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BAJIRAO IAS ACADEMY

Is the falling rupee a cause for alarm?

PARLEY

Over the last few days, the rupee exchange rate has fallen below ₹90 a dollar and has largely stayed at that level. Now, with Parliament running, a lot of the discourse on this has been political. However, from a policy level, it is critical to understand the economics behind the fall. Why is the rupee falling? Is it falling worse than other currencies? Does the fall hurt or help the Indian economy? And finally, is this a cause for alarm? Madan Sabnavis and Ranen Banerjee answer these in a conversation moderated by **TCA Sharad Raghavan**. Edited excerpts:

Why is the rupee falling?

Madan Sabnavis: It is falling for a variety of reasons. The first is that the fundamentals are definitely negative. When I talk of fundamentals, I am talking in terms of a higher trade deficit, possibly a higher current account deficit, and the movement of FPIs (foreign portfolio investments), which have tended to be negative rather than positive. These are the fundamental factors and these also get reflected in terms of our forex reserves coming down.

But I think the factor which has been driving the rupee down is more on the tariff front, where there were expectations that there would be a deal between India and the United States. That seems to be on the anvil, but still has not quite taken place. I think that is the reason why the sentiment has turned in the other direction.

In this entire business of the rupee depreciating, a critical factor which sort of moderates the level of fall of the rupee has been the intervention of the RBI (Reserve Bank of India). Now, we have seen that the intervention of the RBI in the forex market has tended to be limited. It does look like the fall of the rupee is within the acceptable limits of the RBI, though we should say upfront that the RBI maintains it is not defending any rate, but is out there to check any excess volatility in the market. These are the reasons why we have seen the rupee crossing from ₹87 to ₹88 to ₹89 and now ₹90.

Ranen Banerjee: The rupee is falling for two or three reasons. The primary one is ongoing portfolio outflows, which are increasing the demand for dollars. Second, our import growth has been higher than the export growth. And that also boosts the demand for the dollar. The current account deficit has been higher. So I think it's the demand and supply of dollars and how much the RBI releases from its reserves to meet the demand. The uncertainty on the tariff agreement creates a forward-looking challenge. And it may impact the economy also. So that may influence some sentiment of the portfolio investors, who may be withdrawing from the Indian market. But I don't think that is the key reason why portfolio investors are withdrawing. I think the key view that the investors are taking is that the valuations are higher and that they could have a higher return in other economies by deploying that capital in the immediate term. So, that is influencing portfolio flows. And of course, the uncertainty on the trade front adds to that sentiment.

GETTY IMAGES

Does a falling rupee indicate a weakness in the economy?

MS: Definitely not. Because if you are looking at the overall state of the economy, if you go by the performance on the GDP front, it has been fairly remarkable, the kind of growth rates we have seen in the first half of the year. So, I don't think it has anything to do with the real economy. The balance of payments is fairly robust. The RBI Governor had also pointed out that adforeign reserves are covering 11 months of imports. So, I don't see any problem out there. It is more of the sentiment that has been driving the rupee downwards.

RB: I don't think that there has been any structural change in the economy that is influencing the rupee. The fundamentals are very strong. We are having robust growth. Inflation is benign. The monetary policy is quite accommodative. The rate cuts have been done. The fiscal consolidation is in place. Capital expenditure is going on. The government is adhering to the fiscal roadmap that it had laid down. So I don't think structurally anything major has changed. It is my belief that it is more transient factors that are impacting this (fall of the rupee), rather than structural factors.

> I don't think we are in a situation where we need to be alarmed. We are the worst performing currency in the last three months, maybe. But if we take a two-year horizon, then I think other than the Korean currency, all other emerging market currencies have possibly depreciated against the dollar much more than the rupee.
>
> RANEN BANERJEE

Do you feel that there is any benefit to India from a falling rupee?

MS: The only benefit which we would be getting on account of the falling rupee is more theoretical in nature. When I say theoretical, economic theory says that when the rupee depreciates, your exports gain a competitive advantage over the other countries. From the point of view of exports, if other currencies are not depreciating, but the rupee is depreciating, maybe around 4-5%, which we have seen in the current calendar year, this is an advantage for our exporters. The higher tariffs that have been imposed by the U.S. could be negated to a certain extent by the price competitiveness that we get on account of the rupee depreciation.

Imports will become more expensive. Every commodity which we are importing is going to become more expensive by 4-5%. But purely from the point of view of inflation, if you look at the components of the CPI (Consumer Price Index) and what really gets affected on account of imports, our calculation shows that 5% depreciation on a sustained basis could push up inflation by something like 0.3-0.4%, which is not really very high. And given the fact that inflation is at an all-time low in India, this should not be a major worry for us.

RB: The exporters may be happy that they are having a better realisation. And also, they may be happy that given some of the tariff headwinds, our products may become a little bit more competitive. If you look at, say, services, services exports is a very large segment of our economy and it has been doing very well, growing very fast. So companies that are exporting services are going to have better bottom lines in rupee terms. Who knows, they may be willing to share some of those benefits with their employees as higher bonuses. And then that may lead to further support for consumption. So, there are various channels through which benefits could come.

But then there are downsides also. We are a large importer. And therefore, during any rupee weakness, we have to shell out more rupees. And there could be some additional expenses that need to be done by companies that are importing. And if the demand holds, then to a very small extent, there could be some bit of imported inflation too, but it may not be very large. So we can't really say whether it is benefiting India or not because different segments of the economy get impacted differently.

Is the falling rupee alarming and should the RBI step in or let it fall?

MS: Every time the rupee reaches a new low, there is a tendency for a certain amount of alarm. And if the rupee is going down and there is little interference from the RBI, there would be a natural tendency for this to become self-fulfilling and the rupee will fall further. But in terms of internal dynamics, the currency should not be a major worry. From the point of view of exports, no alarm. From the point of view of inflation, no alarm.

But I think what is a worry is that when we have such a volatile currency, it becomes a bit difficult for both exporters and importers to do business, because normally we expect the rupee to be stable. The rupee should actually be appreciating, given the fact that the dollar is weakening. So, to that extent, I think it is definitely a disruption for us, especially for those who are in the business of importing inputs. But it is not going to rock the overall economic performance of the economy.

There may also be some pressure on the fiscal balance, but we will have to wait for the revised budget figures to understand the extent of the impact. There would definitely be some problem even in terms of fertilizer imports. But we don't expect that to actually upset the fiscal arithmetic too much.

RB: I don't think we are in a situation where we need to be alarmed. We are the worst performing currency in the last three months, maybe. But if we take a two-year horizon, then I think other than the Korean currency, all other emerging market currencies have possibly depreciated against the dollar much more than the rupee. So, we must not forget that we almost had a flat exchange rate for over 12 months prior to the last six months. So I don't think that there is need for alarm.

To listen to the full interview **Scan the code or go to the link** www.thehindu.com

WHY THE RUPEE HAS FALLEN

- **The value of the INR is market-determined, with no target for a specific level or band**
- **The rupee's fall is largely due to global factors; currencies of several countries are under pressure**
- **The US dollar has been strengthening in recent months due to uncertainty sparked by US President Trump's tariff policy**
- **INR is also under pressure due to narrowing interest rate differential between the US and India**
- **Foreign portfolio investment outflows of around $19.5 billion from India between October and January also contributed to the fall**
- **India's high goods trade deficit has also exerted pressure on INR**

Why is the Rupee Falling? An Economic Perspective

The recent depreciation of the Indian rupee—slipping below **₹90 per U.S. dollar**—has triggered intense political and public debate. However, the movement of a currency is fundamentally an economic issue driven by trade balances, capital flows, investor sentiment, and policy responses. The rupee's current decline must be understood in the context of both domestic fundamentals and global market conditions.

Structural and Fundamental Drivers of Depreciation

1. Widening Trade and Current Account Deficits

India's **trade deficit** has increased as **import growth outpaces export growth**, pushing up demand for dollars.

- A **higher current account deficit (CAD)** means India requires more foreign currency to pay for goods and services.
- This structural demand for dollars naturally exerts downward pressure on the rupee.

2. Decline in Foreign Portfolio Investment (FPI)

There has been a phase of **consistent portfolio outflows**, driven by:

- Rising equity valuations in India, making investors shift to higher-return markets.
- Global investors seeking better short-term returns in other economies due to higher interest rates abroad.

This capital flight increases the market demand for dollars, weakening the rupee.

3. Sentiment Shock due to Uncertain Tariff Negotiations

Expectations of a pending **India–U.S. tariff agreement** initially supported positive market sentiment. However, delays in finalising the deal have caused sentiment to weaken.

- This forward-looking uncertainty has influenced some FPIs to pull back, exacerbating pressure on the rupee.

Role of the RBI: Limited Intervention

The **RBI intervenes only to curb excessive volatility**, not to defend a fixed exchange rate.

- Its limited intervention suggests the depreciation remains within its comfort zone.
- India's **forex reserves cover 11 months of imports**, as noted by the RBI Governor, indicating no structural weakness.

Does a Falling Rupee Signal Economic Weakness?

Not Necessarily

Both experts emphasise that a depreciating rupee does **not** reflect a weakening economy:

- GDP growth remains robust.
- Inflation is benign.
- Fiscal consolidation is on track.
- Capital expenditure is strong.

Thus, the fall is driven more by **sentiment and transient factors**, not structural deterioration.

Impact on the Economy

1. Potential Benefits

- **Exports become more competitive**, gaining a price advantage of around **4–5%**.
- **Services exports**, a major contributor to India's economy, see improved rupee realisations.
- Firms with global earnings may pass on higher profits through bonuses, boosting consumption.

2. Downsides

- **Imports become costlier**, pressuring margins in import-dependent sectors.
- A 5% depreciation could raise inflation by **0.3–0.4%**, though still manageable.
- Currency volatility complicates planning for importers and exporters.

The fall of the rupee below ₹90 is **not a cause for alarm**. While short-term pressures and market sentiment are driving depreciation, India's economic fundamentals remain strong. As long as volatility is contained, the rupee's movement reflects natural market adjustments rather than a structural crisis.

Why human-rating matters as India prepares for Gaganyaan

Human-rating emerges as a crucial process ensuring that space systems like LVM-3 can safely carry humans by adding redundancy, robust abort capabilities, and rigorous testing; as Gaganyaan approaches, ISRO upgrades and certifies the LVM-3 for human-rating

Unnikrishnan Nair S.

The story so far:

As India moves closer to flying astronauts as part of Gaganyaan, human-rating has emerged as a central but oft-unseen part of the story. Launch vehicles like LVM-3 already fly satellites safely but carrying people demands a lower tolerance for risk and a different way of thinking about failure.

What's the definition of human-rating?

Human-rating is the rigorous engineering and certification process that makes sure a space system, like a launch vehicle or a crew module, can safely carry humans to space. As a result, human-rated systems have an acceptable level of risk.

According to NASA standards, this is a 0.2% chance for a catastrophic event causing loss of crew during the ascent and descent phases of flight.

As part of the human-rating process, engineers attach redundant critical systems, e.g., triple or quadruple redundant flight computers; robust abort capabilities throughout the time of ascent, like the crew escape system; fault tolerance to single failures; and a reliable environmental control and life support system for the crew cabin.

They also exhaustively test, verify, and document far beyond what's required for expendable cargo rockets, all to achieve the stated loss-of-crew probability.

Why is human-rating challenging?

The endeavour of escaping the earth's gravity is much harsher and less forgiving than flying through the atmosphere, like aeroplanes do. In fact, between flying through the atmosphere and entering the vacuum of space, rockets have to accelerate to 28,000kmph in just 8-10 minutes, experience intense vibrations, and withstand high structural loads at the point of maximum dynamic pressure.

The SpaceX Falcon 9 rocket paired with the Crew Dragon spacecraft has achieved a 100% success rate across 20 of its orbital human spaceflights. These NASA Commercial Crew rotations to the International Space Station and private missions, including the Axiom-4 mission that Indian astronaut Subhanshu Shukla piloted.

China's Shenzhou human spaceflight programme, operated by CMSA and launched aboard the Long March 2F rocket, has completed 16 crewed orbital missions with a record of success since its inaugural crewed mission in 2003. However, its flawless run was compromised by the Shenzhou-20 mission in November, when the spacecraft was damaged by space debris. While the crew returned safely aboard the Shenzhou-21 capsule, the damaged Shenzhou-20 capsule was left docked to the Tiangong space station.

Why aren't all launch vehicles human-rated?

Human-rating a launch vehicle is essential to ensure the astronauts' safety but it's technically challenging and more expensive.

The certification process imposes enormous costs because it requires additional systems, rigorous testing, and extensive documentation. These provisions also increase complexity and rocket mass, potentially reducing payload performance and sometimes introducing new modes of failure.

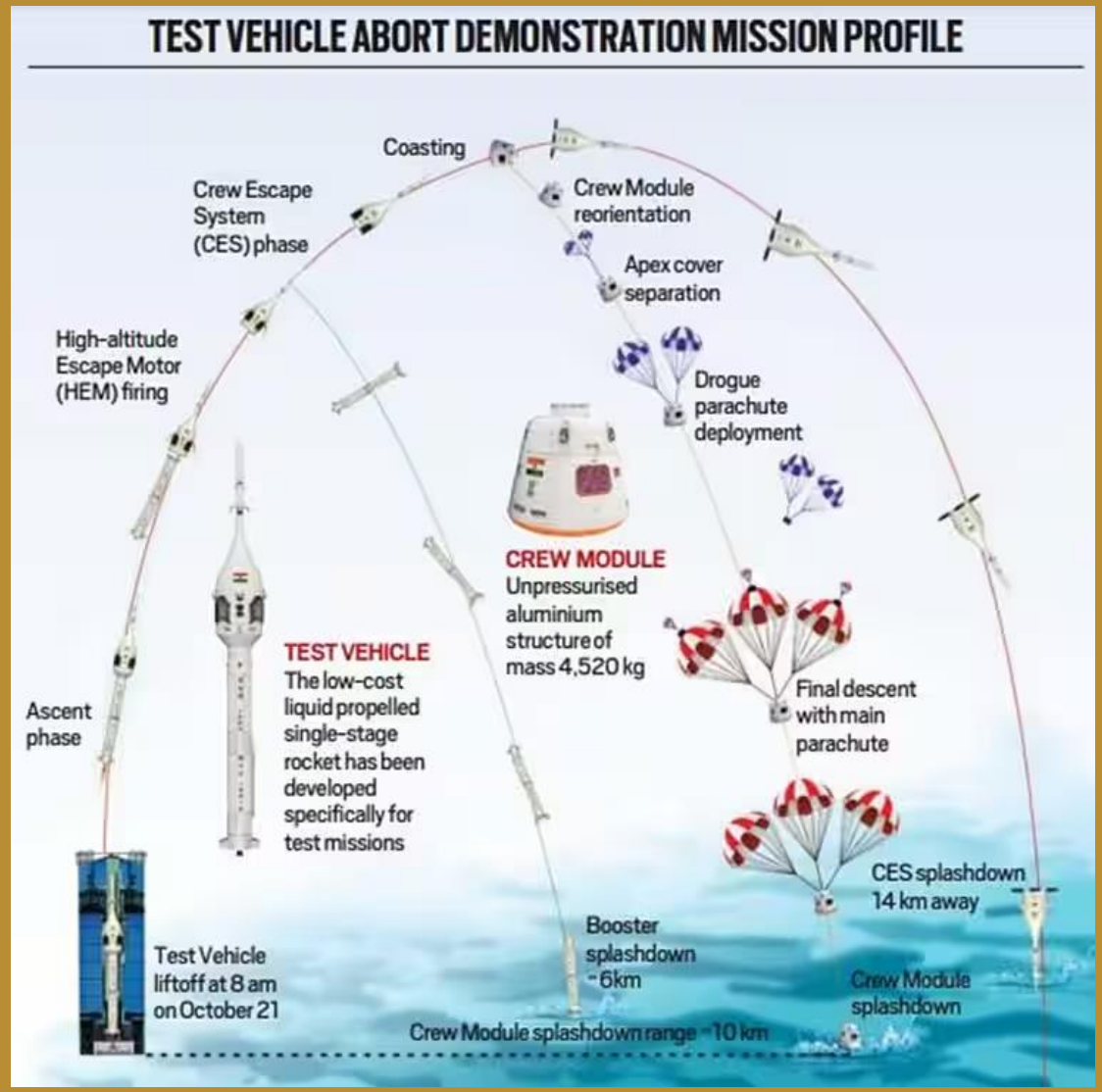
For a cargo mission, the priority is to maximise the mass of the payload (e.g. satellite or supplies) delivered to the desired orbit at the lowest possible cost per kilogram. Adding the mass and complexity of additional systems required for human-rating for a cargo mission would however drive up the price for customers.

Which vehicle is being human-rated for Gaganyaan?

Gaganyaan Mission and Human-Rating of ISRO's LVM-3

Gaganyaan represents **India's first human spaceflight programme**, aimed at sending Indian astronauts (Vyomnauts) into low Earth orbit on an indigenously developed human-rated launch vehicle.

As India moves closer to achieving this milestone, **human-rating**—a rigorous process to ensure astronaut safety—has become a central pillar of the mission.



What is Human-Rating?

Human-rating refers to the **engineering and certification process** that ensures a space system can safely carry humans. It establishes an *acceptable level of risk*, often quantified.

- As per **NASA standards**, acceptable risk is a **0.2% chance of catastrophic failure** causing crew loss during ascent or descent.

- Human-rated systems incorporate:
- **Redundant critical systems** (triple/quadruple redundant flight computers)
- **Abort capability** throughout ascent (e.g., ISRO's Crew Escape System)
- **Environmental control and life support systems (ECLSS)**
- **Fault tolerance to single-point failures**
- Extensive test–verify–document cycles far beyond expendable cargo rockets.

This ensures a significantly reduced tolerance for risk compared to satellite-launching vehicles.

Why Human-Rating is Challenging

Achieving orbit is an inherently hostile endeavour. Rockets must:

- Accelerate to **~28,000 km/h in 8–10 minutes**,
- Withstand intense vibrations and structural loads,
- Pass through maximum dynamic pressure zones.

In contrast, commercial aircraft cruise gently at **<1,000 km/h**, tolerate engine failures, and rely on vast safety margins.

Thus, even the most reliable launch vehicles achieve **98–99.5% success**, compared to one fatal accident per **10–20 million flights** in aviation.

Human-Rated Launch Vehicles Worldwide

Only a few operational vehicles are currently human-rated:

- Russia's **Soyuz-2** (98% success; >150 crewed missions)
- China's **Long March 2F** (16 successful missions since 2003; minor anomaly in Shenzhou-20)
- SpaceX's **Falcon 9 + Crew Dragon** (100% success across 20 human missions)

NASA's **Atlas V** and **Space Launch System (SLS)** are progressing through certification.

Human-Rating of LVM-3 for Gaganyaan

India has chosen **LVM-3**, its most powerful and reliable rocket, for human-rating. Once certified, it will be called **HLVM-3**.

Key Upgrades for Human-Rating

ISRO has introduced:

- **Strengthened engines and subsystems**
- **Backup and redundant safety systems**
- **A high-reliability architecture**
- **Extensive ground and flight testing**
- A **Crew Escape System** capable of rapidly pulling the crew module away during launch anomalies

LVM-3 already has **seven consecutive successful missions**, including **Chandrayaan-3**, making it ideal for Gaganyaan.

Strategic Significance

All propulsion systems—**S200 boosters, Vikas engines, and the C25 cryogenic stage**—are indigenous, aligning with **Atmanirbhar Bharat** goals and enhancing strategic autonomy in human spaceflight.

Invisible epidemic: why air pollution is India's largest health threat?

India's air quality crisis is both widespread and deeply entrenched; the scientific evidence is overwhelming, and the health impacts are undeniable; country must now recognise clean air as a fundamental right essential to equitable growth and a non-negotiable national priority

Sudheer Kumar Shukla

Air pollution in India is no longer a winter irritant confined to the northern plains. It has become a persistent, nationwide public health emergency that affects every demographic group and nearly every organ system. Across the Indo-Gangetic plain, and increasingly in fast-growing urban centres elsewhere, dangerous concentrations of particulate matter are shaping disease patterns, slowing childhood development and silently reducing life expectancy.

India's air quality crisis is both widespread and deeply entrenched. Of the 256 cities monitored in 2025, 150 exceeded the national PM 2.5 standard as per a report by the Centre for Research on Energy and Clean Air. For most urban residents, breathing unhealthy or hazardous air is now a routine part of the year. The Indo-Gangetic plain remains the worst affected. In 2025, Delhi recorded seasonal PM 2.5 levels of 107–130 µg/m³—far above India's 24-hour limit of 60 µg/m³ and the World Health Organization guideline of 15 µg/m³.

Flawed index, outdated ceiling

India's official Air Quality Index (AQI) continues to cap values at 500, although real-time pollution levels in Delhi and other cities often exceed this threshold. The cap — introduced over a decade ago — was intended to avoid public alarm and was based on the belief that health impacts beyond 500 would be uniformly severe. Consequently, government platforms collapse all extreme pollution into one "severe" category, even as international trackers such as IQAir routinely show values above 600 and occasionally beyond 1,000. Experts have repeatedly pointed out that India's AQI relies on outdated thresholds and instruments, and that the scale requires

Gasping for air: Air pollution in India is no longer a winter irritant confined to the northern plains. It has become a persistent, nationwide public health emergency that affects every demographic group and nearly every organ system. SUSHIL KUMAR VERMA

Respiratory illness: Respiratory illnesses remain the most visible consequence of toxic air. Nearly 6% of Indian children now suffer from asthma. Clinical data from AIIMS reveals that a modest 10 µg/m³ increase in PM 2.5 can cause a 20–40% spike in paediatric

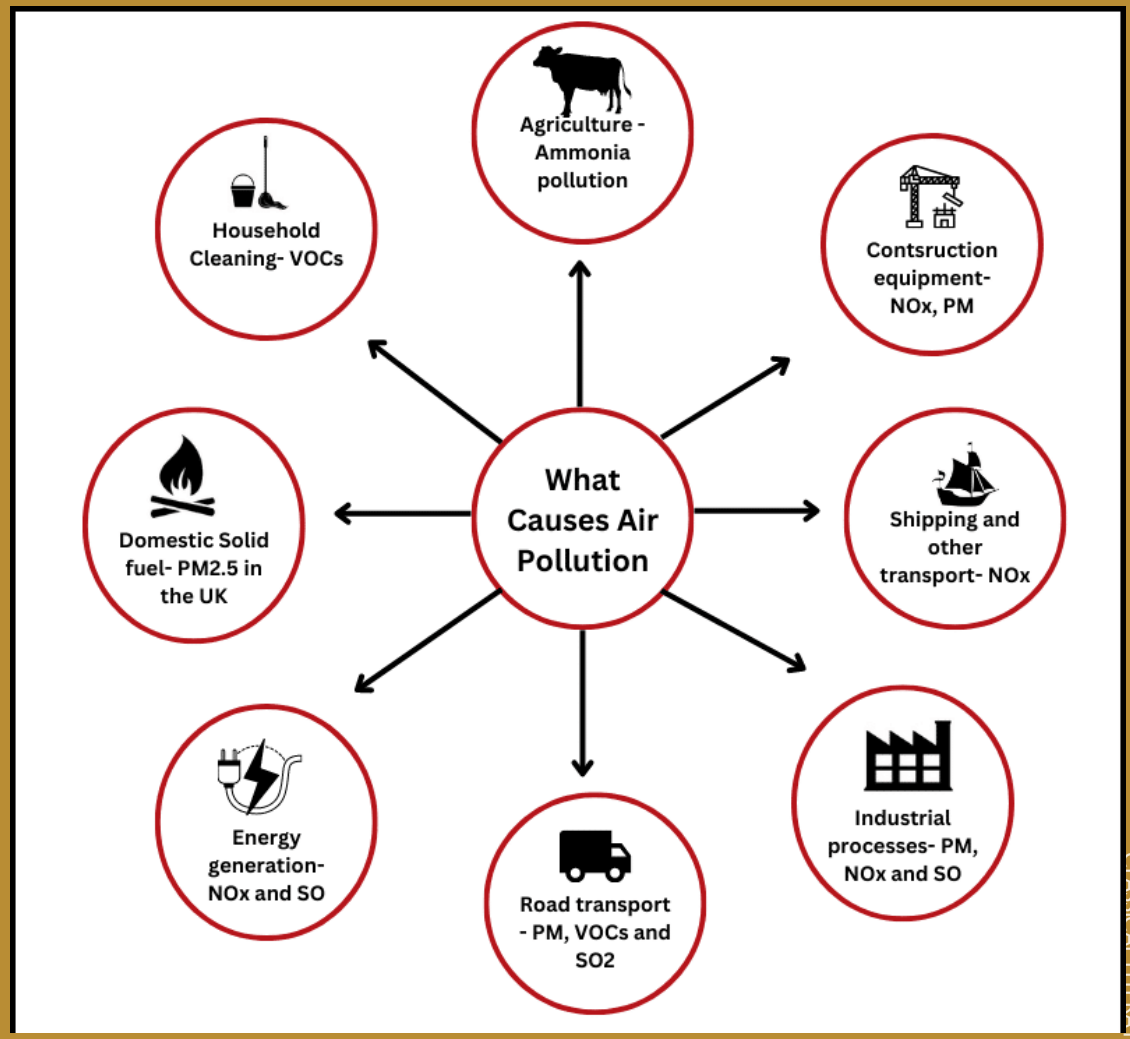
Air pollution contributed to nearly two million deaths in 2023, as per the latest State of Global Air Report, primarily from cardiovascular disease, stroke, COPD and diabetes

now essential, which should include the following aspects:

Transport transformation: Large-scale electrification of buses, taxis, auto-rickshaws and two-wheelers; shifting freight from diesel trucks to rail and electric fleets; real-world emissions

THE GIST

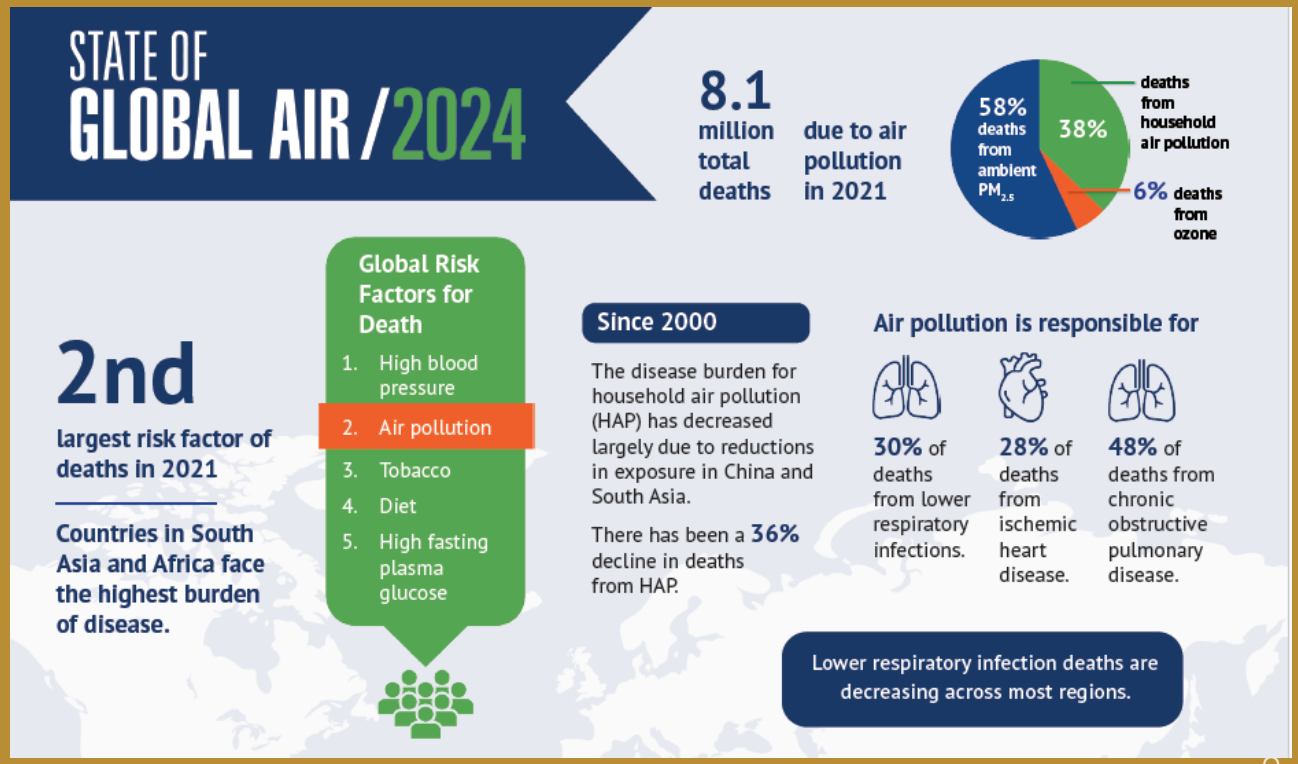
- India's air quality crisis is both widespread and deeply entrenched. Of the 256 cities monitored in 2025, 150 exceeded the national PM 2.5 standard as per a report by the Centre for Research on Energy and Clean Air. India's official Air Quality Index (AQI) continues to cap values at 500, although real-time pollution levels in Delhi and other cities often exceed this threshold.
- The health burden of toxic air is stark. According to the Air Quality Life Index (AQLI) of the University of Chicago's Energy Policy Institute, nearly 46% of Indians live in regions where air pollution significantly reduces life expectancy
- The National Clean Air Programme (NCAP) has initiated some improvements, but its targets remain modest and enforcement weak. Therefore, a health-centred, multi-sectoral strategy is now essential



Air Pollution in India: A Deepening Public Health Emergency

Air pollution in India has transformed from a seasonal winter phenomenon into a **persistent, year-round public health crisis**.

It now affects **nearly every demographic group**, harms multiple organ systems, and significantly **reduces life expectancy** across the country. Rapid urbanisation, ineffective regulation, and structural emission sources have entrenched India's air quality challenge.



Organ-Specific Impacts

1. Cardiovascular Damage

PM2.5 penetrates deep into the bloodstream, triggering systemic inflammation. Indian studies show:

- **8% rise in annual mortality** for every **10 µg/m³** increase in long-term PM2.5 exposure
- Higher incidence of hypertension, atherosclerosis, arrhythmias, and ischemic stroke.

2. Respiratory Illnesses

- Nearly **6% of Indian children** suffer from asthma.
- A mere **10 µg/m³ rise in PM2.5** causes a **20–40% spike** in paediatric emergency visits (AIIMS).
- Children in polluted zones show **10–15% reduced lung capacity**.

3. Neurological Damage

PM2.5 can cross the **blood–brain barrier**, worsening cognitive development. International evidence links every **10 µg/m³ increase** in exposure to a **35–49% higher risk of dementia**.

4. Maternal and Neonatal Harm

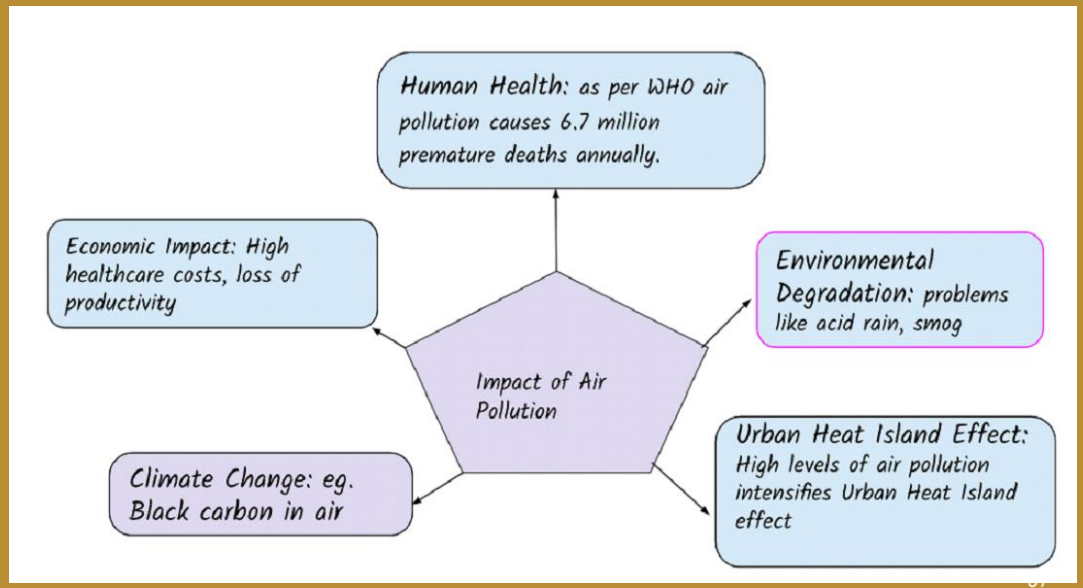
High exposure increases risks of **preterm birth, low birth weight, and neonatal mortality**, disproportionately affecting poorer communities near industrial clusters and roads.

Structural Drivers of Pollution

Public debate often blames **stubble burning** or **fireworks**, but year-round sources dominate:

- Vehicular emissions
- Industrial processes
- Construction and demolition dust
- Informal waste burning
- Household biomass use

Seasonal events only intensify an already hazardous baseline.



Policy Gaps and Needed Reforms

Current Shortcomings

The **National Clean Air Programme (NCAP)** has improved monitoring but suffers from **modest targets** and **weak enforcement**.

Way Forward

A **health-centred, multi-sectoral strategy** must include:

- **Transport transformation**: electrification, low-emission zones, congestion pricing.
- **Industrial control**: strict enforcement and shift away from coal-based operations.
- **Construction regulation**: dust-suppression and mechanised sweeping.
- **Waste management reform**: segregation, biomethanation, and elimination of open burning.
- **Health-system integration**: real-time advisories, school lung-function testing, COPD and cognitive screening.

THANK YOU