link](#)



Advantages of FLFPR

- » Economic Boost- Gender parity in the workforce can **improve India's GDP by 27%** (IMF).
- » Tackle the phenomenon of **feminisation of poverty** which is a result of informalised women workforce
- » Improvement in Social Indicators like the **MMR and IMR**
- » Enables women to play a greater role in decision-making like **family planning**
- » Fulfilment of Global Commitments like **SDG-1, SDG-5, SDG-8**



Created By ForumIAS

What is Female Labour Force Participation Rate (FLFPR)?

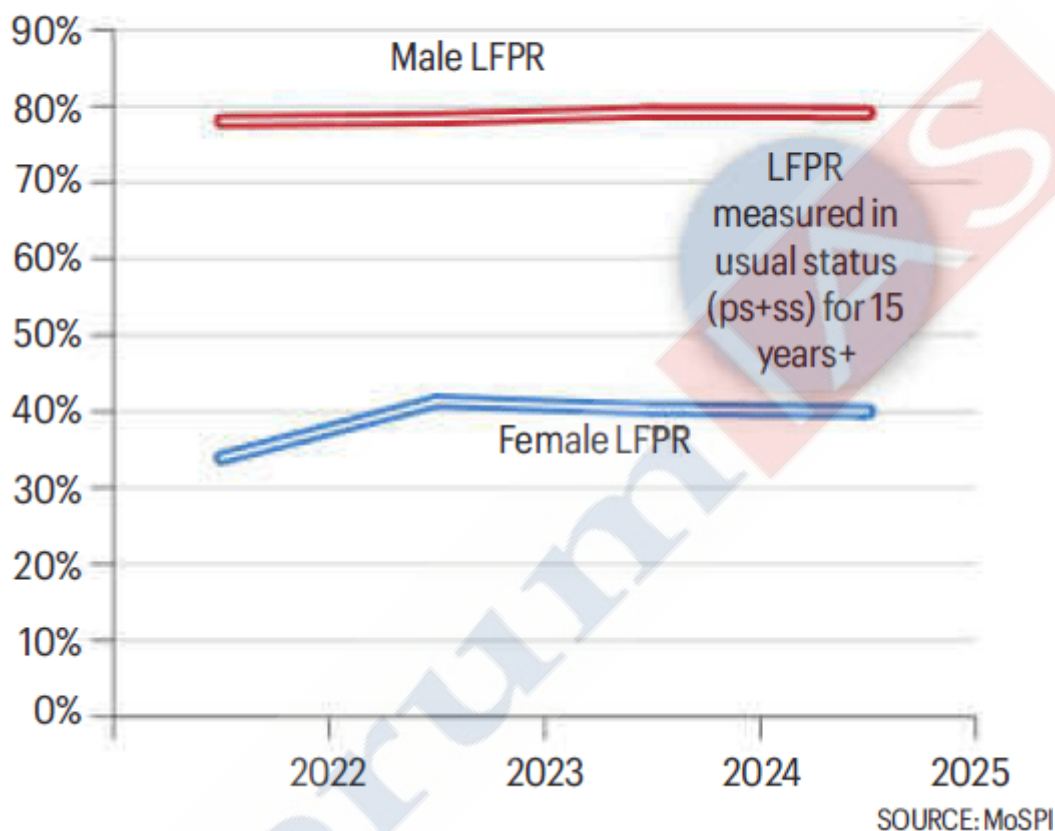
- Female Labour Force Participation Rate is a ratio of the number of women who are part of the labour force to the number of women in the working age (greater than 15 years of age).
- A woman is considered to be a part of the labour force if she is either employed or actively looking for work.

FLFPR trend in India:

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1. Female Labour Force Participation Rate (FLFPR) is consistently increasing in India. The FLFPR has risen from 33.9% in 2022 to 40% in 2025. However, it still remains well below the **global average (49%)** & emerging market peers like **Brazil (53%)** & **Vietnam (69%)**.

● Female LFPR has risen to half that of men...

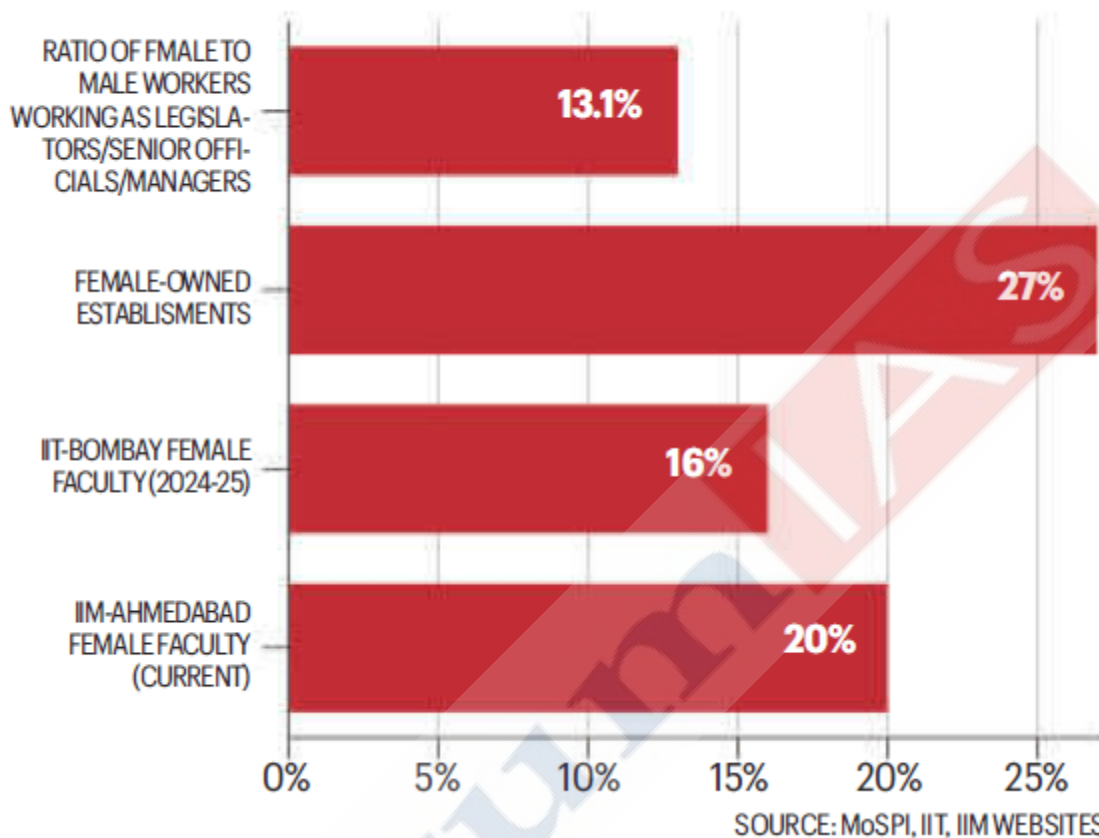


Source: MoSPI

2. Glass Ceiling:

- While the FLFPR is rising, their presence in senior positions in various spheres is much lower.
- Female representation is low in business decision making as well. According to MoSPI's Annual Survey of Unincorporated Sector Enterprises, the share of female-owned proprietary establishments stood at 27% in 2025.
- According to PLFS, for every 100 males working as legislators, senior officials, and managers in 2025, there are only 13 females in similar high positions.
- While nearly all of India's leading firms have a woman as a director on their boards, 77% had only 1-2 women as directors.
- Only 7% of BSE200 & 5% of NSE500 board chairpersons are women. Without achieving a critical mass (30% according to research), their presence at top risks being symbolic rather than substantive in India's corporate governance landscape.

• But in positions of power, women lag behind



Source: Indian Express

- The simple average of the FLFPR of the five southern Indian states (Tamil Nadu, Karnataka, Telangana, Andhra Pradesh, Kerala) is 13% lower than the five northern states of Himachal Pradesh, Rajasthan, Chhattisgarh, Madhya Pradesh and Jharkhand. This defies the conventional belief that southern states, with high literacy and women empowerment indices, will have high FLFPR.
- There are only four states (Assam, Bihar, Haryana and Delhi) with an FLFPR of less than 25%. Delhi has the lowest at 14.8%.
- According to the World Bank, Indian women's participation in the formal economy is among the lowest in the world. Only some parts of the Arab world perform worse than India in terms of FLFPR.

What are the reasons for low Female Labour Force Participation rate in India?

- High Degree of Informalisation:** According to a 2018 study by the International Labour Organisation (ILO), more than 95% of India's working women are informal workers. The absence of social security net in the informal sector discourages women from participating in the labour force.
- Missing manufacturing:** Lack of alternative employment opportunities in manufacturing and the limited number of jobs in services for women, has also suppressed FLFPR in India.
- Gender Pay Gap and Glass ceiling:** According to the Economic Survey 2018, **India has one of the largest gender gap in median earnings of full-time employees.** Such discriminatory practices at workplace adversely affects FLFPR.

4. **Pink Jobs:** The societal notions about ‘**gendered occupations**’ limit the role of women to specific job profiles like nursing, teaching, gynaecologist etc. There are tangible and intangible barriers to entry of women in multiple professions like heavy engineering, law enforcement, armed forces etc.
5. **Cultural practices:** Unpaid care, child care and domestic chores, has hindered women’s ability to participate in the labour force. In a patriarchal society, many women are not allowed to work after marriage.
6. **Time Poverty:** Indian women spend an average of **363 minutes per day** on unpaid domestic work, compared to just **123 minutes** for men. This “time poverty” is the single largest barrier to formal employment.
7. **Increase in Household Income:** The rise in household incomes in both the rural and urban areas has provided women the choice to not take up jobs.
8. **Safety Concerns:** High incidents of violence against women at workplace as well as in public places discourages women to work in the night like their male counterparts. Further, instances of sexual harassment at workplace induces women to opt out of labour force.
9. **Educated Unemployment:** Women are going for higher education, as seen in Gross Enrolment Ratio (GER) of secondary education. The lack of availability of jobs that match the high female education levels also contributes to the low FLFPR.
10. **Legally sanctioned restrictions:** Many States continue to **restrict women’s participation in hazardous jobs in factories and commercial establishments** for e.g. women are not allowed to work on stone-cutting machines, shop floor of boilers, etc.
11. **Political Vacuum:** The current Lok Sabha has only 14.4% women, despite women constituting around 50% of Indian population. The lack of gender perspectives inhibits formulation of a comprehensive policy that encourages women participation in economic activities.

What is the significance of enhancing Female Labour Force Participation?

1. **Economic Boost:** According to the IMF, gender parity in the workforce can **improve India’s GDP by 27%**.
2. **Poverty Reduction:** Women’s earnings improve household income diversification, reduce poverty, breaking intergenerational poverty cycles. It helps to tackle the phenomenon of feminisation of poverty, which is a result of highly informalised work performed by women.
3. **Improvement in Social Indicators:** Encouraging more women to enter the formal workforce will improve indicators like Infant Mortality Rate (IMR), Maternal Mortality Rate (MMR).
4. **Self Confidence and Dignity:** Financial independence enables women to play a greater role in decision-making like family planning.
5. **Demographic Dividend Utilisation:** With a young population, India needs all hands to capitalize on its demographic dividend. Excluding women undermines productivity gains and risks a demographic burden instead. With India’s population growth slowing, women’s participation is vital to sustaining the labor supply required for the “Make in India” and services-led growth models.
6. **The “Multiplier Effect”:** Studies consistently show that women invest a larger portion of their income (up to 90%) into their children’s education, nutrition, and healthcare compared to men.
7. **Social Norms Shift:** Rising FLFP challenges patriarchal norms, normalizes working women, and encourages policy changes like better childcare, safe transport, and workplace flexibility, creating a virtuous cycle.

8. Fiscal & Demographic Balance: It expands the tax base, reduces dependency ratios, and supports social security systems. It also addresses labor shortages in sectors like manufacturing and care economy.

9. Global Commitments: Improving FLFPR is related to achievements of **SDG 1** (No Poverty), **SDG 5** (Gender Equality), **SDG 8** (Decent Work and Economic Growth) and **SDG 10** (Reduced inequalities).

What steps have been taken by the Government to enhance Female Labour Force Participation?

<p>Mission Shakti</p>	<p>Mission Shakti is the flagship initiative designed to support women throughout their life cycle. It is divided into two sub-schemes:</p> <ol style="list-style-type: none"> 1. Sambal (Safety & Security): Includes One Stop Centres (OSC) for legal and medical aid, the 181 Women Helpline, and Nari Adalats (women's collectives) to facilitate gender justice. 2. Samarthya (Empowerment): Focuses on economic independence: <ol style="list-style-type: none"> a. SakhiNiwas: Working Women Hostels that provide safe and affordable accommodation. b. Palna: A national crèche scheme that provides childcare facilities in or near workplaces (including Anganwadis) to reduce the “double burden” on working mothers.
<p>Skill Development</p>	<p>PM Kaushal Vikas Yojana (PMKVY): Nearly 45% of the candidates trained under this national skill development program are women.</p> <p>30% reservation for women in all Industrial Training Institutes (ITIs).</p> <p>NAVYA initiative is a pilot program to equip adolescent girls with vocational training in non-traditional job roles.</p> <p>Swavalambini program aims to cultivate an entrepreneurial mindset among female students in higher education.</p> <p>Women Entrepreneurship Platform (WEP): A NITI Aayog initiative that acts as a one-stop portal for women to access mentorship, funding, and networking.</p>

<p>Economic & Entrepreneurship Incentives</p>	<p>Lakhpati Didi Scheme: Aimed at empowering 3 crore (30 million) rural women to earn an annual income of at least ₹1 Lakh through micro-enterprises and skill training.</p> <p>Drone Didi: A specialized initiative to train 15,000 SHG women as drone pilots for agricultural purposes (pesticide spraying, crop monitoring), integrating women into high-tech rural jobs.</p> <p>Mudra Yojana & Stand-Up India: These schemes provide collateral-free loans. Notably, over 68% of Mudra loan beneficiaries are women, helping them start or scale small businesses.</p> <p>Stand up India: The scheme facilitates bank loans for setting up a new enterprise in manufacturing, services, agri-allied activities, or the trading sector by SC/ST/Women entrepreneurs. It provides bank loans between INR 10 lakh and up to 1 crore.</p>
<p>Safety & Dignity at Work</p>	<p>Sexual Harassment of Women at Workplace Act, 2013: The Act was enacted to protect women from sexual harassment at their place of work.</p> <p>She-Box Portal: 'She-Box' portal provides a centralized online system to file complaints related to workplace sexual harassment.</p>
<p>New Labour Codes</p>	<p>Code on Wages (2019): Equal pay for equal work; no gender discrimination in recruitment or wages.</p> <p>Code on Occupational Safety, Health and Working Conditions (OSH) 2020: Women are now legally permitted to work night shifts and in all sectors (including underground mining and heavy machinery), provided their consent is given and the employer ensures safety and transportation.</p> <p>Maternity Benefits: The Maternity Benefit Act (amended) provides 26 weeks of paid leave and mandates crèche facilities for establishments with 50+ employees. It proposed an option to work from home after this period, on mutual agreement with the employer.</p>
<p>Anganwadi centres under the ICDS</p>	<p>They provide maternal and child nutritional security, a clean and safe environment, and early childhood education. Thus, they facilitate the ability of women to re-enter work post-childbirth.</p>

National Food Security Act (NFSA), 2013	Apart from providing affordable food, it entitles pregnant and lactating mothers to a cash transfer of at least INR 6,000. This is done to break the compulsion for early returning to work.
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What should be the Way Forward?

1. **Strengthening the “Care Economy”:** The single largest barrier to female participation remains “time poverty” due to the disproportionate burden of unpaid domestic work. The care economy can be addressed by following:
 - a. **Child Care Subsidies:** Child-care subsidies should be provided to free up mothers’ time to enter the labour force, which would have significant implications in increasing female employment.
 - b. **Universal Childcare:** Scaling the Palna scheme beyond Anganwadis into urban industrial clusters and IT hubs.
 - c. **Elder-Care Infrastructure:** As India’s demographic shifts, elder care is becoming a new domestic burden. Developing a regulated professional caregiving industry can simultaneously reduce women’s domestic load and create new jobs.
 - d. **Normalizing Paternity Leave:** Moving toward “Gender Neutral Parental Leave” to shift the societal expectation that caregiving is solely a female responsibility.
2. **Comprehensive approach to improve women labour force participation:** A comprehensive approach aimed at improving skill development, access to child care, maternity protection, and provision of safe and accessible transport, is needed.
3. **Removal of the legally sanctioned legislation:** States should review legislations like the Factory Act, Shops and Establishment Act etc. and liberalise the restrictions on women. The best practices from well performing States can be adopted across all States for e.g. **Andhra Pradesh and Telangana are the only two states that allow women to work in all processes in all establishments.**
4. **Creation of Self Help Groups:** The focus should be on creation of more Self Help Groups. They are of immense reliance and drastically enhance women participation as seen in case of **Kudumbashree model of Kerala.**
5. **Use of innovative solutions to enhance female retention in industries:** Public crèches can be operated at worksite clusters such as near industrial areas, markets, dense low-income residential areas, and labour nakas. This model has been tested successfully by **Self-Employed Women’s Association (SEWA) Sangini** in some Indian cities.
6. **Formalizing the Gig Economy:** Leveraging the **e-Shram** portal (which now has over 54% female registration) to provide social security and health benefits to women in the gig and platform economy (e.g., beauty services, digital tutoring).
7. **Safety Infrastructure:** Implement women-centric policing and improve lighting in public spaces to reduce dependency on costly private transport (the ‘Pink Tax’).
8. **Returnships:** Create “returnship” programmes specifically for women re-entering the workforce after a career break due to caregiving.

Conclusion: There is a need to take multiple steps to augment the female labour force participation in India in order to realise the numerous social and economic benefits that accrue from greater presence of women in the workforce. It can help India move from women-centric development to women-led development.

Read More: [Indian Express](#)

UPSC Syllabus- GS 3 Inclusive Growth, GS 1 Women empowerment, GS 2 Vulnerable sections of the society

India-South Korea Relationship – Explained Pointwise

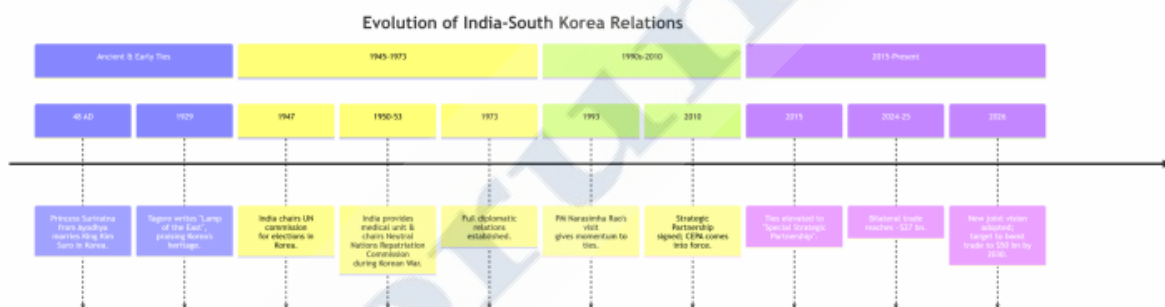
The South Korean President **Lee Jae Myung** is on a state visit to India with an aim to transform the ‘**trusted partnership**’ between two nations into a ‘**futuristic partnership**’. The India-South Korea relations have advanced particularly due to united interests, mutual goodwill, and high-level exchanges. South Korea is currently the fifth largest source of investment in India.



Evolution of India-South Korea relations:

<p>Historical & Civilizational Roots</p>	<ul style="list-style-type: none"> ● The Legend of Princess Suriratna: According to the <i>Samguk Yusa</i>, an Indian princess from Ayodhya traveled to Korea in 48 CE to marry King Suro, founding the Karak dynasty. This shared heritage remains a powerful cultural symbol. ● Buddhism: Introduced to Korea in the 4th century, Buddhism created an enduring intellectual and spiritual link. ● Korean War: India played a crucial role during the Korean War (1950–53), sending a medical unit and a custodian force to manage the exchange of prisoners.
<p>1973</p>	<p>Formal diplomatic relations were established at the Ambassador level.</p>

Post-Cold War Era	The relationship gained significant momentum in the post-Cold War era, aligning with India's "Look East" policy. The 1993 visit of Prime Minister P.V. Narasimha Rao to Seoul was a pivotal moment that helped revitalize bilateral engagement.
2010	Strategic Partnership: The visit of President Lee Myung-bak as the Chief Guest for India's Republic Day was a milestone, elevating ties to a " Strategic Partnership. "
2015	Special Strategic Partnership: Recognizing the growing convergence of interests, the relationship was further elevated to a " Special Strategic Partnership " during Prime Minister Narendra Modi's visit to South Korea.
2026	Joint Strategic Vision (2026–2030): The two nations recently signed a Joint Strategic Vision (2026–2030) , committing to annual leader-level meetings and closer alignment on Indo-Pacific security.



What have been various initiatives to strengthen the India-South Korea relationship?

1. Economic & Trade Initiatives:

- **CEPA & CEPA Upgrade:** CEPA, which is in force since 2010, has increased the bilateral trade from \$14bn at the time of its implementation to \$27bn in 2024-25. Both nations have committed to a mission-mode upgrade of the 2009 **Comprehensive Economic Partnership Agreement (CEPA)**, aiming for completion within one year to address the huge trade deficit.
- **\$50 Billion Trade Target:** A formal roadmap has been established to increase bilateral trade from the current **\$27 billion to \$50 billion by 2030.**
- **Korean Industrial Township (Korea Enclave):** Establishment of a dedicated "**plug-and-play**" industrial township in India specifically designed to help South Korean SMEs bypass bureaucratic hurdles.
- **India-Korea Financial Forum:** A new platform launched to facilitate easier financial flows and investments between the two nations.

2. Technological Cooperation:

- **India-Korea Digital Bridge:** A new framework was signed to promote policy sharing, joint research, and private-sector exchanges in **AI, semiconductors, and quantum computing.**
 - **Space Collaboration:** ISRO and the new Korean space agency (KASA) have initiated a Joint Working Group to explore cooperation in satellite navigation and space startups.
- 3. Defence & Security Partnerships:**
- **K9 Vajra Phase III:** Following the success of the K9 Vajra howitzers, the two countries have entered “Phase III,” which moves beyond assembly to **co-development, joint design, and greater technology transfer.**
 - **Defense Accelerator:** The launch of a **Korea-India Defence Accelerator** platform to connect startups, investors, and universities for next-gen military tech like anti-drone systems.
 - **Maritime Upgrades:** A new framework for shipbuilding and maritime logistics includes an MoU for a South Korean firm to **modernize Indian shipyards** and port infrastructure.
- 4. Annual Leader Summits:** The leaders have agreed to meet **annually** to ensure high-level momentum.
- 5. Cultural & People-to-People Ties:**
- **SARANG,** a festival of India in Korea, has been organised every year by the Indian Embassy since 2015 to showcase India’s diverse art and music.
 - The two nations extended their Cultural Exchange Programme till 2030 and declared 2028–29 as the Year of India-ROK Friendship, with agreements to boost collaboration in creative industries.
- 6. The Steel Alliance:** A massive 2026 joint venture between **JSW Steel and POSCO** to set up a 6-million-tonne green steel plant in Odisha, representing a “reunion” of Korean industry with Indian resources.
- 7. Critical Minerals Value Chain:** Cooperation on mapping and exploring critical minerals using AI, with a focus on “circularity” (recovering minerals from e-waste).

What is the significance of India-South Korea relationship?

- 1. Economic & Trade Significance:**
- **Trade and Investment Engine:** Bilateral trade has grown substantially since the 2009/2010 CEPA (Comprehensive Economic Partnership Agreement), reaching around **\$27 billion** recently, with Korea as one of India’s top FDI sources.
 - **Complementary Strengths:** India’s large market, demographics, and services/IT talent pair with Korea’s advanced manufacturing, semiconductors, shipbuilding, EVs/batteries, steel, and R&D prowess.
 - **Supply Chain Resilience and Economic Security:** In a fragmented global economy, the partnership builds diversified, resilient chains in critical sectors – vital for both nations’ growth and autonomy.
- 2. Geopolitical Significance:**
- **Indo-Pacific Alignment:** Both countries share a vision for a free, open, inclusive, and rules-based Indo-Pacific. India’s **Act East Policy** converges with South Korea’s **New Southern Policy**, promoting stability, maritime security, and connectivity.
 - **Middle-Power Collaboration:** As capable middle powers without major bilateral disputes, they amplify each other’s influence – India gains a stronger East Asian foothold and bridge to ASEAN; South Korea diversifies beyond Northeast Asia and the U.S.-China rivalry.
- 3. Security Significance:** Military-to-military ties are deepening significantly. The two navies held their **first-ever bilateral exercise in October 2025**. They have also agreed to explore a **2+2 dialogue** between their foreign and defence ministers to enhance strategic coordination on regional and global issues.

- 4. Technological Significance:** The focus in recent years has shifted to high-tech collaboration. A new “**India-Korea Digital Bridge**” aims to foster partnerships in **AI, semiconductors, and IT**. Major cooperation is also planned in **shipbuilding**, with a comprehensive framework signed to develop ports and maritime logistics.
- 5. Soft Power:** The Hallyu (Korean Wave) phenomenon has created extraordinary organic goodwill toward South Korea in India. Reciprocally, Indian cinema and yoga enjoy growing popularity in Korea.

What are the challenges in India-South Korea relationship?

- 1. Trade Deficit:** India’s exports to South Korea are significantly lower than its imports. The bilateral trade of ~\$27 billion is heavily skewed, with Indian exports at ~\$6 billion vs. Korean exports at ~\$21 billion.
- 2. Composition of Trade:** India mainly exports raw materials (aluminum, iron ore) while importing high-value finished goods (electronics, machinery). India is pushing for greater market access in sectors where it is globally competitive, such as **pharmaceuticals, IT services, and textiles**.
- 3. Challenges with CEPA:**
 - **“Lopsided” CEPA:** The 2010 Comprehensive Economic Partnership Agreement (CEPA) is seen as flawed and has not worked in India’s favor.
 - **Stalled Upgrade Talks:** Negotiations to upgrade the CEPA were launched in 2016 but have been stalled for years, failing to resolve differences.
 - **Non-Tariff Barriers:** Indian exporters frequently cite complex South Korean regulatory standards and sanitary/phytosanitary measures as hidden “walls” that prevent Indian agricultural and pharma products from entering the Korean market.
- 4. Intermittent High-Level Engagement:** High-level diplomatic momentum has been inconsistent. The last state visit by a South Korean president prior to this was eight years ago, and even the 50th anniversary of diplomatic ties in 2023 passed without a commemorative bilateral summit. This has led to a perception of a lack of political will.
- 5. Stalled Defence Cooperation:** While the K9 Vajra-T howitzers are a success story, other major defence deals (like minesweepers or submarines) have been stalled or cancelled due to bureaucratic hurdles, trust deficits, and disagreements over technology transfer.
- 6. Seoul’s Strategic Focus:** South Korea’s recent foreign policy has been centered on its alliance with the US and cooperation with Japan and Southeast Asia, with India receiving relatively less strategic attention in its Indo-Pacific strategy.
- 7. Limited Diaspora and Exchanges:** The number of South Koreans living in India is only about **12,000**. This presence is very small relative to India’s massive population and economic weight, indicating that people-to-people ties have remained stagnant.
- 8. The “China Factor”:** South Korea’s economy is deeply integrated with China, making it cautious about joining security frameworks (like an expanded Quad) that could be seen as overtly anti-China. India, meanwhile, is seeking a more assertive “de-risking” strategy.

What should be the way forward?

- 1. Market Access for Services:** India must pivot from exporting raw materials to high-value services. Securing easier “Mutual Recognition Agreements” (MRAs) so Indian doctors, nurses, and IT professionals can work in Korea without redundant certifications.
- 2. Address Non-Tariff Barriers:** Streamlining customs clearance processes and simplifying rules of origin to make the agreement more user-friendly for businesses, particularly SMEs.

3. **Operationalize the “Korea Desk”:** India should promptly establish the promised “Korea Desk” to provide regulatory certainty and facilitate investment, while Korea should establish a corresponding unit.
4. **Institutionalizing High-Level Dialogue:** Moving beyond intermittent engagements to regular annual summits and activating the proposed **2+2 Vice-Ministerial dialogue** between foreign and defence ministries.
5. **Semiconductor Hubs:** Moving beyond trade to manufacturing. The South Korean giants (like Samsung or SK Hynix) must be encouraged to set up **complete fabrication units** in India, rather than just testing and packaging.
6. **Joint R&D Platforms:** The proposed **Korea-India Defence Accelerator** should be used to co-develop niche technologies like underwater drones, cyber-defense systems, and small satellite launch vehicles.
7. **Shipbuilding as a Strategic Sector:** Shipbuilding is an underexplored but high-potential area. India has a strong ambition to become a global shipbuilding hub, and South Korea is the world’s leading shipbuilder. Thus, joint ventures, technology sharing, and the integration of Indian yards with Korean expertise must be explored.
8. **Scaling Up People-to-People and Educational Ties:** The human dimension of the relationship remains thin relative to the scale of the two economies. Boosting the Korean diaspora in India, expanding scholarship programmes, increasing student exchanges, and investing in Korean language teaching in India and Indian studies in South Korea would create a larger community of people invested in the relationship.

Conclusion: India & South Korea must realize the new opportunities for cooperation in every field, from chips to ships, talent to technology, environment to energy – to ensure the progress & prosperity of both the nations.

Read More: [Indian Express](#)

UPSC GS-2: International Relations

Diversification Towards High Value Crops – Significance & Challenges – Explained Pointwise

Agriculture occupies a foundational place in the vision of a **Viksit Bharat**. Over the past decade, the sector has grown at **4.45%**, the highest in comparison to previous decades. This growth tells a deeper story. A story of diversification and value enhancement. At the centre of this transformation lies horticulture, which has emerged as the nucleus of India’s high-value crop economy.



Source: Krishi Jagran

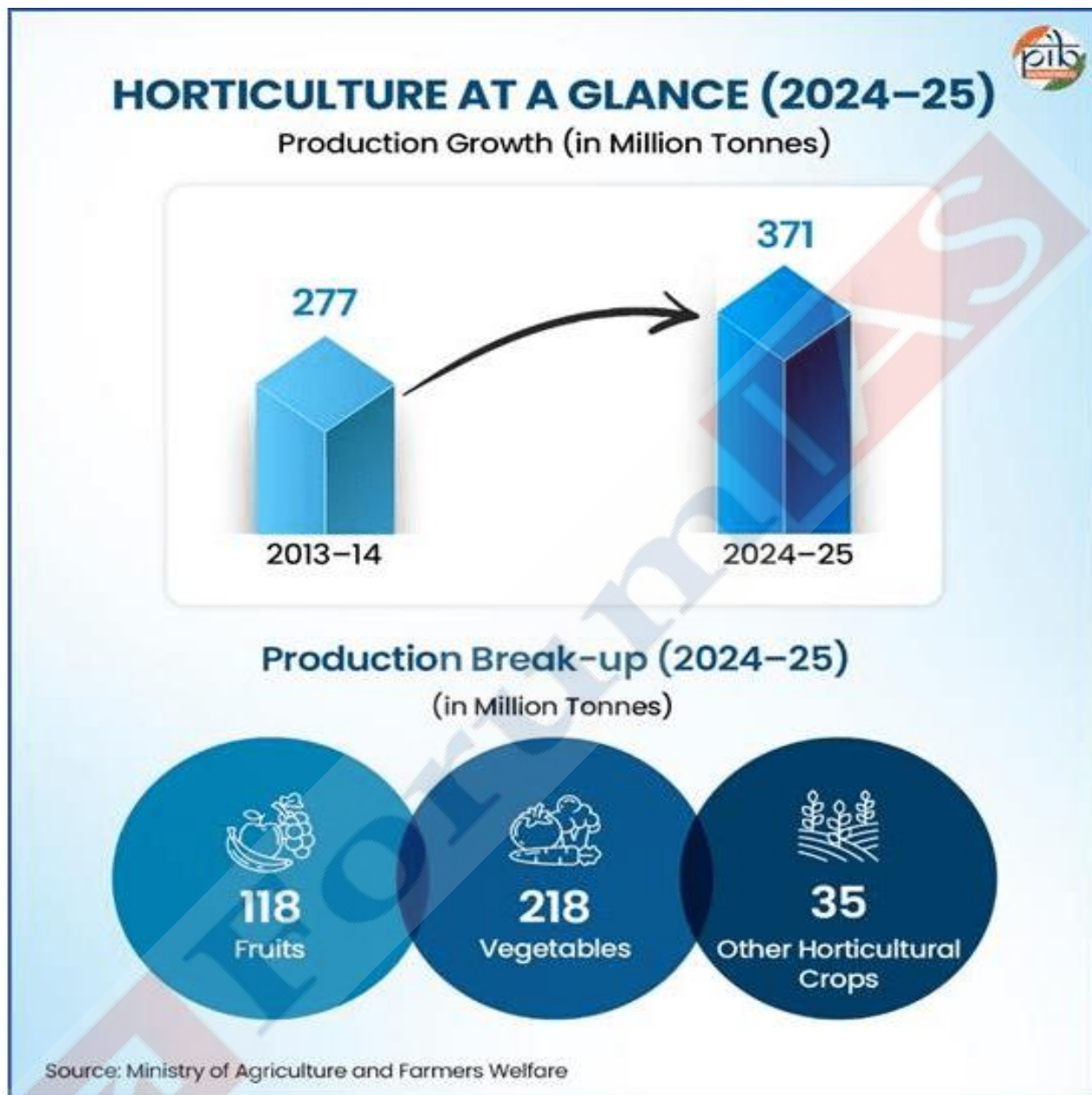
What are High Value Crops?

- High-value crops primarily refer to horticultural produce such as fruits, vegetables, flowers, spices, and aromatic plants. These crops are termed “**high value**” because they generate significantly higher net returns than traditional staple crops like cereals and pulses.
- Unlike traditional staples, high-value horticultural crops generate superior returns per unit of land and contribute substantially to agricultural gross value addition.

Horticulture as a Driver of Agricultural Growth in India:

- The horticulture sector accounts for approximately **37% of the Gross Value Output (GVO)** within the agricultural crops sub-sector of Agriculture and Allied sectors and has emerged as a cornerstone of India’s agricultural growth trajectory.
- Horticulture strengthens nutrition, fuels agro-processing, supports exports, and creates local employment.
- In India’s journey toward sustainable and income-led agricultural growth, horticulture is not peripheral. It is pivotal.
- India’s global standing in horticulture further reinforces its strategic importance:
 - The country ranks second worldwide in the production of vegetables, fruits and potato.
 - Fruits account for **9.18%** and vegetables account for **8.18%** of global production.
 - Additionally, India is the world’s largest producer of onions and shallots, contributing close to **22.42%** of global production.

These indicators highlight India's growing integration into global food supply chains and the significant potential of a high-value crop economy.



Key Characteristics of High Value Crops:

- 1. High Market Price:** They command a premium price because of their quality, uniqueness, or limited supply.
- 2. Intensive Management:** They typically require more labor, precise growing conditions, specialized skills, and controlled environments (like greenhouses or vertical farms).
- 3. Perishability:** Many HVCs (like fresh herbs or berries) are highly perishable, necessitating quick, efficient logistics and access to a reliable market.

- 4. Niche/Specialty Market:** They are often sold to specific markets, such as fine-dining restaurants, organic food stores, health/wellness industries, or directly to consumers.
- 5. Profit per Area:** The financial return (profit) is high relative to the small amount of land or space they occupy.

Examples of High Value Crops:

Fruits	Pomegranate, dragon fruit, black rice, baby corn, mango, grapes, guava, oranges.
Vegetables	Tomatoes, onions, okra, capsicum, baby corn.
Flowers & Ornamentals	Marigold, rose, orchids
Spice & Condiments	Saffron, cardamom, turmeric, ginger, black pepper, chili.

Coconut

India's Coconut Sector at a Glance



Global Standing

- India ranks **second** in the world in coconut production



Production Snapshot (2024-25)

- Production: **13.97 Million Tonnes**
- Area: **2.19 Million Hectares**
- Productivity: **6.36 Tonnes Per Hectares**



State-wise Leadership (Jan 2026)

- **Keralam** 1st in area under cultivation
- **Tamil Nadu** 1st in production
- **Andhra Pradesh** 1st in productivity

Source: Ministry of Agriculture and Farmers Welfare

Source: PIB

Cashew

CASHEW
The Gold Mine of Wasteland



Cultivation and Production

- ▲ Total Area: 12.05 Lakh Hectares
- ▲ Annual Production: Over 8.02 Lakh Tonnes

Export Performance (FY 2024-25)

- ▲ Total Export Value: 369.17 USD Million

Major Export Destinations

- ▲ United Arab Emirates, Vietnam, Japan, Netherlands, Saudi Arabia

Source: Ministry of Commerce and Industry

Source: PIB

Cocoa



Source: PIB

Sandalwood

Santalum album, commonly known as **Indian sandalwood** or *chandan*, is a highly valuable and culturally significant tree species in India. It is widely used in religious practices and is globally renowned for its **premium essential oil**, which is extensively used in the **perfumery and fragrance industries**. Due to its high economic value, sandalwood cultivation has strong potential to generate rural employment and increase export earnings through value-added products.

Nut Crops

India's hilly regions cultivate several nut crops suited to cooler climates and specific agro-ecological conditions, including walnuts, almonds, and pine nuts.

Nut Crops Production & Export Snapshot



Walnuts

- Production (2024-25): **3.22 lakh tonnes**
- Export Value (FY 2024-25): **7.80 USD Million**
- Major Export Destinations: UAE, Turkey, Iraq, Singapore, Algeria, Qatar, Bhutan, Kuwait, Seychelles and Nigeria



Almonds

- Production (2024-25) : **13.94 thousand metric tonnes**
- Major Producing Regions: Jammu and Kashmir, Himachal Pradesh and Gujarat

Source: Ministry of Agriculture and Farmers Welfare

Source: PIB

Significance of High Value Crops:

- 1. Doubling of Farmer Income:** High value crops (HVCs) yield much higher returns per acre than staple crops like rice or wheat, offering farmers opportunities for greater profitability and improved livelihoods. They are crucial for increasing smallholder incomes and supporting rural prosperity, which aligns with national goals of doubling farmer income.
- 2. Agricultural diversification:** Shifting land from low-value staples to HVCs such as fruits, vegetables, spices, and flowers reduces risk, stabilizes farmer incomes, and helps balance food supply with demand. It also makes agriculture more resilient to market shocks and climatic variability.
- 3. Employment generation:** HVC cultivation is labor-intensive and stimulates job creation in production, harvesting, processing, packaging, and marketing, particularly benefiting women and rural youth. The rise of agro-processing and supply chains for HVCs further adds off-farm employment opportunities.
- 4. Export Potential:** Many Indian HVCs like spices, mangoes, pomegranates, and medicinal herbs have strong export markets, contributing significantly to the country's agri-exports and foreign exchange earnings. Enhanced value-addition and product quality increase competitiveness in global markets.

- 5. Sustainable development:** HVCs can be grown in less arable or rainfed areas, thus supporting sustainable use of marginal lands and water resources. Many of them, especially perennial and medicinal plants, support better soil health, biodiversity, and climate resilience.

Challenges to High Value Crops:

- 1. Market Access:** Poor access to organized markets and insufficient cold storage/logistics frequently lead to high post-harvest losses and distress sales.
- 2. Price Fluctuations:** HVC producers often face volatile market prices due to seasonal gluts, weak supply chains, and inadequate market intelligence.
- 3. High Input Cost:** HVC cultivation requires improved seeds, fertilizers, pest management, and irrigation, which can be costly and harder to access for smallholders.
- 4. High Technological Requirements:** Limited knowledge of advanced agronomy, protected cultivation (greenhouses), and precision agriculture affects yields and quality.
- 5. Risk & Vulnerability:** High value crops are often sensitive to weather fluctuations, pests, and diseases, and carry higher investment risks than staples. Crop insurance coverage is limited, leaving growers vulnerable to income losses during adverse years.
- 6. Policy & Institutional Support:** Support for HVCs is generally less than for staple crops in terms of government subsidies, minimum support prices, and extension services.
- 7. Export Barriers:** Meeting international quality and phytosanitary standards for export can be complex and costly. Farmers need better support for certification, grading, and value addition.
- 8. Limited Access to Finance:** High upfront costs for planting materials, inputs, pack-houses, and processing units make access to timely credit and affordable loans essential, but such support remains patchy.

Government initiatives to promote the cultivation of high value crops:

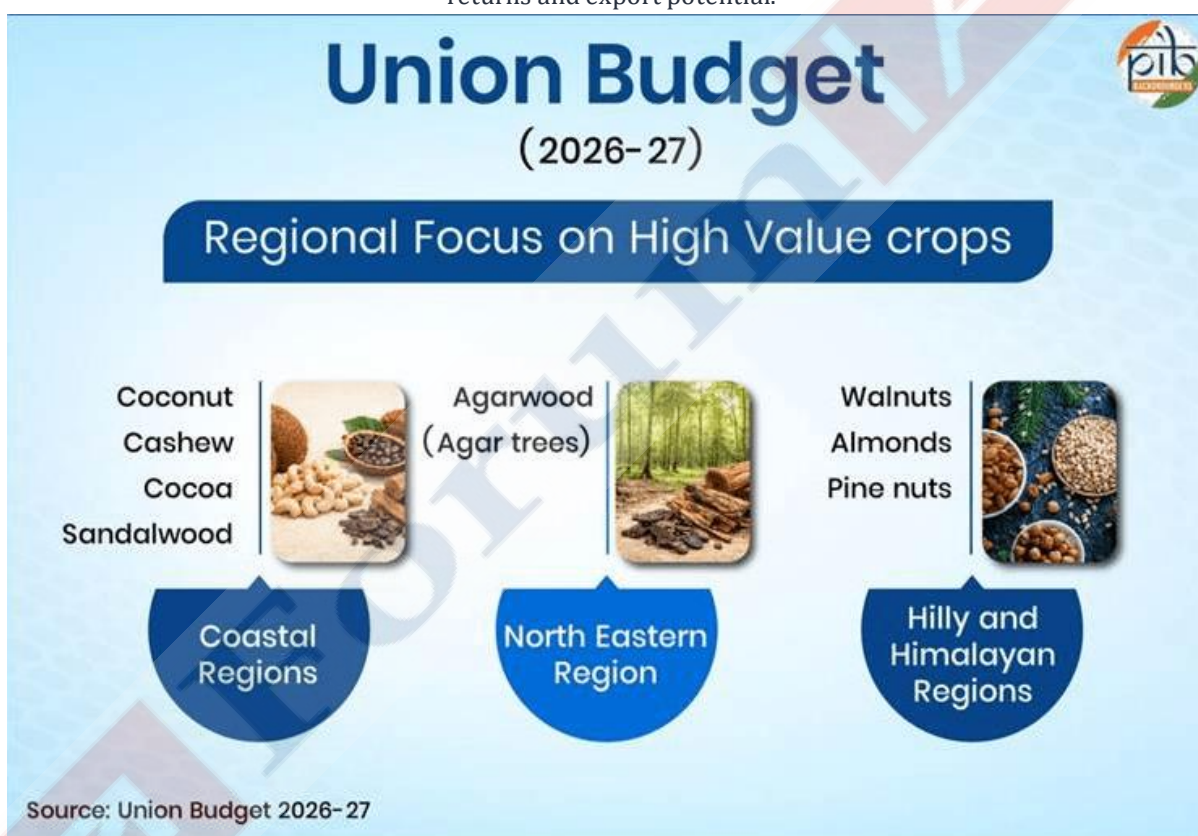
- 1. Mission for Integrated Development of Horticulture (MIDH):**
 - A centrally sponsored scheme supporting area expansion, improved varieties, subsidies for planting materials, creation of water resources, and promotion of protected cultivation (greenhouses, polyhouses).
 - Offers financial incentives for hybrid vegetables, off-season cultivation, perennial spices, cashew, cocoa, and Moringa with substantial per hectare subsidies.
- 2. Operation Greens:**
 - Targets price stabilization, improved logistics, and post-harvest management for Tomato, Onion, and Potato (TOP) crops, later expanded to all fruits and vegetables.
 - Provides support for cold storage, value addition, transportation, and market linkages to protect growers from distress sales and reduce losses.
- 3. Horticulture Cluster Development Programme:**
 - Focuses on geographic clusters for integrated, market-driven development of specific high value crops.
 - Strengthens exports, competitiveness, and productivity through infrastructure and technology support.
- 4. National Horticulture Board:** Facilitates establishment of nurseries, pack houses, cold stores, and ripening chambers, and supports Bharat GAP certification for quality and export standards.
- 5. Kisan Rail & Kisan Udaan:** Special trains and air cargo services to transport fruits, vegetables, and perishables rapidly to distant urban and export markets, with up to 50% transportation subsidy.
- 6. Minimum Support Price (MSP) & Price Support Scheme:**

- MSPs for pulses, oilseeds, nutri-cereals, and select commercial crops (including horticultural crops) set at least 1.5 times the average production cost to ensure remunerative returns.
- Price Deficiency Payment Scheme (PDPS) and Market Intervention Scheme (MIS) support growers against price volatility for perishables and horticulture crops.

7. Union Budget 2026-27 Focus on High Value Crops:

- The **Union Budget 2026-27** emphasized a crop-specific, regionally differentiated strategy to promote high-value agriculture, acknowledging its capacity to enhance farm incomes and diversify production systems.
- Targeted interventions have been proposed for **coconut, sandalwood, cocoa, and cashew** in coastal regions; **agarwood** cultivation in the North Eastern States; and **premium nuts** such as **almonds, walnuts, and pine nuts** in hilly areas.

This geographically aligned policy framework seeks to leverage region-specific agroclimatic advantages, strengthen value chain integration, and incentivise a structural shift towards crops with higher economic returns and export potential.



- The Union Budget has proposed promoting **focused cultivation** and **strengthening post-harvest processing** of sandalwood.
- It also emphasise **expanding cultivation, strengthening processing capacity, and enhancing the export potential** of agarwood from the North-Eastern Region.
- It has proposed a **Coconut Promotion Scheme** to **increase production and productivity**, including replacing ageing and low-yielding trees with improved saplings and high-yielding varieties in major coconut-growing states.

8. Directorate of Cashewnut and Cocoa Development: Dedicated institutional mechanisms have been established at the national level to promote the organised development of **cashew and cocoa cultivation** across India. he Directorate is responsible for formulating and implementing development

programmes for cashew and cocoa, and also monitors schemes carried out by state governments under the MIDH.

What Should be the Way forward?

1. Strengthen Market Linkages and Infrastructure:

- Expand direct farmer access to organized markets, contract farming, and online trading platforms such as e-NAM.
- Scale up cold storage, pack-houses, and efficient logistics for fruits, vegetables, spices, and flowers to reduce post-harvest losses and improve bargaining power.

2. Focus on Coastal Region Crops: Coconut, Cashew, Cocoa, and Sandalwood:

India has a long coastline with numerous small and large islands. These coastal regions are home to a significant population and are characterised by diverse climate, topography, soils, livestock, fisheries, and crops. Such favourable agro-ecological conditions support the cultivation of high-value crops such as coconut, cashew, cocoa, and sandalwood, thereby strengthening livelihoods in coastal areas.

3. Promote Technology Adoption & Extension Services:

- Increase outreach and training on advanced agronomic practices, precision farming, protected cultivation (polyhouses, greenhouses), and integrated pest management to improve productivity and quality.
- Support Centres of Excellence and demonstration farms for capacity building and technology transfer.

4. Expand Credit & Financial Support:

- Enhance timely access to affordable credit, subsidies, and crop insurance targeted for high value crop growers.
- Encourage investment in processing, value addition, and packaging to generate higher returns and employment.

5. Risk Management & Climate Resilience:

- Provide crop insurance coverage and disaster risk support specifically for horticultural and high value crops.
- Promote climate-resilient varieties and water-efficient cultivation practices for smallholders and rainfed areas.

6. Policy & Institutional Support:

- Streamline regulatory frameworks to support land aggregation, direct marketing, farmer producer organizations (FPOs), and export facilitation.
- Ensure robust extension services for high value crop promotion, grading, certification, and export market access.

7. Focus on Quality Standards & Export Promotion:

- Strengthen support for quality certification, grading, and phytosanitary standards needed for domestic and international markets.
- Invest in market intelligence and branding for Indian high value crops to boost competitiveness abroad.

Conclusion: The Union Budget 2026-27 marks a strategic shift towards **crop-specific and regionally aligned strategies** for promoting high value agriculture in India. Complementary measures, including institutional support, export-oriented interventions, and productivity enhancement programmes, further underscore the growing role of horticulture in advancing agricultural development. Collectively, these initiatives position high-

value crops as a key pathway for **diversification, value addition, and enhanced farmer incomes** within India's evolving agricultural landscape.

UPSC GS-3: Agriculture

Read More: [PIB](#)

Railway Sector in India - Significance & Issues - Explained Pointwise

The Indian Railways (IR), often called the lifeline of India, is central to the country's socio-economic development. Since its establishment in 1853, it has grown into one of the world's largest and busiest railway networks. **Covering over 68,000 km of track**, it serves more than 23 million passengers daily and ranks as the **fourth-largest railway system** globally, after the US, China, and Russia.



What is the Significance of Indian Railways?

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1. Economic Significance:

- a. Freight Transport:** Railways are indispensable for moving bulk commodities like coal, cement, iron ore, petroleum products, fertilizers, and agricultural goods. In FY25, Indian Railways loaded **1,617 million tonnes (MT)** of freight, generating revenue of **₹1.75 lakh crore (US\$ 20.5 billion)**.
- b. Revenue Contribution:** Overall revenue in FY25 reached **₹2.70 lakh crore (US\$ 31.57 billion)**, with **freight accounting for approximately 65%** and passenger services making up the rest.
- c. Industrial Development:** Railways ensure smooth industrial and port connectivity, enabling **efficient supply chains** for FMCG, automobiles, containerized cargo, and consumer durables thus enhancing India's economic competitiveness.

2. Social Significance:

- a. Mass Connectivity:** With over **13,000 passenger trains**, including Mail, Express, suburban, and local services, Indian Railways links urban centers and remote villages alike, bringing people together across regions.
- b. Affordability:** For millions of Indians, rail transport remains the **most cost-effective mode** of long-distance travel, ensuring accessibility and social inclusion.
- c. Employment Generation:** As one of the **largest employers** in the country, Indian Railways provides livelihoods to millions directly and indirectly, supporting national socio-economic stability.

3. Environmental Significance:

- a. Energy Efficiency:** Rail transport consumes significantly less energy per **tonne-km for freight** and per **passenger-km** compared to road or air transport, making it an environmentally friendly option.
- b. Electrification:** Nearly **97% of broad-gauge lines are electrified**, aligning with India's sustainability goals under the Paris Agreement and reducing dependency on fossil fuels.

Market Size and Economic Impact:

Passenger Traffic	<p>India maintains the record of highest number of passengers travelling by Indian Railways at over 7.63 billion during 2025-26. With these numbers, India ranks first globally, followed by China.</p> <p>Globally, of the 3 trillion passengers transported by railways, India and China combined account for >50%.</p> <p>However, >50% of passengers in India are suburban commuters. Of the bulk of Indian Railways' over 20 million passengers daily, >50% are daily commuters, mostly confined to metropolitan cities such as Mumbai, Chennai, Delhi, Hyderabad, and Kolkata.</p>
Revenue from Passenger Traffic	<p>₹94,927 crore (US\$ 11.10 billion) in FY25, up from ₹70,693 crore in FY24.</p>

Revenue from Freight Traffic	₹1.75 lakh crore (US\$ 20.50 billion) in FY25, up from ₹1.68 lakh crore in FY24.
FDI in Railway Sector	₹9,155 crore (US\$ 1.42 billion) between April 2000 and December 2024.
Capital Outlay	Budget 2024-25 allocated ₹2.52 lakh crore (US\$ 30.3 billion) for infrastructure and modernization.

Structure and Governance of Indian Railways:

- The **Ministry of Railways** oversees policy-making, budget allocation, project approvals, and strategic guidance, while the **Railway Board** manages daily operations and long-term planning.
- The Indian Railways comprises **18 operational zones**, with the South Coast Railway (SCoR) officially becoming the 18th zone. Each zone is further divided into divisions, headed by **Divisional Railway Managers**, who supervise local operations, track maintenance, safety, and revenue collection.
- **Key Responsibilities:**
 1. **Ministry of Railways:** Policy formulation, budget allocation, project approvals, facilitation of FDI.
 2. **Railway Board:** Operational oversight, modernization initiatives, safety regulation, and coordination among zones.
 3. **Zonal Railways:** Maintenance of tracks, rolling stock management, and daily passenger and freight operations.

What Have Been the Various Govt Initiatives Towards Modernization and Technological Advancements of Indian Railways?

Indian Railways has embraced **cutting-edge technology** to enhance operational efficiency, passenger experience, and safety.

1. Track Modernization:

- a. Over **55,000 km** of tracks have been renewed since 2014. Currently, 80% of the network is fit for speeds of 110 km/h or above, supported by **thick-web switches** and **long welded rails** to reduce jerks and noise.
- b. **Track Management System (TMS)** is now being used, which is an **IT-enabled platform used for monitoring, inspection, and maintenance of railway tracks**. It brings together data from ultrasonic testing, ride quality readings and track geometry into one platform, making it easier to set priorities & act in time.

- c. As a result of various initiatives towards strengthening & modernization of railway tracks – the speed potential of the Indian tracks have improved tremendously – which has led to reduced journey times, improved punctuality, and made it possible to run semi-high-speed services like the Vande Bharat Express.

SPEED (KMPH)	2014		2026	
	Running Track Km	%	Running Track Km	%
130 & above	5,036	6.3	24,173	22.5
110-130	26,409	33.3	62,482	58.2
Below 110	47,897	60.4	20,679	19.3
Total	79,342	100	1,07,334	100

Source: Indian Express

2. High-Speed & Semi-High-Speed Trains:

- a. **Vande Bharat Express:** These are **semi-high-speed (160–180 km/h)** self-propelled trains, these trains are equipped with onboard infotainment, GPS-based passenger information, automatic doors, retractable footsteps, vacuum bio-toilets, and CCTV cameras. As of April 2026, 79 Vande Bharat trains are in service. India aims to export these semi-high-speed trains to **Europe, South America, and East Asia** by 2025-26.
- b. **Bullet Train (MAHSR):** The Mumbai–Ahmedabad High-Speed Rail project is the flagship high-speed initiative using Japanese Shinkansen technology.
- c. **Amrit Bharat Trains:** While Vande Bharat targets premium segments, the Amrit Bharat initiative provides high-speed, non-AC travel with modern LHB (Linke Hofmann Busch) technology for the general public.

3. Safety Technologies:

- a. **KAVACH:** An indigenous **Train Collision Avoidance System** being rolled out over **37,000 km of track**, reducing the likelihood of collisions. It automatically applies brakes if the loco pilot fails to do so, preventing head-on or rear-end collisions.
- b. **Automatic Signaling:** Approximately **15,000 km of track** have been upgraded to automatic signaling, minimizing human error.
- c. **Safety Improvements:** About 17,500km of safety fencing has been installed, especially where trains run above 110kmph, helping prevent trespassing by people & cattle. Consequential rail accidents declined by **89% between 2014-15 to 2025-26**, though **95% of accidents** are still linked to driver errors, highlighting the importance of further technological interventions and comprehensive training programs.

4. Digitisation and Connectivity:

- a. **Wi-Fi:** Available at **6,045 stations**, connecting millions of passengers to the digital world.
- b. **SwaRail Super App:** A unified digital platform launched in 2026 that integrates IRCTC (ticketing), UTS (unreserved tickets), and Rail Madad (complaints) into a single interface.
- c. **Track Management System (TMS):** A web-enabled platform that uses ultrasonic testing data to predict track failures before they happen.

5. Sustainability & Green Energy:

- a. **Net Zero:** Indian Railways aims to be a **Net Zero Carbon Emitter by 2030**.
- b. **100% Electrification:** As of March 2026, nearly **99.6%** of the broad-gauge network is electrified, drastically reducing diesel consumption.

- c. **Dedicated Freight Corridors (DFCs):** The Eastern and Western DFCs (over 96% complete) allow heavy freight to move on separate tracks at higher speeds, reducing the carbon footprint of logistics and freeing up passenger lines.
 - d. **Hydrogen Trains:** Small-scale pilots for hydrogen-fuel-powered trains have begun on heritage routes to test zero-emission technology.
6. **Amrit Bharat Station Scheme:** Over **1,300 stations** are being redeveloped. The focus has shifted from simple repairs to creating “**City Centres.**” These include roof plazas, shopping zones, and seamless integration with city transport (Metros/Buses).

What are the various challenges and issues faced by India’s Railway Sector?

1. **Infrastructure Overload:** Many routes operate at over **150% of their designed capacity**, causing congestion, delayed maintenance, and higher accident risks.
2. **Safety Concerns:** Outdated technology, human error, unmanned level crossings, and inadequate driver training contribute to accidents. Committees such as **Kakodkar (2012), Bibek Debroy (2014), Vinod Rai (2015), and Rakesh Mohan (2010)** have recommended comprehensive reforms in safety, regulation, and human resources.
3. **Financial Constraints:** Populist fare policies and limited private investment strain finances, affecting infrastructure development, modernization, and technological upgrades.
4. **Organizational Bottlenecks:** Excessive centralization and political interference slow down decision-making and project implementation. Experts emphasize the need for **corporatization, decentralization, and autonomous zonal operations.**
5. **Human Resource and Service Quality Issues:** Staff shortages, inadequate training, long working hours, and gaps in service quality—including cleanliness, food, and punctuality—affect operational efficiency and passenger satisfaction.

What are the key reforms undertaken in the Indian Railways sector?

1. **Financial and Administrative Reforms:**
 - **Dynamic Fare Pricing:** Helps optimize revenue from passenger services while balancing affordability.
 - **Merger of Rail and Finance Budgets:** Ensures a unified approach to funding major infrastructure projects.
 - **Rail Infrastructure Development Fund (RIDF):** Provides long-term financing for rail network development.
 - **Rail Drishti Portal:** Promotes transparency and accountability by offering real-time operational insights.
2. **Organizational Restructuring:**
 - **Indian Railway Management Service (IRMS):** A unified management cadre to improve operational efficiency.
 - **Digital HR Systems:** Streamlined employee monitoring and management for better administrative control.
3. **Infrastructure Development:**
 - **National Rail Plan (NRP) 2030:** Lays out a roadmap to meet traffic demands projected for 2050.
 - **Vande Bharat Trains:** India’s semi-high-speed trains, designed to meet global standards.
 - **Dedicated Freight Corridors (WDFC & EDFC):** Supported by Japan and the World Bank to decongest passenger lines and enhance freight efficiency.

4. Safety and Security:

- **Railway Safety Fund (RSF):** Targets elimination of unmanned level crossings to reduce accidents.
- **Zero Accident Mission & KAVACH:** Advanced systems aimed at preventing collisions.
- **MeriSaheli Initiative:** Focused on ensuring women's safety on trains and stations.
- **CORAS Railway Commando Battalion:** Special units for counter-terrorism and anti-Naxal operations.

5. Freight and Logistics:

- **Freight on Priority Policy:** Ensures timely and customer-focused freight services.
- **Kisan Rail:** Dedicated trains for transporting agricultural produce efficiently.
- **Gati Shakti Cargo Terminal Policy:** Encourages development of cargo terminals to support multi-modal logistics.

6. Tourism Promotion:

- **Bharat Gaurav Scheme:** Theme-based trains designed to promote tourism and enrich passenger experience.

7. Railways (Amendment) Bill, 2024:

- Provides statutory backing to the Railway Board.
- Modernizes outdated provisions from the Indian Railway Board Act of 1905.
- Introduces independent regulators for tariffs, safety, and private sector participation.
- Grants greater autonomy to individual railway zones for efficient functioning.

Recommendations from Expert Committees:

- **Kakodkar Committee (2012):** Statutory Railway Safety Authority, non-lapsable safety fund, advanced technology adoption.
- **Bibek Debroy Committee (2014):** Outsourcing non-core activities, separating budget, Railway Infrastructure Authority.
- **Vinod Rai Committee (2015):** Independent Railway Safety Authority, Railway Accident Investigation Board, performance-linked incentives.
- **Rakesh Mohan Committee (2010):** Accounting reforms, expansion into FMCG, containerized cargo, and inter-city high-speed corridors.

What are the measures that should be taken to improve the Railway Sector?

- 1. Modernisation of Infrastructure:** Tracks, stations, locomotives, and signaling systems need significant upgrades. Emphasis should be placed on **high-speed trains and LHB coaches**, while **ICT integration** can enable real-time monitoring, mobile ticketing, and enhanced passenger services.
- 2. Safety Enhancement:** Establishing an independent **Railway Safety Regulatory Authority** is crucial to enforce strict safety standards. Efforts should also focus on eliminating manned and unmanned level crossings, upgrading signaling systems, and implementing advanced technologies like KAVACH to prevent collisions.
- 3. Integrated Multimodal Logistics:** Developing logistics parks, intermodal hubs, and door-to-door freight solutions will enhance supply chain efficiency and reduce congestion on passenger routes.

4. **Public-Private Partnerships (PPP) and FDI:** Encouraging private operators and foreign investment in both freight and passenger services can bring in global technology, expertise, and improved service standards, boosting overall efficiency.
5. **Human Resource Reforms:** Addressing **staff shortages**, improving **training programs**, professionalizing recruitment, and focusing on employee welfare and productivity will help reduce errors and operational delays.
6. **Commercial Utilisation of Railway Land:** Optimizing railway-owned land and airspace for retail, real estate, and industrial projects can generate non-fare revenue, which can be reinvested into infrastructure and modernization.
7. **Customer Service Improvements:** Enhancing punctuality, cleanliness, and food quality, along with digital ticketing and real-time train tracking, will significantly improve the overall passenger experience and satisfaction.

UPSC GS-3: Indian Economy – Transportation Infrastructure

Read More: [Indian Express](#)

Political Reservation for Women – Arguments in Favour & Against – Explained Pointwise

Women make up roughly half the world's population but are severely underrepresented in legislatures globally. As of recent data, women hold only about **26% of parliamentary seats worldwide**. Similarly, in India, women Members of Parliament constituted only about 13.63% of the Lok Sabha following the 2024 General Election. Although women's representation in the Lok Sabha has increased over time—reaching around 14% in the 17th Lok Sabha (2019–2024) – it still remains significantly below the global average of approximately 26%.

Thus, to enhance women's representation in the legislature, the Parliament of India enacted the *Nari Shakti Vandan Adhiniyam* in 2023. However, the demand for political reservation for women is not recent and has evolved over several decades.



What has been the history of political reservation for women?

- **During the National Movement:** The three women's bodies sent a letter to the British Prime Minister in 1931 seeking political reservation.
- **Constituent Assembly:** The issue of women's reservation also came up in Constituent Assembly debates. However, it was rejected on the grounds that a democracy is expected to give representation to all groups.
- **73rd and 74th amendments:**
 - The **Committee of the Status of Women in India (1971)** and The **National Perspective Plan for Women (1988)** recommended reservation of women in the local bodies.
 - These recommendations paved the way for the 73rd and 74th amendments to the Constitution which mandate all State governments to reserve **one-third (33%) of the seats** for women in the local bodies. This included reservation for women within the quotas for SC/ST categories.
- **Decades of Deadlock (1996–2023):**
 - **1996:** The Women's Reservation Bill (81st Amendment Bill) was first introduced but lapsed.
 - **1998–2008:** Various versions were introduced but faced intense pushback, often resulting in chaotic scenes in Parliament.
 - **2010:** The Rajya Sabha passed the Bill, but it was never taken up in the Lok Sabha and eventually lapsed again.
- **[Nari Shakti Vandan Adhiniyam \(2023\)](#):** In September 2023, history was made during a special session of Parliament held in the new Parliament building. The **Constitution (128th Amendment) Bill**, also known as the **Nari Shakti Vandan Adhiniyam**, was passed with near-unanimous support.

Types of Quota Systems used globally:

Legislative Quotas	<p>Seats reserved by law e.g.</p> <ul style="list-style-type: none"> ● India = 73rd & 74th Constitutional Amendment Act reserved 33% of seats for women in local bodies. ● Rwanda = Constitution reserves 30% seats for women. ● Nepal = Constitution mandates 33% representation of women ● Pakistan = About 17% seats reserved in National Assembly ● Bangladesh = Reserved seats in Parliament filled through proportional representation
Voluntary Party Quotas	<p>Political parties voluntarily reserve a share of candidacies for women e.g.</p> <ul style="list-style-type: none"> ● Sweden = Political parties follow "zipper system" (alternating men & women) ● Norway = Major parties have internal quotas (around 40%)
Candidate Quotas	<p>Laws requiring parties to field a minimum percentage of women candidates e.g.</p> <ul style="list-style-type: none"> ● France = Parties must field 50% women candidates

- **Mexico** = “Gender parity” law ensures **50% women candidates**
- **Brazil** = At least **30% women candidates** mandated

What are the arguments in favour of women reservation?

1. **Right to Equality (Article 15(3)):** The Indian Constitution itself provides the basis for this. While Article 15(1) prohibits discrimination, **Article 15(3)** explicitly allows the state to make “special provision for women and children.” Reservation is a positive, enabling provision to achieve *substantive* (real-world) equality.
2. **Deepening Representative Democracy:** A true democracy requires the legislature to mirror the population it serves. With women consistently making up over 48% of India’s population, a parliament or assembly with less than 10-15% women suffers from a “representation deficit.”
3. **Challenging the Patriarchal Mindset of Society:** Indian society has a millennia-old history of patriarchy that systematically denied women education, property rights, and a public voice. For e.g. the **Hindu Succession Act**, which gives daughters equal inheritance rights to ancestral property, was only passed in **2005**. For generations before that, women were deliberately kept economically dependent. Reservation is a form of compensatory justice for this long history of exclusion.
4. **Focus on “Welfare” vs. “Public Works”:** A substantial body of research, including work by economists like **Esther Duflo**, shows that women leaders in Gram Panchayats prioritize infrastructure that directly addresses daily survival needs. They are statistically more likely to invest in **drinking water, sanitation, healthcare, and nutrition**. In contrast, male-led councils often prioritize “visible” public works like roads and bridges.
5. **Women-centric Issues:** When women are present in legislatures, issues like maternal health, domestic violence, child nutrition, education, and gender-based discrimination receive greater legislative attention. Research shows women legislators tend to raise women-centric issues more consistently.
6. **Critical Mass Theory** Political scientists argue that women need to form at least **30-35% of a legislature** to influence policy meaningfully without being marginalized — reservation is the fastest route to crossing that threshold.
7. **Role Model Effect:** Political representation encourages girls and young women to pursue education and professional careers, creating a “ripple effect” of empowerment across society.

What are the arguments against women reservation?

1. **Violation of Principle of Meritocracy:** Opponents claim that seats should go to the “most qualified” candidate, regardless of gender. They argue that reservation, by definition, means a less qualified woman could win over a more qualified man simply because of her gender. It might lead to “perceived incompetence,” where even highly capable women are seen as having won only because of a quota.
2. **The “Proxy” Candidate Concern (Pati-Panchayat):** In local bodies, it is common to see men fielding their wives or daughters to keep a seat “in the family.” The woman may hold the official title, but the male relative exercises the actual power. Thus, it does not empower women but rather institutionalizes their subordination.
3. **Insult to Women’s Capabilities:** Ironically, this was the *original* argument made by women leaders in the Constituent Assembly. They argue that by demanding a reserved quota, women were admitting they could not win in a fair, open election. To them, true empowerment meant competing on equal terms, not being handed seats.

4. **Intra-Women Inequality** Reservation may disproportionately benefit upper-caste, educated, urban women, leaving behind Dalit, tribal, and rural women — unless accompanied by sub-quotas.
 5. **Women not Homogeneous Group like caste groups:** Women are not a homogenous community unlike a caste group. As a result, the same arguments used to justify caste-based reservations cannot be used to justify reservations for women. Women's interests **cannot be isolated from other social, economic and political strata.**
 6. **Restriction of Choice of Voters:** Reservation of seats for women would restrict the choice of voters.
- What should be the Way Forward?**

1. **Dual-Member Constituencies:** Instead of making a seat “women-only” and displacing male candidates, certain constituencies would elect **two members:** one man and one woman.
2. **Proportional Representation (List System):** Most of the world's leaders in gender parity (like Sweden or Rwanda) don't reserve individual geographical seats. Instead, they use a **Party List System.** Political parties would be legally required to alternate male and female names on their candidate lists (e.g. Position 1: Woman, Position 2: Man). This ensures 33% or 50% women in the House without having to “reserve” the seat. It also shifts the burden of finding candidates onto the political parties, forcing them to build a pipeline of female leaders.
3. **Mandatory Party Quotas:** Rather than the government reserving seats, the law could mandate that all recognized political parties must give 33% of their total tickets to women across the country. It allows women to contest from any seat they choose, rather than being restricted to “reserved zones.”
4. **Grassroot Empowerment of Women:** Strengthen women's agencies and organizations for building a progressive society with equality of opportunities among all citizens. Promote girl's participation in College/Universities student political parties and political debate to increase their political prowess for future.

Conclusion: Political reservation for women is best understood as a **necessary but not sufficient** condition for gender equality in governance. It is a powerful tool to break open the doors of political power, but lasting change requires simultaneously addressing the deeper social, economic, and cultural barriers that keep women out of politics. The most effective systems combine **legal quotas with strong party support, voter education, and safety for women in public life** — creating conditions where reservation becomes the ladder, not the ceiling.

UPSC GS-2: Indian Polity
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Anti-Defection Law – Explained Pointwise

Recently, seven Rajya Sabha MPs from a political party (out of a total of ten) switched allegiance to another party. However, they will not face disqualification under the Anti-Defection Law due to the ‘merger’ provision. In this context, it becomes important to understand the Anti-Defection Law in a comprehensive manner.



Source: Indian School of Democracy

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>
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.

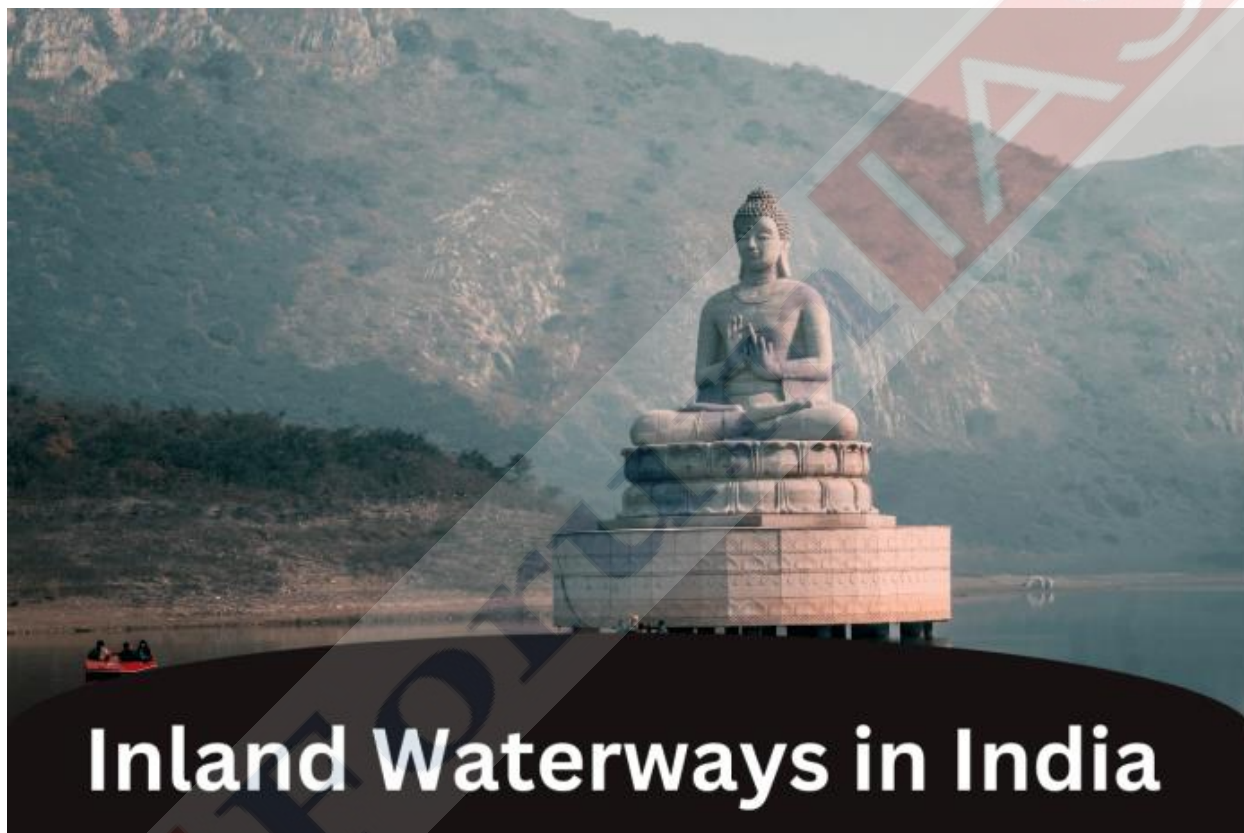
What are the reforms that should be introduced into the Anti-Defection Law?

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**.
 - b. **Independent Tribunal:** In the *Keisham Meghachandra Singh case (2020)*, the Supreme Court suggested that Parliament should consider creating a **permanent independent tribunal** to decide these cases to ensure impartiality.
2. **Limiting the Scope of the "Whip":** To prevent the law from silencing legitimate dissent, the **Dinesh Goswami Committee** recommended:
 - a. **Use of Whip Only for Survival:** The "Whip" (and subsequent disqualification for defying it) should only apply to motions that affect the **survival of the government** for e.g. for No-Confidence Motions, Money Bills (Budgets), or Votes of Thanks.
 - b. **Freedom of Conscience:** On all other Bills (social, environmental, developmental), legislators should be free to vote according to their conscience or their constituents' interests without fear of losing their seat.
3. **The Merger Loophole:** The current rule allows 2/3rd of a party to merge with another. This simply legalizes mass horse-trading. This can be prevented by:
 - a. **Raising the Bar:** Raising the threshold to **3/4^{ths}** or even removing the "merger" exception entirely.
 - b. **Resign and Re-elect:** The Law Commission recommended that any person who defects—whether individually or as part of a group—must **immediately resign** and cannot hold any ministerial post until they win a by-election.
4. **Ban on Ministerial Posts:** While the 91st Amendment bars defectors from being ministers until they are re-elected, politicians use the "Resignation Route" to bypass this. To prevent this, any legislator who resigns during the term of a House should be barred from contesting by-elections or holding a remunerative political post for the **remainder of that House's term** (e.g., up to 5 years).
5. **Enforce Strict Timelines for Decisions:** Introduce a **statutory deadline** for Speakers to decide on disqualification petitions, with **90 days** being a commonly suggested benchmark. If a decision is not made within this period, the defecting member should automatically face disqualification.
6. **Strengthen Deterrence through Severe Penalties:** To make defection a financially and politically unattractive proposition, stricter punishments are needed:
 - a. **Six-Year Disqualification:** Bar a disqualified defector from contesting any election for **six years** (a full electoral cycle), ensuring they cannot simply switch sides as a short-term career move.

- b. **Loss of Pension:** Newer proposals, inspired by recent state-level actions in Himachal Pradesh, suggest that legislators disqualified under the anti-defection law should also **forfeit their right to a legislative pension.**

UPSC GS-2: Indian Polity
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Inland Waterways in India – Explained Pointwise



India possesses an extensive network of inland waterways in the form of rivers, canals, backwaters, and creeks. These routes offer a cost-effective and environmentally sustainable way to move freight, as they use fuel efficiently and produce fewer emissions. They require minimal land, safely carry bulk/over-dimensional cargo, and maintain high safety standards across operations. Recognising this potential, the **Union Budget 2026-27** announces the operationalisation of **20 new National Waterways over the next five years** and introduces a **Coastal Cargo Promotion Scheme** that seeks to shift cargo from road and rail to water transport. This policy push is intended to increase the combined share of inland waterways and coastal shipping from **6% to 12%** by 2047. In this article we will look at the status of Inland waterways sector in India. We will look at its advantages and the initiatives taken for its development. We will delve into the challenges that the sector faces with the way ahead for the sector.

What is Inland Water Transport (IWT)? What is the status of Inland waterways in India?

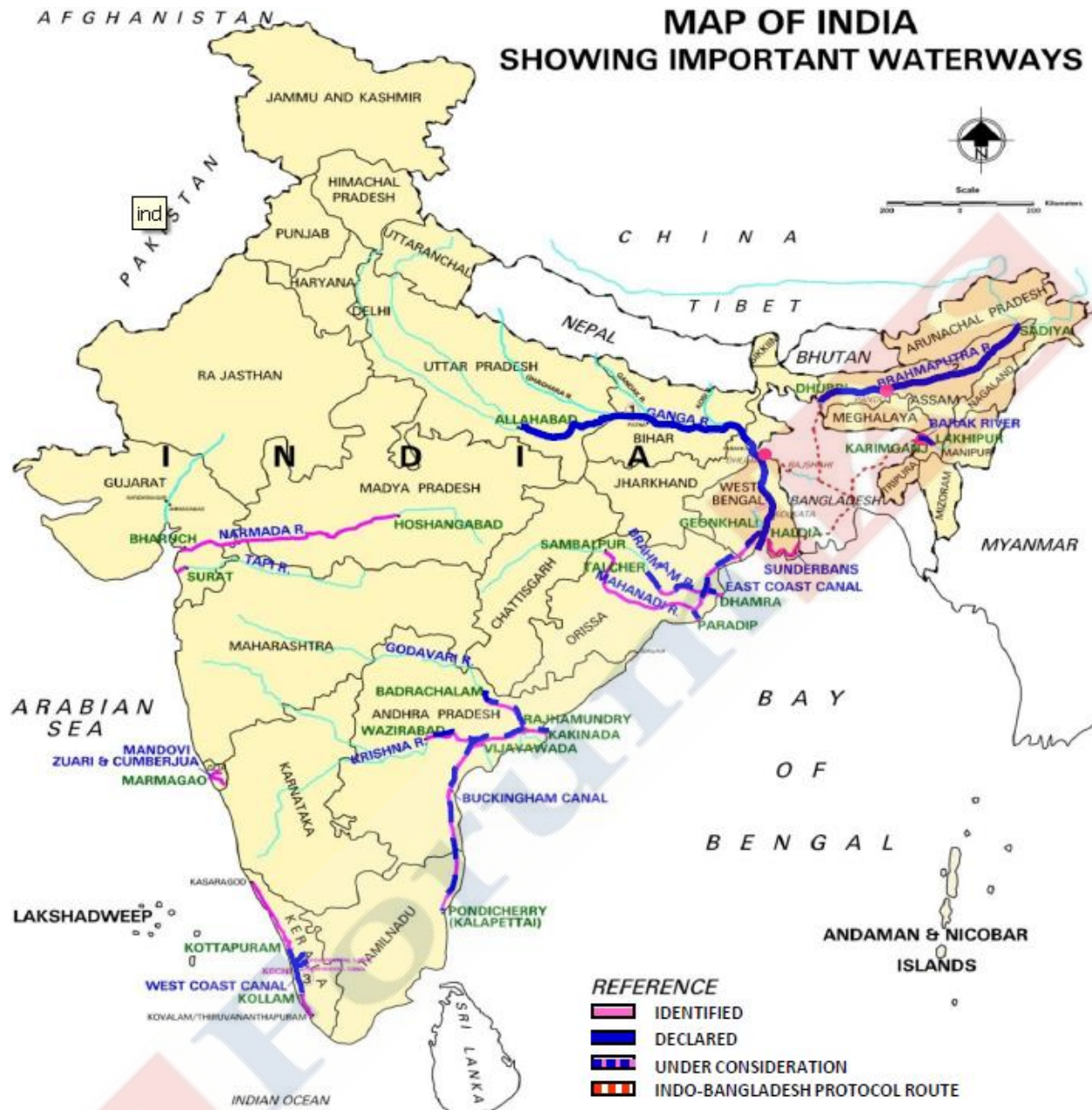
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- **Inland Waterways:** Inland waterways are navigable water channels within a country *that are not part of the sea*. These include *rivers, canals, lakes, lagoons*, and certain *river estuaries*. They are suitable for navigation due to natural or man-made features and allow vessels carrying at least 50 tonnes under normal operating conditions. They support commercial transport that ranges from natural river routes to completely engineered channels, and are commonly classified into three main types:
 1. **Open River Waterways** are natural rivers where vessels operate in a largely free-flowing channel, with limited improvements made to maintain sufficient depth for movement.
 2. **Canalised Waterways** are rivers that have been modified using structures such as locks and dams, which divide the river into calmer sections and provide more reliable water levels for transport.
 3. **Canals** are man-made waterways built specifically to carry vessels, often to avoid natural barriers or to connect different rivers and lakes, offering fully controlled conditions for inland water transport.
- **Inland Waterways in India:**

Operational NWs in India (as of March, 2026)

S. No.	State(s)	NW No.	Limits of NW
1	Andhra Pradesh	NW-4	Krishna-Godavari River Systems
2	Assam	NW-2	Brahmaputra River (Dhubri-Sadiya)
3		NW-16	Barak River
4		NW-31	Dhansiri / Chathe
5		NW-57	Kopili River
6		Bihar	NW-94
7	Goa	NW-68	Mandovi River
8		NW-27	Cumberjua River
9		NW-111	Zuari River
10	Gujarat	NW-48	Jawai-Luni-Rann of Kutch River
11		NW-73	Narmada River
12		NW-87	Sabarmati River
13		NW-100	Tapi River
14	Kerala	NW-3	West Coast Canal

15		NW-8	Alappuzha-Changanassery Canal
16		NW-9	Alappuzha-Kottayam-Athirampuzha Canal
17	Maharashtra	NW-10	Amba River
18		NW-53	Kalyan-Thane-Mumbai Waterway, Vasai Creek and Ulhas River
19		NW-83	Rajpuri Creek
20		NW-85	Revadanda Creek-Kundalika River System
21		NW-91	Shastri River-Jaigad Creek System
22		Odisha	NW-5
23	NW-14		Baitarani River
24	NW-23		Budha Balanga
25	NW-64		Mahanadi River
26	Uttar Pradesh	NW-110	Yamuna River
27		NW-40	Ghaghra River
28	Uttar Pradesh, Bihar, Jharkhand, West Bengal	NW-1	Ganga-Bhagirathi-Hooghly River System (Haldia-Allahabad)
29	West Bengal	NW-44	Ichamati River
30		NW-47	Jalangi River
31		NW-86	Rupnarayan River
32		NW-97	Sundarbans Waterway



- According to the **Economic Survey 2025-26**, as of November 2025, **cargo operations are functional on 29 National Waterways**, **cruise operations on 15 National Waterways**, and **passenger services on 23 National Waterways**. A total of **11 National Waterways support all three modes of transport**, namely cargo, cruise, and passenger movement, signifying strong multimodal integration.
- **Passenger traffic** has also grown significantly, increasing from **1.61 crore in 2023-24 to 7.6 crore in 2024-25**. Cargo transportation on NWs reached **145.84 million metric tonnes in the financial year 2024-25**, and **198 MMT (till February 2026) in the financial year 2025-26**. The combined cargo handling capacity of major ports rose from **555 million metric tonnes per annum (MTPA) in FY 2013-14 to 1,681 MTPA in FY 2024-25**.

- The **turnaround time** for container vessels declined substantially from **41.76 hours in 2013-14** to **28.5 hours in 2024-25**.

What are the advantages of Inland Waterways in India?

- 1. Lower Transportation Costs:** Inland water transport (IWT) is considerably cheaper than road and rail transport. It is reported to be 60% cheaper than road transport and 20-30% cheaper than rail.
- 2. Fuel and energy efficiency:** It is a fuel and energy efficient medium of transportation as compared to the other modes of transport like rail and road. The **Integrated National Waterways Transportation Grid Study** states that **one litre of fuel** will move **24 tons** through **1km on road, 85km on rail** and **105 km on inland water transport**.
- 3. Environment Friendly:** IWT **emits 10 times less carbon dioxide per ton-kilometer** compared to road transport, contributing to lower greenhouse gas emissions.
- 4. Less Land Requirement:** Utilization of waterways minimizes the need for extensive land acquisition. The land acquisition is often a **contentious and time-consuming process** associated with road and rail projects.
- 5. Employment Generation:** The development of inland waterways is **labor-intensive**, creating jobs in various sectors such as river conservancy, vessel operation, terminal management, and tourism.
- 6. Better connectivity:** IWT helps in creating seamless interconnectivity connecting hinterlands along **navigable river coasts** and **coastal routes**. Further, riverine routes are likely to play a crucial role in connecting the north-eastern states to the mainland.
- 7. Tourism Development:** Inland waterways can boost tourism through initiatives like **river cruises**. This helps to enhance passenger movement and also promote cultural and heritage tourism along riverbanks.












What are the government initiatives for the development of Inland Waterways in India?

<p>National Waterways Act, 2016</p>	<p>The National Waterways Act, 2016, declares 111 inland waterways as 'National Waterways (NWs)' across the country to stimulate shipping and navigation. The total length of these NWs is 20,187 km, and they are spread across 23 States and 4 Union Territories of India.</p> <p>As of March 2026, 32 National Waterways are operational, spanning 5,155 km in the country for cargo and passenger movement, and the number is proposed to increase to 52 in the next 5 years.</p>
<p>The Inland Waterways Authority of India Act, 1985</p>	<p>The Inland Waterways Authority of India Act, 1985 provides for the creation of a dedicated authority to regulate and develop inland waterways for shipping and navigation, along with related activities.</p> <p>Under this Act, the Inland Waterways Authority of India (IWAI) was established by the Central Government to develop and regulate inland waterways for shipping and navigation.</p> <p>The IWAI mainly works on developing and maintaining infrastructure for inland water transport (IWT) on national waterways.</p>

Maritime India Vision 2030

Maritime India Vision 2030 (MIV 2030) is a **strategic roadmap** released by the Government of India to modernize and expand the maritime sector by 2030.

MIV 2030 – Key targets

Key Performance Indicator		Current (2020)	Target (2030)
1	 Major Ports with >300 MTPA cargo handling capacity	-	3
2	 % of Indian cargo transshipment handled by Indian ports	25%	>75%
3	 % of cargo handled at Major Ports by PPP/ other operators	51%	>85%
4	 Average vessel turnaround time (containers)	25 hours	<20 hours
5	 Average container dwell time	55 hours	<40 hours
6	 Average ship daily output (gross tonnage)	16,500	>30,000
7	 Global ranking in ship building and ship repair	20+	Top 10
8	 Global ranking in ship recycling	2	1
9	 Annual cruise passengers	4,68,000	>15,00,000
10	 % share of Indian seafarers across globe	12%	>20%
11	 % share of renewable energy at Major Ports	<10%	>60%

Inland Water Waterways Authority of India (IWAI) aims to increase the modal share of freight movement through IWT from **2% to 5%** and traffic volume to more than **200 MMT by 2030 & 500 MMT by 2047** in line with the **Maritime India Vision 2030**.

Maritime Amrit Kaal Vision 2047

Maritime Amrit Kaal Vision 2047 is India's long-term strategic roadmap to transform its maritime sector by the year 2047.

The Amrit Kaal Vision 2047 Action Points have been defined across 11 key themes which are provided as below.



<p>Jal Marg Vikas Project</p>	<p>The Jal Marg Vikas Project, along with Jal Marg Vikas Project-II (Arth Ganga), is being implemented to improve navigability on National Waterway-1 and to support the socio-economic development of communities along the Ganga River banks.</p> <table border="1" data-bbox="451 386 1424 892"> <thead> <tr> <th data-bbox="451 386 948 436">Jal Marg Vikas Project on NW-1</th> <th data-bbox="948 386 1424 436">Jal Marg Vikas Project II (Arth Ganga)</th> </tr> </thead> <tbody> <tr> <td data-bbox="451 436 948 892"> <ul style="list-style-type: none"> The project aims to increase the capacity of NW-1 along the Varanasi-Haldia stretch of the Ganga-Bhagirathi-Hooghly river system. The project is supported by technical and financial assistance from the World Bank. Its objective is to improve navigability on NW-1. This is being achieved through fairway development to maintain an assured water depth of 2.2 to 3.0 metres for at least 330 days a year. This allows the movement of larger vessels with a capacity of 1,500 to 2,000 DWT. The project also includes the development of supporting infrastructure. This covers multimodal terminals, jetties, navigational locks, barrages, channel marking systems, and other logistics and communication facilities. A ₹5,061.15 crore project is underway for National Waterway-1 (NW-1), covering a 1,390 km stretch from Varanasi to Haldia, and is targeted for completion by 30 June 2026. Cargo movement on NW-1 has grown by 220%, increasing from 5.05 MMT in 2014-15 to 16.38 MMT in 2024-25. </td> <td data-bbox="948 436 1424 892"> <ul style="list-style-type: none"> ARTH GANGA (JMVP-II) has been planned and is being implemented as a sub-component of the Jal Marg Vikas Project (JMVP). Its objective is to support socio-economic development along the banks of the Ganga. The programme focuses on inclusive growth and aims to improve livelihoods of communities living along the river. It seeks to link people's participation and economic activities with the rejuvenation of the Ganga. Under JMVP-II, the programme provides simple logistics solutions to small farmers, fishery units, unorganised producers, horticulturists, florists, and artisans reach nearby markets. This is expected to enhance economic activity in the region and generate significant employment opportunities. As of April 2026, 66 community jetties have been developed along the river and are operational, facilitating local trade and serving approximately 10 lakh users daily. </td> </tr> </tbody> </table> <p style="text-align: center;">Source: PIB</p>	Jal Marg Vikas Project on NW-1	Jal Marg Vikas Project II (Arth Ganga)	<ul style="list-style-type: none"> The project aims to increase the capacity of NW-1 along the Varanasi-Haldia stretch of the Ganga-Bhagirathi-Hooghly river system. The project is supported by technical and financial assistance from the World Bank. Its objective is to improve navigability on NW-1. This is being achieved through fairway development to maintain an assured water depth of 2.2 to 3.0 metres for at least 330 days a year. This allows the movement of larger vessels with a capacity of 1,500 to 2,000 DWT. The project also includes the development of supporting infrastructure. This covers multimodal terminals, jetties, navigational locks, barrages, channel marking systems, and other logistics and communication facilities. A ₹5,061.15 crore project is underway for National Waterway-1 (NW-1), covering a 1,390 km stretch from Varanasi to Haldia, and is targeted for completion by 30 June 2026. Cargo movement on NW-1 has grown by 220%, increasing from 5.05 MMT in 2014-15 to 16.38 MMT in 2024-25. 	<ul style="list-style-type: none"> ARTH GANGA (JMVP-II) has been planned and is being implemented as a sub-component of the Jal Marg Vikas Project (JMVP). Its objective is to support socio-economic development along the banks of the Ganga. The programme focuses on inclusive growth and aims to improve livelihoods of communities living along the river. It seeks to link people's participation and economic activities with the rejuvenation of the Ganga. Under JMVP-II, the programme provides simple logistics solutions to small farmers, fishery units, unorganised producers, horticulturists, florists, and artisans reach nearby markets. This is expected to enhance economic activity in the region and generate significant employment opportunities. As of April 2026, 66 community jetties have been developed along the river and are operational, facilitating local trade and serving approximately 10 lakh users daily.
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<p>Sagarmala Programme</p>	<p>It aims at enhancing multi-modal connectivity including rail, inland water, coastal and road services.</p>				
<p>Interlinking of Rivers Programme</p>	<p>The project is expected to offer potential benefits to the inland waterways transport sector through navigation.</p>				
<p>Jalvahak Scheme</p>	<p>Jalvahak scheme promotes a strategic transition of cargo to inland waterways by providing incentives to vessel operators and supporting scheduled cargo services on NW-1, NW-2 and NW-16 via the Indo-Bangladesh Protocol (IBP) route.</p> <p>Under the scheme, up to 35% of the actual operating cost of a waterway journey is reimbursed.</p> <p>The scheme is expected to shift about 800 million tonne kilometres of cargo to inland waterways, which is nearly 17% of the total cargo movement currently carried on National Waterways.</p>				

<p>The Inland Vessels Act, 2021</p>	<p>It brings uniform rules for inland waterways across the country. It ensures safe navigation and protects life and cargo. It also reduces pollution from the use of inland vessels. The Act promotes transparent and accountable administration of inland water transport.</p>
<p>The Coastal Shipping Act, 2025</p>	<p>The Coastal Shipping Act, 2025 states that the Central Government publishes a National Coastal and Inland Shipping Strategic Plan within two years of the Act's commencement, and updates it every two years.</p> <p>The Strategic Plan identifies coastal shipping routes, including those that overlap with inland waterways, and specifies the operational improvements needed to make coastal maritime transport more cost-efficient for goods and passengers.</p>
<p>Harit Nauka Inland Vessels Green Transition Guidelines</p>	<p>Harit Nauka Inland Vessels Green Transition Guidelines provide a strategic framework for making inland water transport cleaner, more efficient, and future-ready in line with India's National Maritime Vision.</p>
<p>River Cruise Tourism Roadmap, 2047</p>	<p>The River Cruise Tourism Roadmap 2047 provides a structured framework to promote river cruise tourism in India. It focuses on four key pillars: infrastructure development, integration, accessibility, and supportive policy measures.</p>
<p>Digital Initiatives</p>	<p>CAR-D (Cargo Data) is a web-based portal developed by the Inland Waterways Authority of India (IWAI) to collect, analyse, and share data on cargo and cruise movement on National Waterways.</p> <p>Least Available Depth Information System (LADIS) has been introduced to share information on the minimum available water depth in navigation channels on selected National Waterways. An assured water depth is essential for the smooth movement of vessels.</p> <p>River Information Services (RIS) is an integrated digital system designed to improve safety, efficiency, and traffic management on inland waterways. It enables real-time vessel tracking, monitors waterway and navigation conditions, and provides updates on weather and water levels. It also supports communication between vessels and control centres.</p> <p>IWAI Vessel Tracker and PANI Portal together offer a digital solution for e-navigation on inland waterways. They are available as a web portal and a mobile application. The system provides updated navigation routes, water depth information, and real-time vessel tracking to support safe and efficient movement.</p>

What are the key challenges facing Inland Waterways in India?

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IWT is the most economical mode of transportation, especially for bulk cargo like coal, iron ore, cement, food grains and fertilizer. However presently the IWT sector remains underutilized at a share of 2% in India's modal mix due to the following challenges:

- 1. Infrastructural/Technical challenges:** There is challenge of Inadequate depths in Indian rivers, especially **northern rivers which suffer from high siltation**. This necessitates extensive dredging of Indian rivers.
- 2. Lack of Adequate Terminals:** There is a **shortage of modern terminals** and **maintenance, repair, and overhaul** (MRO) facilities for vessels, impacting their operational efficiency.
- 3. Environmental Concerns:** Dredging activities necessary for maintaining navigability can lead to environmental degradation (like **riverbed damage, aquatic species damage**) and community resistance due to fears of displacement or ecological harm.
- 4. Technical Limitations:** **Low vertical clearances from bridges** obstruct the passage of bigger vessels and the lack of **Night Navigation Facilities** such as **Differential Global Positioning Systems** (DGPS) hampers safe navigation at night.
- 5. Institutional and Regulatory challenges:** The IWT sector is often burdened by regulatory complexities and overlapping jurisdictions among various government agencies. **For ex-** Multiple authorities including the Central Inland Water Corporation Limited (CIWTC Ltd), port authorities and state governments.
- 6. Lack of funds:** Dredging as well as infrastructure for IWT requires huge investments. However, both public and private funding in the sector is low.

What should be the Way Forward for the development of Inland Waterways in India?

NITI Aayog has recommended the following measures for the development of Inland Waterways in India:

- 1. Streamline the governance of inland waterways:** NITI Aayog recommends streamlining the regulatory structure and bringing an overarching body to oversee Inland Water Transport.
- 2. Develop measures for year-round navigation:** Efforts should be made to develop deeper stretches of the river, i.e., at least 2.5 m to 3 m to achieve year-around navigation. Further the adequate maintenance of rivers, including continuous dredging to maintain adequate water depth for servicing shipping lines should be ensured.
- 3. Ease restrictions on river-sea movement:** Utilizing a single vessel for both inland and coastal waters, lowers transport costs and minimizes handling. The **state authorities** should **draw up coordinates for inland vessel limits under the Inland Vessel Act** for their coastal waters.
- 4. Creation of Inland Waterways transport hub in the North East:** State governments should commence work on dredging and channel stabilization to **create about 20 new ports in the Brahmaputra and Barak rivers**. The protocol for Inland Waterways between Bangladesh and India should be extended for at least 10 years to reduce uncertainty.
- 5. Strengthen public-private partnership:** Private players can undertake terminal development, cargo and passenger handling, and building low-draft vessels and related repair facilities.
- 6. Increasing economic activities along the Inland waterways:** **PM Mitra parks, Mega food parks,** should be located along the inland waterways route to encourage use of National Waterways (NWs).

Conclusion: India's inland waterways journey signifies an evident shift in how the country views its rivers, not merely as natural assets but as active instruments of growth, sustainability, and inclusion. By addressing the challenges & providing supportive policies, we can collectively shape a future where India's inland waterways emerge as prevailing passageways of economic vitality, ecological balance, and shared national progress.

Read More: [PIB](#)

UPSC Syllabus- GS 3- Infrastructure

India's Fisheries Sector – Significance & Challenges – Explained Pointwise

India ranks as the world's second-largest fish-producing nation, accounting for approximately 8% of global output. The fisheries sector constitutes a vital component of national food security, employment generation, and income enhancement, particularly across coastal and rural economies. Reflecting its growing structural significance, fisheries account for nearly 7.43% of Agricultural Gross Value Added (GVA), the highest share among the agriculture and allied sectors. In this regard, let us understand the significance of the fisheries sector & the challenges that it is presently facing, as well as the various policy intervention provided to promote its growth.



Source: Benison Media

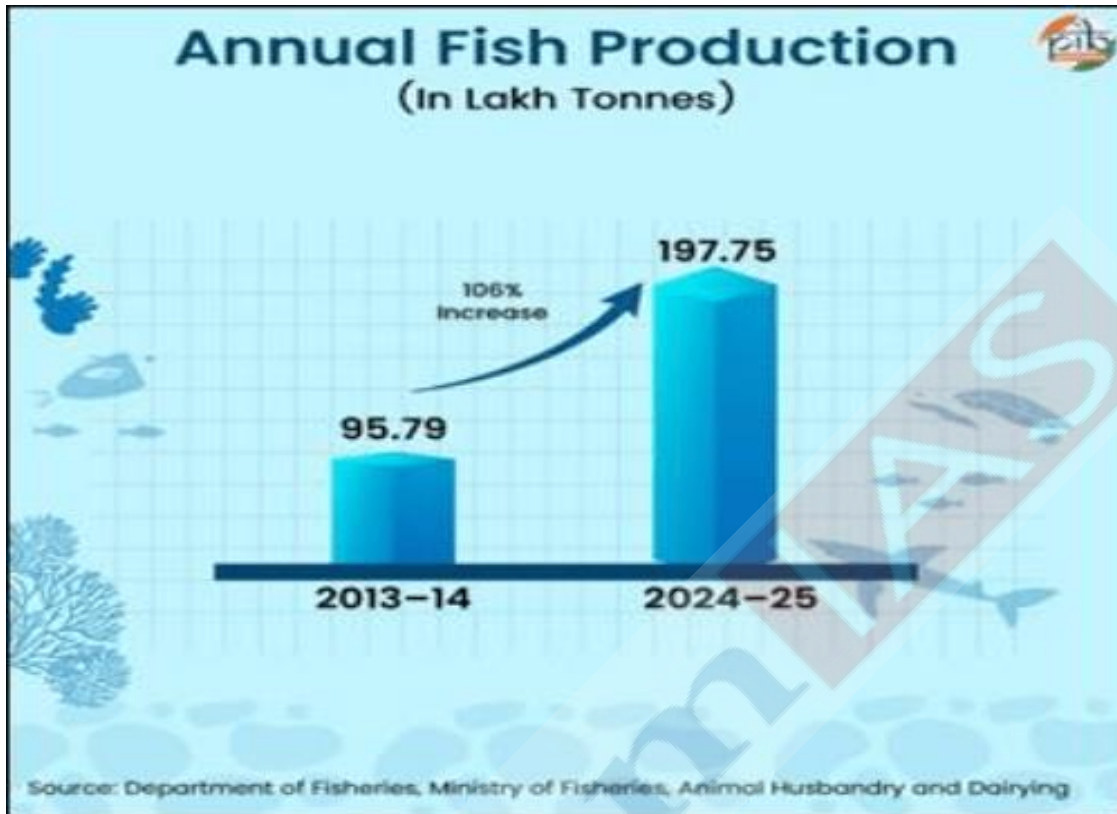
What is meant by the fisheries sector?

- The **fisheries sector** is a vital part of the global economy and food system. It involves the **harvesting, processing, distribution, and management of fish and other aquatic organisms** such as crustaceans (shrimp, crabs), mollusks (oysters, clams), and aquatic plants.
- Fisheries sector includes:

Marine Fisheries	<p>Capture of fish from the seas and oceans:</p> <ul style="list-style-type: none"> ○ Coastal Fisheries: Traditional and mechanized fishing within the territorial waters. ○ Deep-Sea Fishing: Operates in the Exclusive Economic Zone (EEZ) and high seas. ○ Mariculture: The farming of marine organisms in the open ocean or enclosed sections of the ocean.
Inland Fisheries	<p>Largest contributor to India's total fish production (roughly 70%).</p> <ul style="list-style-type: none"> ○ Capture Fisheries: Harvesting fish from open water bodies like rivers, canals, lakes, and reservoirs. ○ Aquaculture: Farming of fish and aquatic organisms under controlled conditions: <ul style="list-style-type: none"> ○ Freshwater Aquaculture: Farming in man-made ponds and tanks. ○ Brackishwater Aquaculture: Farming in water that has more salinity than freshwater but less than seawater.

What is the current status of the fisheries sector in India?

- India has one of the world's largest inland reservoir networks, spanning approximately **31.5 lakh hectares**, offering significant potential for expanding inland fisheries.
- India's extensive coastline of over **11,099 km** and an Exclusive Economic Zone (EEZ) of approximately **24 lakh square kilometres** sustain the livelihoods of more than **50 lakh members** of the fishing community across 13 maritime States and Union Territories.
- Backed by sustained interventions, total fish output more than doubled from **95.79 lakh tonnes** in FY 2013-14 to **197.75 lakh tonnes** in FY 2024-25, reflecting a **106%** increase over the period.



Source: PIB

Concurrently, seafood exports expanded significantly, reaching ₹62,408 crore in FY 2024-25. Frozen shrimp remains the dominant export commodity, with the United States and China serving as key markets, highlighting the sector’s expanding scale and growing global competitiveness.



Source: PIB

What is the significance of the fisheries sector and aquaculture?

1. Food & Nutrition Security:

- Provides high-quality protein, omega-3 fatty acids, and essential micronutrients.
- Ensures affordable and accessible animal protein for rural and coastal populations.
- Enables year-round food availability through continuous production cycles.

2. Livelihoods & Employment:

- Supports over 30 million livelihoods directly and indirectly in farming, processing, transportation, and trade.
- Strengthens rural and coastal economies and provides supplementary income to farmers.
- Empowers women through their participation in post-harvest, processing, and marketing activities.

3. Economic Growth & Exports:

- Contributes about 1-2% to GDP and 7-8% to agricultural GVA.
- Major foreign exchange earner.

4. Resource Utilisation & Potential:

- Vast inland water resources (ponds, tanks, reservoirs, wetlands) remain underutilized.
- Huge potential for coastal and brackish-water aquaculture and mariculture of high-value species such as shrimp.

5. Poverty Alleviation & Equity:

- Provides supplementary income to small and marginal farmers.
- Offers livelihood options for landless and vulnerable communities through community-based or cage farming.

6. Environmental & Ecosystem Benefits:

- Supports aquatic biodiversity when managed sustainably.
- Promotes carbon sequestration and coastal resilience through mangrove-linked systems.
- Reduces pressure on wild fish stocks, aiding marine conservation.

What issues are being faced by the fisheries sector and aquaculture?

- 1. Overfishing and Coastal Depletion:** Scientific data indicates that 4.4% of India's fish stocks are already overfished, with another 8.2% under intense pressure. The situation is critical along the northwest coast, where **54.2% of fish stocks are overfished**. The government is investing nearly **200 times more** in extractive fishing than in restoring coastal ecosystems like mangroves and seagrass, which are vital breeding grounds for fish.
- 2. High Post-Harvest Losses:** Despite a 167% surge in inland aquaculture production to nearly 4 million tonnes, the sector suffers from high Fish Loss and Waste (FLW). Marine fish losses have climbed to over 10%, while dry fish losses are critically high at 37%. These losses stem from inadequate cold-chain capacity, poor handling practices, and unhygienic landing sites.
- 3. Market Dependency (Lack of Export Market Diversification):** India exports **95% of its shrimp to the US and European markets**, creating a dangerous vulnerability. Potential tariff actions, like those from the US, could deliver a **50% blow** to the shrimp sector.
- 4. Devastating Climate Change Impacts:**
 - Increased frequency of cyclones and unpredictable rainfall patterns disrupt fishing days and damage inland ponds. Rising sea surface temperatures are causing species like sardines and

mackerel to shift their distribution, moving deeper or further north, which makes them harder for traditional boats to reach.

- In 2025, unseasonal rains and cyclones in Palghar, Maharashtra, destroyed dried fish stocks worth an estimated **₹100 crore**, pushing over 100,000 fisherfolk to the brink. Despite being granted agricultural status, these fishing communities are often denied disaster relief packages available to farmers, leaving them with negligible compensation that fails to cover losses.
5. **Limited Value Addition:** India primarily exports raw frozen shrimp, missing out on the 30-40% additional value that competitors like Vietnam capture through processing. This is due to inadequate cold-chain capacity, inconsistent farm supply, and weak integration between farmers, processors, and exporters.
 6. **High Input Costs:** Feed constitutes nearly **70% of production costs**. Rising prices of fishmeal and ingredients make it difficult for small farmers to maintain profitability.
 7. **Global Competition:** India faces stiff competition from countries like Vietnam and Ecuador, which have more integrated cold chain systems and lower shipping tariffs.

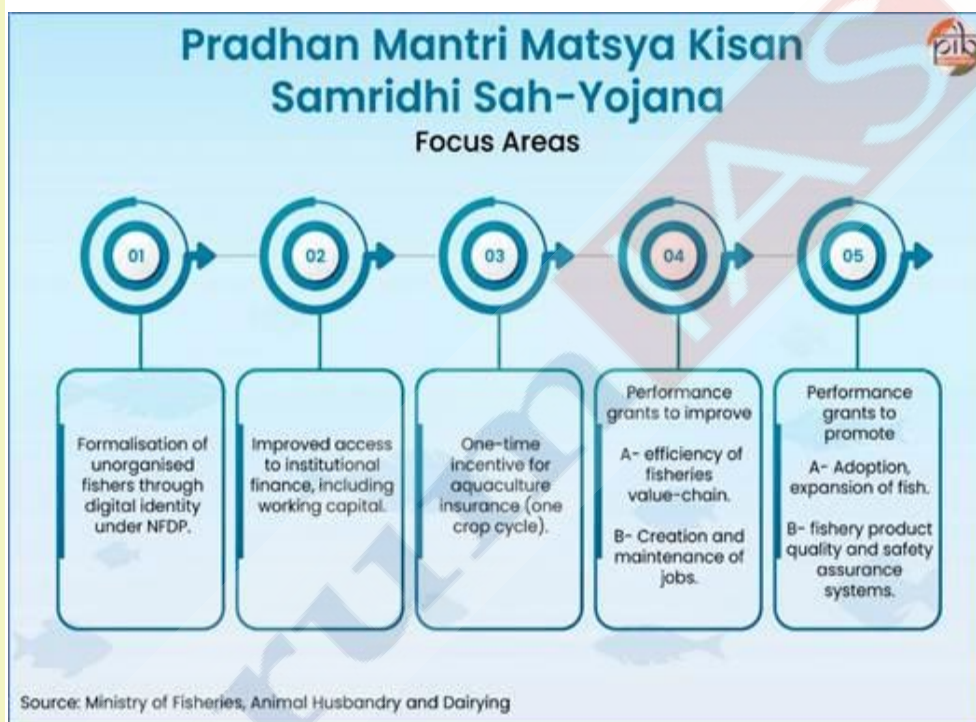
What are the various government initiatives aimed at promoting the fisheries sector in India?

<p>Blue Revolution</p>	<p>The Blue Revolution, launched in 2015, seeks to increase fish production and strengthen the fisheries value chain across inland and marine sectors by enhancing productivity, expanding infrastructure, and promoting modern practices.</p> <p>To build on these efforts and further advance post-harvest management, traceability, fisher welfare, and market linkages, the Government launched the Pradhan Mantri Matsya Sampada Yojana (PMMSY) in 2020 to accelerate the sector's transformation.</p>
<p>Pradhan Mantri Matsya Sampada Yojana (PMMSY)</p>	<p>The PMMSY seeks to enhance fish production and productivity, upgrade quality standards, promote technological modernisation, strengthen post-harvest infrastructure, and improve fisheries governance.</p> <p>The scheme prioritises technology-driven aquaculture systems that improve productivity while optimising resource use. It promotes high-density, water-efficient models such as Recirculatory Aquaculture Systems (RAS) and Bio-floc technology, which enhance output, maintain quality, enable nutrient recycling, and support environmentally sustainable fish farming.</p>

Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana (PM-MKSSY)

The **Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana (PM-MKSSY)** is a Central Sector sub-scheme implemented under the umbrella of the **PMMSY**.

The scheme facilitates the structural transformation of the fisheries sector by advancing formalisation, **expanding insurance coverage, strengthening access to institutional finance, and promoting quality assurance and traceability** across the fisheries value chain.



Kisan Credit Card for Fisheries

The Kisan Credit Card (KCC) scheme has become a pivotal instrument for advancing **financial inclusion** within India's agrarian economy. Structured to provide timely and affordable access to working capital, it enables farmers to finance the purchase of critical inputs and meet liquidity requirements for crop cultivation and allied activities.

Since 2019, the scope of the scheme has been expanded to include animal husbandry, dairy, and fisheries. The Government has raised the lending limit under the KCC scheme for fisheries from **Rs 2 lakh to Rs 5 lakh**, thereby improving access to credit for **fishers, farmers, processors, and other stakeholders**.

Fisheries and Aquaculture Infrastructure Development Fund (FIDF)	<p>FIDF was launched in 2018–19 to strengthen infrastructure across marine and inland fisheries and promote sustainable sectoral growth.</p> <p>The scheme offers a credit guarantee cover, helping fishers and entrepreneurs access much-needed credit with lower financial risk. It also provides an interest subvention of up to 3% per year.</p>
Marine Fisheries Census 2025	<p>The National Marine Fisheries Census (MFC) 2025, launched in 2025, represents a significant advancement toward fully digital, georeferenced data collection in India's fisheries sector.</p>
Mission Amrit Sarovars	<p>Under Mission Amrit Sarovar, the Government has facilitated the development of ~70,000 Amrit Sarovars, including 1,222 water bodies integrated with fisheries activities, thereby promoting fish culture, livelihood diversification, and the enhancement of aquatic ecosystems – thus, tapping the immense potential of inland fisheries in India.</p>

What should be the way forward?

1. **Deep Sea Fishing and EEZ Utilization:** With near-shore waters overexploited, the focus should be moved further out to sea. Investing in “Blue Economy” hubs in the Andaman & Nicobar and Lakshadweep Islands to serve as strategic bases for deep-sea fleets.
2. **Prioritising Community-Led Models:** Fishermen Cooperative Societies and Fish Farmer Producer Organizations (FFPOs) will be given priority for deep-sea fishing operations. This empowers small-scale fishers by enabling them to access high-value resources like tuna.
3. **Good Aquaculture Practices (GAqP):** Implementing traceability standards from “pond to plate.” This ensures that Indian seafood meets the stringent quality requirements of markets like the EU and USA, reducing the risk of export rejections.
4. **Climate Resilience and Sustainability:**
 - **Species Diversification:** Moving beyond just shrimp and carp to high-value species like seaweed, tilapia, and sea bass which are more resilient to changing water temperatures.
 - **Integrated Multi-Trophic Aquaculture (IMTA):** Encouraging systems where the waste of one species (like fish) becomes the food for another (like seaweed or shellfish), creating a circular and eco-friendly farm model.

Conclusion: The fisheries sector is a critical contributor to India's economy, supporting the livelihoods of nearly three crore people, particularly among marginalised coastal and inland communities. If we are able to address the challenges faced by the sector then we will be able to move towards a more inclusive and resilient blue economy while contributing meaningfully to achieving **Sustainable Development Goal 14: Life Below Water** by sustainably managing fisheries and aquaculture.

UPSC GS-3: Agriculture

Read More: [PIB](#)

Skill Development in India – Challenges & Initiatives – Explained Pointwise

India is at a pivotal demographic moment. With one of the youngest workforces in the world, the country has significant potential for higher productivity and growing consumer demand. Focusing on the potential of young population and realising the importance of skilling ecosystem, the **Union Budget 2026–27 positions skill development as a cross-sectoral priority.** Over the last decade, India has built one of the largest skilling ecosystems in the world. Between 2015 & 2025, India's flagship skilling programme, PM Kaushal Vikas Yojana, has trained & certified around 1.4cr candidates, Still, the employability outcomes remains uneven, and PLFS data show that wage gains from vocational training are modest & inconsistent, particularly in informal employment, where most workers are absorbed, offering limited recognition for certified skills & very less visible improvement in quality of life.



What is Skill Development?

- Skill development and upskilling play a pivotal role in enhancing the livelihoods of individuals and, by extension, the welfare of communities.
- This aspect of sustainable development is particularly crucial in rapidly developing economies like India, where a significant portion of the population still grapples with challenges such as unemployment and underemployment.

Skill Development Also Means...

Improved Confidence

Increased Income

High Employability

Better Quality of Life

Greater Career Progression

Sambhav

Source: Sambhav Foundation

What is the importance of skill development?

- 1. Enhancing Employability and Economic Independence:** Comprehensive skill development directly impacts employability. By equipping individuals with relevant, marketable skills, opens doors to new job opportunities and career paths. A report by the **National Skill Development Corporation (NSDC)** highlights that skill training increases the likelihood of employment by 15% to 25%. This rise in employability naturally translates into economic independence and improved living standards, crucial for individual and familial well-being.
- 2. Empowerment and Social Inclusion:** Skill development initiatives often target marginalised groups, including women and rural populations, thereby fostering social inclusion and empowerment. For instance, **UNESCO's** data indicates that vocational training programs have significantly increased women's participation in the workforce in developing countries, leading to their empowerment and, consequently, the upliftment of entire communities.
- 3. Fueling Economic Growth and Innovation:** A skilled workforce is the backbone of innovation and economic growth. According to a study by the **World Economic Forum**, economies that invest in their human capital tend to have higher growth rates. Skilled individuals contribute more effectively to the workforce, leading to increased productivity, which is a key driver of economic growth.
- 4. Contributing to Societal Advancement:** Skill development contributes to reducing poverty levels, as skilled individuals are more likely to secure better-paying jobs. The **International Labour Organization (ILO)** underscores this, stating that education and training are key determinants in breaking the cycle of poverty. Skilled populations are better positioned to contribute to their communities, not just economically but also in terms of social and civic engagement. This leads to healthier, more cohesive, and progressive societies.

What are the challenges or limitations in India's skill development programme?

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- 1. Employability Gap:** The employability gap remains a major hurdle. Even though more youth are “certified,” they are not necessarily “job-ready.” According to the **India Skills Report 2025**, only about **54.8%** of Indian graduates are considered employable. Many training programs still focus on outdated curricula that don’t reflect current industry needs in AI, robotics, or the green economy.
- 2. Low Placement Rates:** PMKVY 1.0, 2.0 and 3.0 had placement rates of roughly **18-23%**, dropping to about 10% in PMKVY 3.0, indicating limited translation of training into jobs.
- 3. Misalignment with Market Demand (“Skill Mismatch”):** There is a persistent disconnect between the skills taught and the jobs available. While national policy identified sectors like **construction and logistics** as having over 60% of future demand, PMKVY allocated only 22.7% of training to these areas. Conversely, the **apparel sector alone received 28.4% of certifications**, despite not being a top-priority area and actually seeing a decline in employment. This supply-demand mismatch means candidates are trained for roles where few jobs exist.
- 4. Limited Industry Participation:** For a skill programme to succeed, the “end-user” (the employer) must be involved in the design. But in India, only about **5% of enterprises** participate in formal skill development programs.
- 5. Lack of “Skin in the Game”:** Many employers do not recognize government certifications, preferring their own internal training or private certifications (like those from Google or AWS) which they find more rigorous.
- 6. Weak Apprenticeships:** While the **National Apprenticeship Promotion Scheme (NAPS)** has grown, it still accounts for a tiny fraction of the total workforce compared to countries like Germany.
- 7. Failure of Sector Skill Councils (SSCs):** SSCs were created to act as industry-facing institutions that define standards, ensure relevance, and anchor employability. SSCs have not only failed to fulfill its mandate but have largely limited themselves to standard creation.
- 8. Social Perception:** Only about **4.1%** of India’s workforce has received formal vocational training, a stark contrast to countries like South Korea (96%) or Germany (75%) because traditional degrees are still seen as the only path to social mobility. Vocational courses are often viewed as a “last resort” for those who fail in mainstream academics.
- 9. Rural Disconnect:** While 7.1% of urban youth receive formal training, the figure drops to just **3.9% in rural areas**. Training centers are often clustered in urban hubs, leaving rural youth to deal with long travel times and high opportunity costs. Advanced training in AI and data analytics is largely concentrated in Tier-1 metros.
- 10. Gender Barriers:** While female employability (54%) has actually surpassed male employability in some sectors, women remain underrepresented in high-end STEM and AI-intensive roles due to mobility constraints and socio-cultural barriers. Women face additional hurdles including limited mobility, lack of childcare at centers, and societal restrictions, leading to lower participation in high-growth technical trades.
- 11. Fragmented Ecosystem:** The entire skill development ecosystem in India is fragmented: training is delivered by one entity, assessment by another, certification by SSCs, and placement by someone else. This fragmentation has eroded trust & diffuses the responsibility without consequences.

What are the various initiatives for skill development of the labour force in India?

Skill India Mission

- Skill India Mission (SIM), launched in 2015, provides skill, re-skill, and up-skill training through an extensive network of skill development centres under major schemes.
- The mission focuses on all sections of the society across the country, and concentrate on enhancing the skills and employability of the working age population.
- Under this mission, following schemes are covered:
 1. Pradhan Mantri Kaushal Vikas Yojana (PMKVY)
 2. Jan Shikshan Sansthan (JSS),
 3. National Apprenticeship Promotion Scheme (NAPS),
 4. Craftsman Training Scheme (CTS) in Industrial Training Institutes (ITIs)

Performance of Skill India Mission

PMKVY 4.0



27.74 lakh candidates trained (as on 31 March 2026)

Jan Shikshan Sansthan



36.48 lakh+ beneficiaries have been trained (until 31st March 2026)

National Apprenticeship Promotion Scheme (NAPS)



54.41 lakh+ apprentices engaged across sectors (until 31st March 2026)

Craftsmen Training Scheme (CTS)



14.70 lakh enrolled in FY 2025-26; up by 17.5% w.r.t. FY 2022-23

Source: PIB

<p>Pradhan Mantri Kaushal Vikas Yojana 4.0 (PMKVY 4.0)</p>	<ul style="list-style-type: none"> ● Provides short-term training, reskilling, and upskilling. ● Introduces 400+ new courses in emerging technologies, including AI, 5G, cybersecurity, green hydrogen, and drone technology. ● Promotes on-the-job training and recognition of prior learning to equip workers with globally recognized skills. ● Aligns with other government initiatives such as PM Vishwakarma, PM Surya Ghar Muft Bijli Yojana, National Green Hydrogen Mission, and NAL JAL Mitra, enabling cross-sector skill impact. ● Target Beneficiaries: Individuals aged 15–59 years.
<p>Pradhan Mantri National Apprenticeship Promotion Scheme (PM-NAPS)</p>	<ul style="list-style-type: none"> ● Aims to expand apprenticeship training across industries. ● Provides 25% of the stipend (up to Rs. 1,500 per apprentice per month) through Direct Benefit Transfer (DBT). ● Expands apprenticeship opportunities in AI, robotics, blockchain, green energy, and Industry 4.0. ● Focuses on small establishments, MSMEs, aspirational districts, and the North-East Region. ● Target Beneficiaries: Individuals aged 14-35 years.
<p>Sector Skill Councils (SSCs)</p>	<ul style="list-style-type: none"> ● SSCs are industry-led, autonomous bodies that act as the primary link between the government's skilling policy and the actual requirements of the workforce. ● They were established under the National Skill Development Corporation (NSDC) to ensure that training isn't just happening in a vacuum but is directly aligned with what employers actually need. ● Core functions: <ol style="list-style-type: none"> Setting Standards: They create National Occupational Standards (NOS) and Qualification Packs (QP). Assessment and Certification: They conduct exams and practical tests to certify that a trainee has actually mastered the required skills. Labour Market Information (LMIS): They track sector-specific data to predict which jobs will be in demand over the next 5 years, helping the government decide where to allocate funds. Train the Trainer (ToT): To ensure quality at the grassroots, SSCs train and license the instructors who work at various training centers across the country.

**Jan Shikshan
Sansthan
(JSS) Scheme**

- A community-driven vocational training program aimed at women, rural youth, and economically weaker sections.
- Provides low-cost, flexible skill development programs.
- Linked with initiatives like **PM JANMAN** and **Understanding of Lifelong Learning for All in Society (ULLAS)** to ensure **inclusive skilling**.
- **Target Beneficiaries:** Individuals aged **15-45 years**.

ITIs

- ITIs are the backbone of long-term vocational education in India.
- They have been set up with the objective to **ensure a steady flow of skilled personnel to the industry.**
- To further strengthen this ecosystem, **PM-SETU (Pradhan Mantri Skilling and Employability Transformation through Upgraded ITIs)** was launched in 2025 as a **Centrally Sponsored Scheme.**



Orange Economy	<p>To strengthen the talent pipeline in high-growth creative segments, the 2026-27 Budget emphasises setting up AVGC (Animation, Visual Effects, Gaming and Comics) Content Creator Labs in 15,000 secondary schools and 500 colleges.</p> <p>With the AVGC sector projected to require nearly 2 million professionals by 2030, this initiative aims to build early-stage creative capacity, enhance industry-aligned skills, and strengthen India's presence in global digital content production.</p>
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What can be the way forward to improve skill development in India?

1. **Focus on Outcomes (Not Degrees):** Shift from measuring inputs (e.g., enrollments) to outcomes (e.g., job placement, productivity gains). Introduce an annual **Skills and Employment Survey** to track real employability.
2. **Mandatory Apprenticeships:** Transitioning from optional to mandatory apprenticeship-linked degrees (e.g., the **PM-NAPS** expansion). This ensures students spend 50% of their time on the shop floor or in an office rather than just a classroom.
3. **Industry-integrated ITIs:** Mandate industry participation in curriculum design. Modernizing Industrial Training Institutes (ITIs) through Public-Private Partnerships (PPP) where companies like Tata, Maruti, or Google “adopt” centers to install the latest equipment.
4. **Academic Credit Bank:** Under the **National Education Policy (NEP) 2020**, credits earned from a welding or coding certificate can now be transferred to a formal university degree. Embed vocational subjects as electives from Class 8 under NEP 2020, with credit transfer between academic and skill streams for seamless mobility.
5. **Global Mobility:** Signing **Migration and Mobility Partnership Agreements (MMPAs)** with countries like Germany, Japan, and France to ensure Indian certifications are recognized globally.
6. **Enforce Accountability:** India's skilling challenge is a failure of accountability, not of intent or government funding. Thus, focus on enforcing accountability in the institutions of the skilling ecosystem, especially in SSCs. Until SSCs are held accountable for employability, certification will remain symbolic rather than economic.
7. **Emphasizing Sunrise Sectors:** Skilling efforts must pivot toward high-growth areas where the demand for labor exceeds supply for e.g. focusing on training 1.5 lakh caregivers for the healthcare sector and professionals for green mobility ensures India captures emerging global services markets.
8. **Innovative Financing:** Utilizing public-private partnerships (PPP) and frameworks like the **India Skills Accelerator** (in collaboration with the World Economic Forum) to scale innovative skilling solutions.
9. **Quality of Trainers:** Create a formal “**Vocational Educator Cadre**” with mandatory industry immersion and continuous professional development to bridge the gap between teaching and industry realities.

Conclusion: When skills are embedded in degrees, when industry is treated as co-owner, and when SSCs are made answerable for placement outcomes, skilling move from fragmented welfare intervention to a pillar of national economic empowerment. Thus, focus on making India's skilling ecosystem resilient & future-ready so that it can help in translating the country's demographic advantage into broad-based, sustainable growth.

UPSC GS-3: Indian Economy

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

Health Insurance – Significance & Challenges – Explained Pointwise

According to the latest NSS data of the 80th round on “**Household Social Consumption: Health**”, while the health insurance coverage has increased considerably compared to the 2017-18 (75th round), this has not translated into a significant rise in the utilisation of the hospital care. A greater proportion of people are going to the private hospital – which is a concerning trend. Universal Health Care (UHC), envisioned by the **Bhore Committee (1946)**, remains distant for India even after eight decades. While PMJAY and SHIPs (State Health Insurance Programmes) have expanded formal coverage to over 80% of the population, they raise questions about sustainability, equity, and the future of India’s public health system.



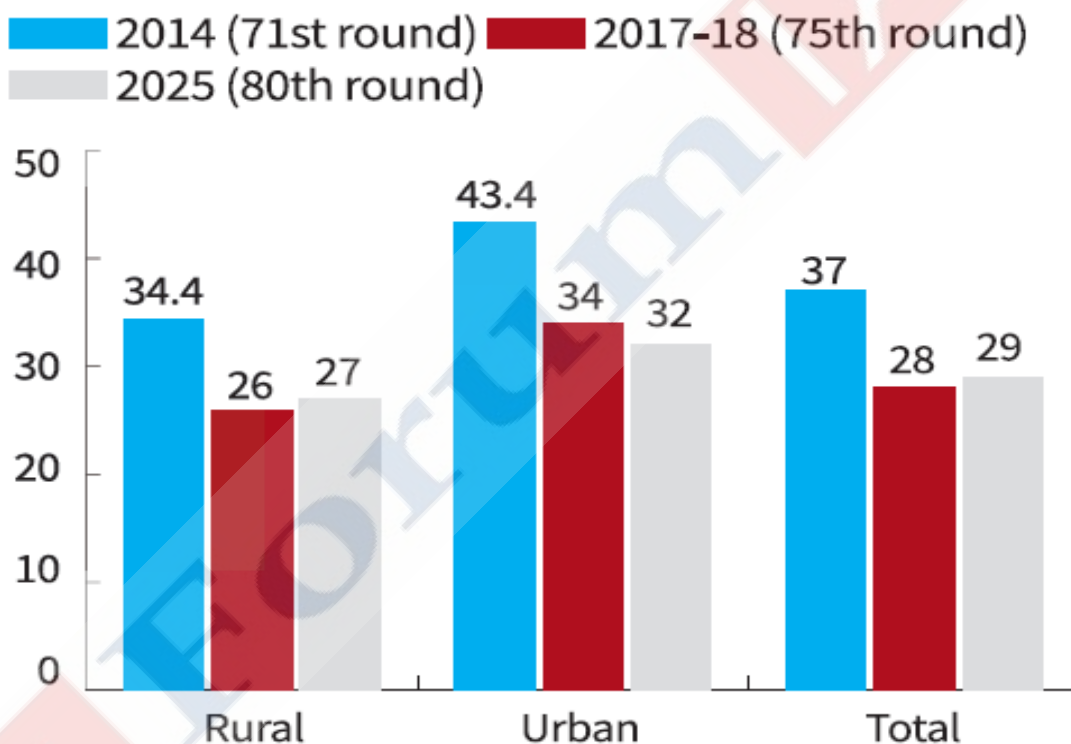
What is the Status of Health Insurance Coverage in India?

- **National coverage rate:** Currently, 47.4% of rural households & 44.3% of urban households are covered by some form of health insurance. This has been achieved by more than a 2.5 fold increase in coverage between 2017-18 & 2025 of government-financed health insurance (GFHI) schemes.
- **Ayushman Bharat-PM-JAY:** India’s largest public health insurance plan now covers 107 million families (over 40% of the population).
- **Private insurance:** Over 30% of insured individuals are covered by private plans, with premiums ranging from ₹5,000–₹20,000 per person per year.
- **Out of Pocket Expenditure (OOP Expenditure):**
 - Increased access to insurance coverage is failing to protect people from financial hardship. OOP expenditure on hospitalization has more than doubled in both rural & urban areas between 2017-18 & 2025.

- Average OOP expenditure (excluding childbirth) is Rs 31,250 in rural areas & Rs 34,259 in urban areas.
- Average hospitalization expenses in private hospitals have increased by 70% in rural areas & 80% in urban areas.
- **Hospitalization Rate:** While the insurance coverage has increased considerably, this has not translated into a significant rise in the utilization of hospital care. The hospitalization rate had decreased considerably.

Latest NSS data* reveal limited gains in hospital use and rising expenses despite a surge in insurance schemes

Table 1: Hospitalisation cases (per 1,000 persons)



Source: The Hindu

What is the Significance of health insurance?

- 1. Preventing Catastrophic Expenditure (Out-of-Pocket Expenditure):** India historically has had one of the highest rates of **Out-of-Pocket (OoP)** healthcare spending in the world. Health expenses, particularly for hospitalization (secondary and tertiary care), are a leading cause of families falling into poverty (**"Medical Poverty"**: About 7% of India's population is pushed into poverty annually due to out-of-pocket healthcare expenses). Health insurance, especially schemes like PMJAY, absorbs these unpredictable & high costs.
- 2. Access to Quality Healthcare:** Insurance enables timely access to private and public healthcare services, allowing for cashless treatment and routine or emergency procedures. It allows middle- and lower-income families to access private multi-specialty hospitals that offer shorter wait times and

advanced medical technology – thus, it levels the playing field, ensuring that “quality” healthcare isn’t reserved only for the wealthy.

3. **Reducing the Burden on Public Infrastructure:** India spends only about **1.5-2% of its GDP** on public health – one of the lowest globally. Without insurance, citizens clog public hospitals for every minor ailment and major surgery, leading to long wait times, lack of beds, and doctor burnout. When a significant portion of the population uses insurance in private hospitals, it decongests public hospitals. This allows the government to redirect its limited budget toward **primary care** rather than tertiary care.
4. **Formalizing the Healthcare Sector:** Insurance requires detailed record-keeping, standardized billing, and adherence to treatment protocols. This forces hospitals to adopt better transparency and accountability, which is essential for improving the quality of care and curbing over-billing practices.
5. **Social Impact & Health Equity:** Health insurance schemes, especially government-led ones like Ayushman Bharat, improve inclusivity by covering low-income, rural, and vulnerable populations. They contribute to improved national productivity, lower mortality, enhanced wellbeing, and reduction of catastrophic health expenditures.

What are the various initiatives to expand the health insurance coverage?

1. **Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana (PM-JAY):**
 - a. AB-PMJAY is one pillar of the larger **Ayushman Bharat scheme** launched in 2018, a health initiative designed to provide equitable health coverage, especially for rural & economically weaker sections.
 - b. PM-JAY offers ₹5 lakh annual cover per family for hospitalizations.
 - c. Covers secondary and tertiary care, both public and private hospitals nationwide.
 - d. Significant extension in 2025 to individuals aged 70 and above. Under this decision, all senior citizens aged 70 and above will receive health coverage, regardless of their income.
2. **State Health Insurance Programmes (SHIP):**
 - a. **Rajiv Aarogyasri** (AP, Telangana): Focused on BPL and serious illnesses.
 - b. **Arogya Karnataka:** Universal coverage aspirations with diagnostics, hospitalization.
 - c. **Mahatma Jyotiba Phule Jan Arogya Yojana** (Maharashtra): Provides cover up to ₹1.5 lakh per family.
 - d. **CMCHIS** (Tamil Nadu), **Bhamashah Swasthya Bima** (Rajasthan), and others provide cashless treatment and significant annual coverage.
3. **Health & Wellness Centres (HWCs):** Transformation of over 1.7 lakh sub-centres and PHCs into HWCs by 2024, offering primary healthcare and linking insurance benefits closer to communities.
4. **Ayushman Bharat Digital Mission (ABDM):** ABDM is creating unique digital health IDs (**ABHA (Ayushman Bharat Health Accounts)**) for every citizen. This infrastructure is vital for the future, as it will allow beneficiaries’ medical records and insurance claims to be linked digitally, making the entire process of enrollment and portability seamless.
5. **Key Regulatory Reforms in Health Insurance:** To streamline compliance, enhance transparency, and strengthen policyholder rights, IRDAI has introduced several regulatory reforms in the health insurance sector:
 - a. **Shortening of Moratorium Period:** Moratorium period in health insurance is a fixed timeframe after which insurance companies cannot deny claims on the grounds of non-disclosure and misrepresentation, except on grounds of established fraud. IRDAI **reduced the moratorium period from 8 years to 60 months (5 years) in 2024.**

- b. Standardized 30-day free-look period:** IRDAI introduced a standard 30-day free-look-period for policies with a term of one year or more. The free-look-period is the period given to a policyholder to assess and review the policy document.
 - c. Premium Refund on Mid-Term Cancellation:** In case of mid-term cancellation of the policy, insurers shall refund the premium or proportionate premium for the unexpired policy period.
- 6. GST Exemptions:** Removal of GST from insurance premiums (2025) to make insurance more affordable. GST exemptions on individual and family floater health insurance premiums have significantly lowered the cost for middle-class families.
- 7. 100% FDI:** Allowing 100% Foreign Direct Investment in insurance companies is bringing in global capital and technology to reach rural India.
- 8. NIRAMAYA Health Insurance Scheme:** Special affordable health insurance scheme for persons with disabilities, covering OPD and diagnostics. It provides affordable health insurance for PwD, offering up to Rs. 1 lakh coverage without pre-insurance medical test.
- 9. Mental Health Coverage:** Expansion of benefits under Ayushman Bharat and private schemes to include mental health services.

What are the Challenges related to health insurance in India?

- 1. High Out-of-Pocket (OoP) Expenditure:** Even with the growth of insurance, over 60% of total healthcare spending is still paid out-of-pocket by patients. This is due to the lack of coverage for Out-Patient Department (OPD) expenses which constitute the bulk of everyday medical costs. Most insurance only covers hospitalization. Even in public hospitals, patients incur significant expenses due to unavailability of medicines, diagnostic services, and high transport & other non-medical costs.
- 2. The "Missing Middle":** A vast segment of the Indian population is too wealthy to qualify for the highly subsidized PMJAY but too poor or informally employed to afford comprehensive private insurance. This group, estimated at around 30% of the population, often faces the greatest financial distress during a medical crisis.
- 3. Complex Exclusionary Clauses:** Private insurance policies are often highly complex, containing numerous and difficult-to-understand clauses, especially concerning Pre-Existing Diseases (PEDs). PEDs typically involve waiting periods of 2 to 4 years, meaning individuals with chronic conditions (like diabetes or hypertension) cannot access coverage immediately, defeating the purpose of buying insurance when they need it most.
- 4. Claim Denial and Disputes:** High rates of claim rejection or partial payment, particularly in the private sector, erode public trust. This often stems from ambiguity in policy wording, non-disclosure of health conditions by customers, or arbitrary interpretation of "medically necessary" treatment by insurers.
- 5. Privatisation of Healthcare & Profit-seeking Behaviour:** Health insurance in India promotes for-profit medicine. About two-thirds of the PM-JAY budget is spent on private, mainly profit oriented hospitals. India's healthcare system, however, is dominated by poorly-regulated profit seekers. Health insurance reinforces this bias rather than correcting it.
- 6. Misdirected Focus:** Health insurance also tilts the focus of the healthcare system towards hospitalisation, when investments in primary & outpatient care may be more urgent. Focus on strengthening the PHC would not only ensure accessible treatment but also reduce unnecessary hospital visits & their financial burden.
- 7. Lack of Awareness & Serious Utilisation Problem:** The combined coverage of PM-JAY & SHIP is estimated to be as high as 80% of the population. However, a large % of this population do not seem to know about these schemes or how to use them even if they are nominally enrolled. According to the

2022-23 Health Consumption Expenditure Survey – only 35% of insured hospital patients in that year were able to use their insurance. This is the main reason why there is no strong evidence linking the health insurance schemes with substantial reduction in OoP health expenditure.

8. **Discriminatory Treatment:** Targeted health insurance schemes create the issue of discrimination between insured & uninsured patients. Private hospitals prefer an uninsured patient because commercial charges for healthcare are usually higher for them – often much higher than the insurance reimbursement rates. Public hospitals, on the other hand, prefer insured patients because they get some money for their treatment. This creates the problem of discriminatory treatment & pressure to enroll for insurance on spot.
9. **Information Asymmetry and Fraud:** Both government and private schemes struggle with fraud and unethical practices. This includes excessive billing or unnecessary procedures by healthcare providers to maximize claim amounts, which, in turn, increases the overall cost of insurance for everyone. The NHA has recently recommended action against 3200 hospitals for fraudulent activities under PM-JAY.
10. **Regulatory Capacity:** While the Insurance Regulatory and Development Authority of India (IRDAI) is active, ensuring compliance across thousands of hospitals and hundreds of insurance products requires enormous regulatory bandwidth, especially in monitoring billing practices and claim settlement integrity.
11. **Impact on States' Budget:** Although GFHIs target socio-economically backward sections, many States have extended coverage to non-poor populations. The inclusion of non-poor households has increased the utilisation & placed a greater strain on States' budgets for e.g. in Haryana & WB, nearly 15% of their State health budgets are spent on GFHIs. This increased fiscal strain is also leading to delays in reimbursement to private providers.

What should be the Way forward?

1. Universal Health Coverage:

- Expand government schemes like Ayushman Bharat to cover the uninsured population (~400 million), especially focusing on outpatient care and chronic illnesses.
- **Bridge the "Missing Middle" Gap:** Encourage insurers to offer highly flexible, modular plans that allow the "missing middle" to buy specific coverage at a lower cost, with the option to add comprehensive coverage later.
- Increase public investment in primary and preventive healthcare, integrating insurance with wellness and early intervention programs.

2. Affordability & Product Innovation:

- Standardize insurance policies with transparent coverage and limits (e.g. Arogya Sanjeevani) to eliminate confusion and mis-selling.
- Develop plans tailored for seniors, women, and low-income groups, including wellness-linked benefits and cashless OPD coverage.

3. Mandatory Health Claims Exchange (HCX) Use:

The government must mandate the use of the HCX platform by all hospitals and insurers (public and private). This standardized digital exchange will drastically reduce claim processing time, minimize disputes, and reduce fraudulent billing by creating an audit trail.

4. Strengthened Regulatory Framework:

- IRDAI reforms to speed claim settlements, mandate cashless anywhere facilities, protect consumer rights, and regulate premium hikes.
- Introduce composite licenses allowing insurers to offer life and health insurance products seamlessly.

5. Increased Awareness & Literacy:

- Run public campaigns focused on the importance of insurance, especially in rural/underserved regions.
- Promote financial literacy, especially around claim processes, policy selection, and benefits.

6. Paperless and Aadhaar-Linked Claims: The goal should be for 100% cashless and paperless claim settlement for all enrolled patients, using the ABHA (Ayushman Bharat Health Account) ID for authentication and record access.**Conclusion:**

Health insurance is definitely an important pillar towards achieving UHC (Universal Healthcare), however, to truly achieve the UHC, the focus should be on not only overcoming the limitations of the existing health insurance programmes but also on investing in basic public healthcare infrastructure to deliver universal, comprehensive care.

UPSC GS-2: Social Security

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