

The Hindu Important News Articles & Editorial For UPSC CSE

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The Archaeological Survey of India (ASI) is organizing a three-day international seminar (August 20–22, 2025) in Greater Noida to deliberate on one of the greatest unresolved puzzles of ancient history – deciphering the Indus Valley Script.

- This marks a significant step in India's effort to revive and advance research on the Harappan script, bringing together both Indian and international experts.

Key Highlights of the Initiative

- **Event:** "Decipherment of the Indus Script: Current Status and the Way Forward".
- **Venue:** Pt. Deendayal Upadhyay Institute of Archaeology, Greater Noida.
- **Participants:** Indian and foreign scholars researching Harappan culture and language.
- **Mode:** Presentations (offline & online) followed by discussions.
- **Outcome Expected:** To assess and expand the scope of present and future research on the Indus script.

About the Indus Valley Script

- **Nature:** Comprises over 400 pictorial signs/symbols.
- **Undeciphered:** No bilingual inscriptions (like the Rosetta Stone for Egyptian) make decoding extremely difficult.
- **Script Type:** Believed to be logo-syllabic (each sign may represent a word/syllable).
- **Length:** Most inscriptions are very short (4–5 signs), limiting linguistic analysis.

Why It's Difficult to Decipher

ASI to organise global meet on decoding Indus Valley script

Sreeparna Chakrabarty
NEW DELHI

The Archaeological Survey of India (ASI) will host a three-day international conference from August 20 to 22 in Greater Noida to discuss deciphering the Indus Valley script.

Invitations to the international conclave on "Decipherment of the Indus script: current status and the way forward", to be held at the Pt. Deendayal Upadhyay Institute of Archaeology, Greater Noida, have been sent out to experts working on the Harappan civilisation and culture both in India and abroad.

Sources in the ASI told *The Hindu* that the seminar would take place mainly through presentations, both offline and online. Thematic sessions shall be designed based on the current stage of research in this field. Discussions shall



Seals with the script of the Indus Valley Civilisation.

follow presentations at the end of each session.

"The proceedings of the seminar is anticipated to highlight the scope and quantum of current and future research in the field," a senior ASI functionary said.

The Indus script, comprising over 400 pictorial symbols, remains undeciphered due to the lack of bilingual texts and the brevity of inscriptions. The script consists of over 400 pictorial signs, leading some researchers to classify it as "logo-syllabic".

Daily News Analysis

- No known bilingual texts (unlike Mesopotamian or Egyptian).
- No long inscriptions to analyze sentence structure.
- Uncertainty over the underlying language (Dravidian, Indo-Aryan, or a lost language?).
- Limited archaeological context and dating challenges.

Importance of Decipherment

- Will shed light on the socio-cultural, administrative, and economic structure of the Harappan civilization.
- Help understand the origins of language, writing systems, and early urban society in the Indian subcontinent.
- Could establish linguistic continuity with later Indian scripts or reveal a lost language family.

UPSC Prelims Practice Question

Ques : Which of the following statements about the Indus Valley script is/are correct?

1. It is widely agreed to be a phonetic script similar to Brahmi.
2. The script has been deciphered through bilingual inscriptions found in Mesopotamia.
3. The script comprises over 400 pictorial signs, many of which may be logo-syllabic in nature.

Select the correct answer using the code below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) 1, 2 and 3

Ans : c)

India is facing a public health crisis due to rising alcohol consumption, with heavy episodic drinking, high disease burden, and significant social costs. Despite this, India lacks a comprehensive National Alcohol Control Policy, relying instead on fragmented State-level policies and limited central action.

The unregulated drink: rethinking alcohol control in India

Alcohol consumption significantly raises the risk of injuries, mental illness, and non-communicable diseases, including cancer; it is time for a National Alcohol Control Policy and Programme that prioritises people over profit, prevention over revenue, and long-term well-being over short-term gains

Vid Karmarkar
Jitendra Chouksey

The safe limit for alcohol consumption is zero ml. Yet, 23% of Indian men and 1% of women consume alcohol (NFHS-5). India also records one of the highest rates of heavy episodic drinking, with lakhs needing clinical and social support.

Alcohol consumption significantly raises the risk of injuries, mental illness, and non-communicable diseases, including cancer. Beyond health, alcohol use is associated with aggression, crime, suicides, and risky behaviour.

In 2021, alcohol-use contributed to approximately 2.6 million DALYs (Disability-Adjusted Life Years) in India, reflecting the combined toll of premature deaths and years lived with illness or disability. The estimated societal cost of alcohol-related health is ₹6.24 trillion. Meanwhile, per capita alcohol consumption increased by about 240% in the last two decades, an underestimate because nearly half of alcohol use in India is unrecorded.

Determinants of alcohol consumption

Alcohol use is shaped by a complex web of biopsychosocial, commercial and policy-level determinants. (i) Biopsychosocial determinants: Biologically, some individuals are genetically predisposed to addiction. Alcohol activates the brain's reward system making it habit-forming. Psychologically, people drink to relieve stress, anxiety, or experience euphoria. Socially, urban lifestyles, peer pressure, and glamourised portrayals in media have normalised alcohol use. (ii) Commercial determinants: The industry has broadened its product portfolio with offerings such as fruit-flavoured spirits, pre-mixed cocktails, and other ready-to-drink options, making alcohol more appealing to new and younger users. Despite legal advertising restrictions, promotional tactics persist through surrogate advertising, brand sponsorships, and strategic product placements, where the depiction of alcohol has doubled over the past two decades. Pubs and bars offer incentives like 'Happy Hours' and free samples, while social media algorithms subtly amplify alcohol-related content (ARC).

The placement of liquor stores in residential and high-traffic areas, ensures easy access and everyday visibility. Packaging shapes consumer perception - sleek bottles, international labels, and premium branding enhance the aspirational value of alcohol.

Pricing ensures affordability. Indian Made Indian Liquor (IMIL) remains cheap and accessible to lower-income groups, especially in rural areas, while growing



Swift action: Alcohol use in 2021 caused 2.6 million Disability-Adjusted Life Years in India. ISTOCKPHOTO

disposable incomes in cities have made alcohol increasingly affordable for the urban middle class.

(iii) Policy is the most influential determinant. The alcohol industry wields significant influence over regulation, often resisting stricter laws by emphasising its contribution to State revenues through excise taxes. Even bans on advertising are undermined through tactical marketing and alcohol persists in public life under different names.

Alcohol regulation in India falls under State jurisdiction, granting each State authority over legislation, excise taxes, supply chain, licensing and manufacturing, sale and consumption restrictions, prohibition, and pricing. This autonomy has led to regulatory variations across States.

For instance, Bihar, Gujarat, Mizoram, and Nagaland enforce prohibition, while Andhra Pradesh, Haryana, Kerala, Manipur, and Tamil Nadu had previously imposed similar bans. In contrast, some States are now actively promoting alcohol sales. Kerala's new Akbari Policy markets today as a "natural, traditional beverage," while Andhra Pradesh is introducing a policy offering alcohol for ₹99 to ensure "quality, quantity, and affordability." Meanwhile, some States are exploring online alcohol delivery through platforms like Swiggy, Zomato, and Blinkit, contradicting efforts to restrict alcohol access.

Alcohol accessibility

Regulation of alcohol accessibility in India varies as equally as availability. The legal drinking age differs across States, ranging from 18 to 25 years. Alcohol pricing regulation exists in 19 of 33 States/UTs, with nine States setting only maximum prices while others setting both

maximum and minimum prices. The GST Act excludes liquor from sales tax, leaving alcohol taxes to States, often vaguely defined in excise policies.

Compared to State policies, national-level policies are more specific addressing single aspects such as drunk driving or prevention of alcohol use and regulating supply-chain in an individual policy. However, India lacks a unified national policy on alcohol regulation.

Earlier, alcohol was excluded from the National Policy on Narcotic Drugs and Psychotropic Substances (NDPS) 2012 despite being a common psychoactive substance followed by cannabis and opioids. Later, alcohol regulation was included in the National Action Plan for Drug Demand Reduction (NAPDDR) 2021-22 under Nasha Mukta Bharat Abhiyan.

While the NAPDDR addresses alcohol regulation, its demand and supply reduction efforts are scattered across Central ministries and State governments. The Ministry of Social Justice leads demand reduction, while supply and harm reduction are handled by the Ministries of Home Affairs, Finance, and Health.

The National Mental Health Policy (NMHP) 2014 recognised the role of alcohol in mental illness and suicide prevention and suggested the need for a specific action plan. Similarly, the National Health Policy (NHP) 2017 mentioned curbing alcohol use through higher taxation. More recently, the National Suicide Prevention Strategy (NSPS) 2022 identified alcohol as a major risk factor for suicides, advocating for a national alcohol control policy and measures to limit alcohol accessibility.

The National Action Plan and Monitoring Framework for Prevention

and Control of Noncommunicable Diseases (NMAP) 2017-2022 also echoed the call for a national alcohol policy.

The way ahead

Regulating alcohol is urgent but complex, given alcohol's deep entanglement with State revenues, social norms, and political interests. It is time to move beyond short-term revenue thinking and adopt a systems approach - grounded in both evidence and equity. Based on the biopsychosocial and commercial determinants of alcohol consumption, we propose the following to regulate alcohol-use.

(i) Affordability: Alcohol pricing must deter excessive use without pushing the poor toward dangerous alternatives like illicit liquor.

(ii) Allocation: Health taxes on alcohol should not disappear into general revenues. Ear-marking these funds for public health, combined with transparent governance, can improve trust and accountability - and prevent corporate lobbying from redirecting them.

(iii) Accessibility: Alcohol access must be curbed beyond geographic distance. Urban policy must reduce availability in everyday spaces to signal a shift toward alcohol-free environments.

(iv) Advertisement: In the digital age, "alcohol influencers" in India promote consumption by framing alcohol positively. Regulating this "social surrogacy" - including algorithmic amplification - is key to reducing social appeal.

(v) Attractiveness: Plain packaging, visible warning labels, and controls on point-of-sale promotion are needed to disrupt the cycle of normalisation.

(vi) Awareness: Public understanding of alcohol's health harms - especially its link to cancer, mental illness, and generational poverty - remains low. Large-scale public education campaigns, similar to tobacco control efforts, are overdue.

(vii) Artificial Intelligence: AI tools can detect and suppress alcohol-related content on digital platforms and flag misinformation. When 180 million monthly users see health misinformation (e.g., WebMD praising alcohol), it is clear that digital regulation is a frontline public health priority.

India's alcohol crisis cannot be solved through isolated actions or State-level measures. It is time for a National Alcohol Control Policy and Programme that prioritises people over profit, prevention over revenue, and long-term well-being over short-term gains.

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THE GIST

India records one of the highest rates of heavy episodic drinking, with lakhs needing clinical and social support

Alcohol use is shaped by a complex web of biopsychosocial, commercial and policy-level determinants. Policy is the most influential determinant

Compared to State policies, national-level policies are more specific in addressing single aspects such as drunk driving or prevention of alcohol use

Key Concerns

Daily News Analysis

- **Health Burden:** Alcohol contributed to 2.6 million Disability-Adjusted Life Years (DALYs) in India in 2021.
- **Social Cost:** Estimated at ₹6.24 trillion due to health complications, crime, accidents, and lost productivity.
- **Consumption Trends:** A 240% increase in per capita alcohol consumption in the last two decades; 50% of it unrecorded.

Determinants of Alcohol Use

- **Biopsychosocial:** Genetic predisposition, stress relief, social glamourisation.
- **Commercial:** Surrogate advertising, social media influencers, cheap IMIL, product innovation targeting youth.
- **Policy-Level:** Weak and inconsistent State-level laws; commercial interests overriding public health.

Policy Fragmentation

- States have complete control under the Constitution: sale, excise, legal age, pricing.
- **Examples:**
 - Prohibition in Gujarat, Bihar, Mizoram.
 - Andhra Pradesh's ₹99 liquor policy.
 - Online delivery via Zomato, Swiggy in some States.
- **Centre's Role: Limited; includes**
 - NAPDDR (2021–22) under Nasha Mukta Bharat
 - National Mental Health Policy (2014)
 - National Suicide Prevention Strategy (2022)
 - National Health Policy (2017)

Key Issues

- Absence of a unified national policy.
- Alcohol excluded from GST, giving States unregulated revenue control.
- Digital media promotion bypasses traditional advertising bans.
- Low public awareness of health risks like cancer, suicide, and mental illness.

Way Forward: Framework for a National Alcohol Control Policy

- **Affordability:** Use pricing to deter excessive use without promoting illicit liquor.

Daily News Analysis

- **Allocation:** Earmark alcohol taxes for health programs.
- **Accessibility:** Limit retail outlets and urban exposure.
- **Advertisement Regulation:** Monitor digital platforms and influencers promoting alcohol.
- **Attractiveness:** Plain packaging, graphic warnings, and control of point-of-sale marketing.
- **Awareness Campaigns:** Mass education on alcohol-related diseases and social harm.
- **AI Regulation:** Detect and suppress alcohol misinformation online.

Conclusion

- A systems-based, national-level policy on alcohol is long overdue. It must address health, social, digital, and economic angles holistically — focusing on people over profit and prevention over revenue.

UPSC Mains Practice Question

Ques: India needs a unified National Alcohol Control Policy to address the health and social costs of alcohol consumption. Discuss the need, challenges, and the way forward. **(250 words)**



The Indian government recently announced that the next Census will be conducted in 2027, marking a 16-year gap since the last Census in 2011. The delay, originally due to COVID-19, now raises political, administrative, and developmental concerns — particularly with the inclusion of caste data for the first time in independent India.

Will delaying the Census affect its implementation?



Sanjay Kumar,

Co-Director of Lokniti, a research programme at the Centre for the Study of Developing Societies, New Delhi



Poonam Muttreja,

Executive Director, Population Foundation of India

PARLEY

On June 16, the Registrar General of India under the Union Ministry of Home Affairs issued a notification that India's population will be counted in 2027. Following demands by the Opposition parties, among other reasons, the government has also announced the inclusion of caste enumeration in the Census for the first time in independent India.

The last Census was held in 2011. The exercise was to take place in 2021, but was delayed because of the COVID-19 pandemic. It has now been further pushed to 2027. Will delaying the Census affect its implementation? Sanjay Kumar and Poonam Muttreja discuss the question in a conversation moderated by **Vijaita Singh**. Edited excerpts:

Was the Census deliberately delayed?

Sanjay Kumar: The Census should have taken place in 2021, but that was the time of the COVID-19 pandemic. Since everything was stalled in 2020 and we were under a strict lockdown for a good part of that year, the Census could not take place.

Do you see any political reasons for the further delay? Do you think the government wanted to time it with the delimitation exercise, which is frozen till 2026?

SK: I don't have an explanation for this delay. The pandemic was over by mid-2022. By the end of 2022, universities had opened, schools had gone back to a normal routine, and everyone had started going back to office. The delay for nearly three years after that is frankly inexplicable. I'm not sure why the government did not take the initiative earlier. Every time delimitation takes place, the exercise uses the previous Census data. So the government could have begun conducting the Census in 2023 as well. Even if it did start conducting the exercise in 2025, it would have made no difference to the work of delimitation.

Can you tell us about the implications of a delayed Census?

Poonam Muttreja: The delay has serious consequences for governance and development. India continues to use Census data from 2011 data in 2025. The ground reality has changed dramatically since 2011. Population growth, internal migration, urbanisation, and fertility patterns have all accelerated/changed. But policy continues to run on outdated assumptions. The delay affects nearly every



A view of Ranganathan Street in T. Nagar, Chennai. B. VELANKANNI RAJ

sector. School enrolment projections are inaccurate. Vaccine coverage targets have missed the mark. Social welfare programmes such as PDS (public distribution system) and MGNREGS (Mahatma Gandhi National Rural Employment Guarantee Scheme) cannot adjust to the actual population needs. The delay also affects disaster preparedness and infrastructure planning.

This is going to be the first digital Census in India. Are there any concerns about that?

PM: Digitisation can bring in efficiency, reduce manual error, and allow faster data processing. But a fully digital Census also risks excluding the very people who are the hardest to reach, such as those in rural households and informal settlements, those belonging to marginalised communities, and women. They may not have smartphones, stable electricity, or digital access. Take women, for instance — only 33% of rural women use the Internet. Among women in low income households, mobile phone ownership is significantly low. A 'digital first' approach without safeguards could reinforce the existing gender bias.

To succeed, this Census must retain door-to-door in-person enumeration, especially in areas that are difficult to access. The enumerators must be trained to work with diverse populations in regional languages and have an inclusive approach. Technology should support, not replace, the human engagement that is essential for collecting accurate data.

The government is yet to announce any decision regarding the National Population Register (NPR), which is the first step towards the creation of a National Register of Citizens (NRC). In the 2021 Census, it was planned to be updated with the first phase of



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POONAM MUTTREJA

the Census. Do you think if the two are combined — the NPR and population Census — it may impact the process because of the controversies and fears around the NPR?

SK: If you are trying to do one piece of work and then you combine it with other work, there is a possibility of both getting tampered with. Things could get delayed, jumbled, and some information could get misrepresented.

But do you see the Centre not going ahead with the NPR so that the Census is done in a hassle-free manner?

SK: I would be in favour of getting the Census done separately because we should not forget that this is being undertaken after a very long time — 16 years! This is the first time that caste enumeration is also taking place as part of the Census. So a new element is already there. Why overburden the enumerators?

How difficult or easy will it be for the government to collect data on caste? In the Socio-Economic and Caste Census of 2011, around 40 lakh caste names were thrown up. There were instances of people writing their surnames instead of their community names. It was based on self-disclosure. What methodology do you think the government should follow to make the process robust?

SK: If we are raising questions about caste data, we can raise questions about the collection of other information as well. If people can answer questions about their assets, age, gender, and education, why should there be any difficulty in answering questions about caste?

But yes, training is important. If we are able to train our enumerators well, the respondents will be able to answer most of the questions. The enumerators need to know that Varma, for instance, is a surname, not a caste. If a respondent mentions this surname as their caste, the enumerators will have to ask a follow-up question.

PM: Asking about a person's caste is not going to be difficult. The UPA (United Progressive Alliance) government conducted a caste census nearly a decade ago, but never released the data. I think homework needs to be done well when we collect data on caste. Enumerators must understand all the caste sub-categories. Unless they themselves are well informed, they are not going to be able to deal with erroneous answers or inappropriate answers.

Why do you think Census is important for a country?

PM: The world is changing rapidly and so many things are uncertain. In such a scenario, the Census is the most important aspect to consider in not only planning and policymaking, but also in the allocation of resources. It helps us understand how climate change is impacting us, changing population dynamics, and patterns of digitisation. In India, to understand the rapid increase in urbanisation and migration patterns, we need numbers. We also know that India is an ageing society. The number of aged people is going to nearly double in the next 20 years. You can't let people age and then start planning. So given the rapidly changing environment, planning, allocation of resources, targeting the poor and targeting those who are marginalised are all objectives. In fact, the whole purpose of having a caste census is to invest in the most marginalised communities.

Do you think the government should consider reducing the 10-year period for conducting the Census so that we can have faster and more accurate data about these changes in society?

SK: Conducting the Census is a tedious, time-consuming process. It cannot happen overnight. The Census is not merely about counting the number of people. The government's policy formulation depends on the information collected during a Census. The large amount of information gathered is valuable for the government to implement various kinds of policies. We may feel that the government can do this every five years, but it is more appropriate to do it every 10 years. But we should make sure that the Census takes place on time and there is no break in between.



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

Key Concerns with the Delay

- **Governance Crisis:**

Daily News Analysis

- Policies are still being designed using 2011 data which does not reflect the current demographics, migration patterns, or urbanisation levels.
- Welfare schemes like PDS, MGNREGS, vaccination drives, school enrolment projections face mismatches between demand and ground realities.
- **Data Gaps in Planning:**
 - Lack of updated population data hampers infrastructure development, disaster preparedness, and resource allocation.
 - Challenges in identifying the aged population, urban poor, and emerging health trends.
- **Political Implications:**
 - Delay raises questions about timing vis-à-vis delimitation (due post-2026).
 - Concerns over combining the Census with the National Population Register (NPR) amid controversies linked with NRC.

Key Developments and Issues

- **Digital Census:**
 - First attempt at a digital-first Census, intended to improve efficiency. However, risks excluding rural and marginalised communities, especially women due to poor digital access.
- **Inclusion of Caste Data:**
 - For the first time, caste enumeration will be conducted. Experts highlight the need for trained enumerators, regional language support, and a clear methodology to avoid misreporting or confusion between surnames and caste identity.
- **No NPR Update Yet:**
 - Though NPR was to be updated alongside the 2021 Census, the government has made no fresh announcement, possibly to avoid delay and controversy.

Why Timely Census Matters

- Evidence-based policymaking relies on up-to-date demographic and socio-economic data.
- Targeted welfare schemes, urban planning, ageing population management, and tracking migration depend on accurate Census information.
- Caste enumeration can enable affirmative action, better reservation policy planning, and social justice targeting.

Suggestions & Way Forward

- Conduct Census independently of NPR to avoid resistance and confusion.
- Retain door-to-door enumeration, especially in vulnerable areas, even with digital integration.

Daily News Analysis

- Provide intensive training to enumerators to handle caste data, regional complexities, and avoid misclassification.
- Ensure gender-sensitive approaches and inclusion of hard-to-reach populations.
- Consider policy mechanisms to bridge data gaps during inter-Census years (e.g., periodic national surveys).

UPSC Mains Practice Question

Ques: Digital-first strategies in population enumeration risk widening existing inequalities. Evaluate the pros and cons of digitising the Census in a socio-economically diverse country like India. (250 Words)



Despite progress in indigenous fighter aircraft development (e.g., LCA Tejas, AMCA), India remains dependent on foreign engine technology, risking strategic vulnerability, delays, and constraints in defence preparedness. The failure of domestic engine programmes like Kaveri and the continued reliance on GE engines highlights India's long-standing propulsion gap.

Why India should address its propulsion gap

Is India overly reliant on imported engines? What happened to the HF-24 Marut, India's first indigenously designed fighter jet? Why has the Kaveri engine project not been able to come to fruition? How is India affected by foreign engine supply delays? Is only the Indian Air Force affected by such dependency?

EXPLAINER

Rahul Bedi

The story so far:

There has been growing excitement in military and industrial circles over the fast-tracked indigenous fifth generation stealth Advanced Medium Combat Aircraft (AMCA). Touted as a multi-role fighter with super-cruise capability, internal weapons bays, advanced avionics, and diverter-less supersonic intakes enhancing stealth and reliability, the AMCA is being hailed as a milestone in Indian aerospace history. However, a dose of historical realism is warranted particularly since India has a persistent propulsion gap, and is overly reliant on imported engines. Nearly seven decades of fighter development reveal cautionary lessons, starting with India's first indigenously designed fighter jet, the HF-24 Marut (Spirit of the Tempest).

What happened to the HF-24 Marut?

Launched in the 1950s by Hindustan Aeronautics Limited (HAL) under famed German engineer Kurt Tank – designer of several WWII Luftwaffe fighters – the twin-engine, swept-wing Marut was, like the AMCA, an ambitious project of its time. Sleek and capable of transonic speeds, it embodied post-colonial India's drive for self-reliance and entered service amid high hopes in the late 1960s.

However, the Marut never reached its full potential, not because of design flaws, but entirely due to its underpowered British Bristol Siddley Orpheus 703 turboprops. Although Tank had envisioned a more powerful engine, it never materialised, leaving the Marut's performance underwhelming. And, while it performed reasonably well in ground-attack roles during the 1971 war on the western front, its propulsion limitations ultimately proved crippling. HAL produced only 147 of these high-maintenance, low-combat fighters, which were eventually 'number-plated' or retired by 1990.

Indian Air Force (IAF) veterans who flew the Marut consistently cited the lack of a powerful engine as its Achilles' heel – highlighting the enduring reality that high-end fighters live or die by propulsion technology. Engines, after all, are not mere technical parts but the core of sovereign aerospace capability, shaping a combat aircraft's power, range, and mission effectiveness.

Did India develop its own engines?

Following the Marut's disappointing engine performance, the Defence Research and Development Organisation (DRDO) assigned its Gas Turbine Research Establishment (GTRE) laboratory in 1989 to develop the Kaveri (GTSVS) afterburning turbofan for the Light Combat Aircraft (LCA), which had been under design development since 1980-82.

Over the next 35 years, GTRE spent around ₹202 crore, as of 2020, on the project, but without success. Despite producing nine full-scale prototypes and four core engines – logging over 3,000 hours of ground testing and 73 hours of flight trials on an Ilyushin IL-76 flying test bed in Russia – the Kaveri failed to meet the LCA's performance benchmarks. It struggled with thrust-to-weight ratio, reliability, and thermal management under sustained high-performance conditions. Though spin-off versions were proposed for tanks, ships, and locomotives, none have so far entered



Long-term vision: Three HF-24 Marut aircraft of the IAF flying in formation over Bagpath, New Delhi. THE HINDU ARCHIVES

operational use.

A revival attempt in 2016, in collaboration with French engine-maker Safran (linked to offset obligations from the IAP's Rafale deal) also collapsed. A parallel proposal by its partner Safran to co-develop a new engine for the Tejas MkII and AMCA met a similar fate, reportedly rejected by the DRDO due to institutional pride.

Meanwhile, Kaveri's failure forced the Aeronautical Development Agency (ADA), responsible for the LCA's design, to adopt the U.S.-made General Electric (GE) F404-IN20 afterburning turbofan engine (producing 78-80 kN of thrust) around 2004. Although barely adequate – restricting Tejas' payload and high-angle-of-attack capabilities – the engine was eventually approved by the IAF, which inducted two MkII squadrons from 2015 onwards, with one squadron operating without full operational clearance, nearly 34 years after the LCA programme's inception.

How is India affected by engine dependency?

India's engine dependency issues resurfaced recently when GE delayed delivery of 99 F404 engines by 13 months for the upgraded LCA MkII – a lighter, more capable variant equipped with an Active Electronically Scanned Array (AESA) radar, advanced electronic warfare suites, and mid-air refuelling capability. Under a \$716 million contract signed in 2021, engine deliveries were scheduled to begin by March 2024, but the first power pack arrived only in April 2025, as part of an initial batch of 12 expected by the end of the year. GE cited "unprecedented supply chain pressures," including disruptions from suppliers, as the cause for the delay, but for India it jeopardised the MKIAs commissioning by deferring it further.

This triggered sharp criticism from Air Chief Marshal A.P. Singh, who publicly rebuked HAL for chronic slippages in fighter deliveries amid a steep decline in IAF combat strength from a sanctioned 42.5 fighter squadrons to around 30 presently. Further reductions loom with two legacy MiG-21 'Bis' squadrons slated for imminent retirement. "We need to be now ready to be future-ready," Mr. Singh said at the 61st Annual Business Summit in New Delhi on May 29. Citing HAL's blotted history of missed deadlines, he bluntly

asserted that wars are won by equipping the military, not merely planning for the future.

Simultaneously, HAL's negotiations with GE to locally manufacture the more powerful GE F404 engine (90-96 kN thrust) – intended for the LCA Mk2 and initially the AMCA Mk1 – too has hit a roadblock. The deal, announced during Prime Minister Narendra Modi's 2023 U.S. visit, has reportedly been stalled by GE's demand for an additional \$500 million over the original \$1.5 billion agreement.

More critically, GE appears unwilling to share core engine technologies like single-crystal turbine blades, thermal barrier coatings, and advanced cooling systems, all of which are vital for boosting engine durability and thrust. HAL continues to demand full technology transfer, but industry insiders point out that such proprietary know-how, developed at great expense, is rarely shared by global engine makers. Talks, however, are still ongoing.

Both the LCA Mk2, which is under-development, and the initial AMCA Mk1 models are expected to rely on the F404 as a 'stopgap' powerplant, pending finalisation of the deal. The ADA is also scouting for a 110 kN-class engine for the AMCA Mk2, potentially via a joint venture. Intermittent discussions with France's Safran and the U.K.'s Rolls-Royce have so far yielded no concrete outcome.

And, while these possibilities may serve as a short-term workaround, it reflects the same external engine dependency that had crippled the Marut. Consequently, a cross-section of IAF veterans and aerospace experts warned that unless India developed an indigenous engine to power future AMCA blocks, the programme risks being held hostage once again to geopolitical whims.

How much is India dependent on external engines?

India's external propulsion sourcing extends well beyond aerial platforms, affecting the Army and Navy as well, both of which are exclusively reliant on imported power packs or foreign engines assembled and built domestically under licence. The Army's Arjun Main Battle Tank, for example, is powered by the German MTU MB838 Ka 501 diesel engine paired with IEND RK304 transmissions, while the recently trialled Zorawar Light Tank uses the U.S.-origin 1,000hp

Cummins Advanced Combat Engine. The Navy too depends wholly on foreign propulsion systems – Russian, Ukrainian, French, German, and U.S. engines – that power all its indigenously designed and built frigates, destroyers, auxiliary vessels, troop carriers, corvettes, and fast attack craft. India's all-round engine development across aerospace, land, and naval platforms is critical to ensure strategic autonomy and enhance military capability.

How important is autonomous engine development?

Aircraft engine development is vital for India to achieve aerospace autonomy and strategic self-reliance. Disruptions in foreign engine supplies delay production like that of the LCA MkII, hampers upgrades, and restricts exports as that would necessitate third-party approvals. The U.S., France, and China are able to assert dominance in global aerospace markets as they have harnessed indigenous propulsion.

However, for India, mastering advanced jet engine technology is not merely a prestige project but is crucial to sustaining military readiness, ensuring credible deterrence, and insulating its defence sector from external shocks and global political vagaries. Without this core capability, India's broader ambitions in aviation and defence experts risk remaining perennially compromised.

A broad spectrum of defence experts and IAF veterans contend that India's failure to develop advanced jet engines transcends technical hurdles and are fundamentally a political challenge. India's defence funding remains fragmented, largely focused on short-term projects, rather than being driven by a long-term, strategic vision.

If India is genuinely committed to closing this glaring capability gap, mere slogans like *Atmanirbhar Bharat* will not suffice. Achieving true autonomy in engine technology demands comprehensive structural reforms, unwavering political will, and the cultivation of an innovation ecosystem which will seamlessly integrate private sector participation, academic research, and defence R&D institutions into a cohesive and competitive framework.

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THE GIST

Launched in the 1950s by Hindustan Aeronautics Limited (HAL) under famed German engineer Kurt Tank – designer of several WWII Luftwaffe fighters – the twin-engine, swept-wing Marut was, like the AMCA, an ambitious project of its time.

India's engine dependency issues resurfaced recently when GE delayed delivery of 99 F404 engines by 13 months for the upgraded LCA MkII.

India's external propulsion sourcing extends well beyond aerial platforms, affecting the Army and Navy as well, both of which are exclusively reliant on imported power packs.

Background: The Marut Case and Its Lessons

Daily News Analysis

- HF-24 Marut, India's first indigenous fighter (1960s), failed not due to design but due to lack of a powerful indigenous engine.
- The British Orpheus 703 engine used was underpowered, limiting Marut's performance.
- Despite some success in the 1971 war, Marut was retired by 1990.
- **Lesson:** Aircraft design is ineffective without a self-reliant propulsion base.

The Kaveri Engine Project: A Missed Opportunity

- Started in 1989 by DRDO's GTRE for LCA.
- Despite over ₹2,000 crore spent, Kaveri failed due to poor thrust-to-weight ratio, reliability, and thermal efficiency.
- Collaboration efforts with Snecma (France) and later Safran did not materialise due to trust and tech-transfer issues.
- LCA Tejas had to adopt GE F404-IN20, which is barely adequate.

Current Challenges

- **Delayed Engine Deliveries:**
 - GE's delay in supplying F404 engines for LCA Mk1A set back timelines.
 - Production schedules and IAF's operational readiness are disrupted.
- **Strategic Dependency:**
 - HAL's deal to produce GE-F414 engines domestically has stalled.
 - GE's refusal to share critical tech (single-crystal blades, thermal coating) blocks true indigenisation.
- **Multiservice Impact:**
 - **Army:** Arjun tank uses German engine; Zorawar tank uses US engine.
 - **Navy:** Fully reliant on foreign engines for all ship classes.

Why This Propulsion Gap Matters

- **Strategic Autonomy:** Without engine self-sufficiency, India's defence programmes are vulnerable to geopolitical pressure.
- **Export Limitations:** Reliance on foreign engines restricts export potential due to third-party approval requirements.
- **Combat Readiness:** Delays in engine delivery directly affect force strength, especially when fighter squadrons are already below sanctioned levels.

The Way Forward

- **Long-term Vision:** A 10–15 year roadmap focused exclusively on jet engine R&D is essential.

Daily News Analysis

- **Institutional Reform:** Integrate academia, private firms, and R&D labs into a unified innovation ecosystem.
- **Dedicated Defence Funding:** Move beyond project-wise funding to mission-based, outcome-driven investment.
- **Tech Partnerships:** Negotiate meaningful technology transfer agreements with trusted allies.
- **Protect Indigenous IP:** Build domestic capability from component-level up, safeguarding intellectual capital.

UPSC Mains Essay Practice Question

"True Atmanirbharta in defence lies not in assembling aircraft but in powering them. "



The UNCTAD World Investment Report 2025 has flagged a significant decline in India's Foreign Direct Investment (FDI) levels, both in absolute terms and as a share of the country's capital formation and GDP. This trend suggests that foreign investment is playing a diminishing role in India's development financing.

India FDI slid 1.8% in 2024, share in capital formation declining

T.C.A. Sharad Raghavan
NEW DELHI

A new report by the United Nations (UN) shows how foreign investment is playing a shrinking role in India's development, with foreign direct investment (FDI) inflows making up 2.3% of all capital formation in India in 2024, down from 8.8% in 2020.

The World Investment Report 2025 by the United Nations Conference on Trade and Development,

released on Thursday, further shows that the total stock of foreign investment accumulated in India over the years stood at 14% of the country's gross domestic product (GDP) in 2024, down from 17.9% in 2020.

In fact, in absolute terms, India attracted \$27.6 billion of FDI in 2024, down 1.8% from 2023 or less than half seen in 2020. The report, however, noted overall capital formation in India from other sources had been robust.

Key Findings

- FDI Inflows (2024): \$27.6 billion
 - Down 1.8% from 2023
 - Less than half of the FDI received in 2020
- FDI as % of Capital Formation (Gross Fixed Capital Formation):

- Dropped to 2.3% in 2024 from 8.8% in 2020
- FDI Stock as % of GDP:
 - Declined to 14% in 2024 from 17.9% in 2020

Interpretation & Implications

- A steady fall in FDI's contribution to India's investment pool reflects lesser foreign investor confidence or interest, especially in high-capital projects.
- However, domestic capital formation remains strong, suggesting India is increasingly relying on internal resources (public investment, domestic private investment) for growth.
- Policy implications may include the need for:
 - Easing of regulatory bottlenecks
 - Enhanced investor protection mechanisms
 - Improved ease of doing business
 - Sector-specific reforms (manufacturing, electronics, services).

UPSC Prelims Practice Question

Ques: With reference to the UNCTAD World Investment Report 2025, consider the following statements:

1. FDI inflows into India increased by more than 10% in 2024 compared to 2023.
2. The share of FDI in India's gross capital formation has declined between 2020 and 2024.
3. The total stock of FDI in India in 2024 is less than 15% of the GDP.

Which of the above statements is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans : b)

Blame not the messenger in India's diplomacy

History and literature are replete with references to not 'shooting the messenger' for bringing bad news. In Shakespeare's *Antony and Cleopatra*, the Egyptian queen assaults a messenger and threatens to have him "whipped with wire and stewed in brine, smarting in ling'ring pickle", for bringing her the news that the Roman General Mark Antony has married another. "I that do bring the news made not the match," the messenger replies, before making a hasty exit. Over the past two months, India's 'diplomatic messengers' too have faced an ire that is unprecedented – criticised not for the message they bring, but for failing to convey effectively enough, the message New Delhi has sent out after Operation Sindoor (May 7-10, 2025).

Criticism of Indian diplomacy

Public commentary that is critical of the Ministry of External Affairs and its missions has focused broadly on three counts. First, that India received condolences and statements condemning the Pahalgam terror attack from all quarters, but not the kind of unequivocal support, especially from the neighbourhood, for retaliatory strikes on Pakistan, of the kind seen in 2016 (post-Uri) and 2019 (post-Pulwama). In 2016, Bangladesh, Bhutan, Afghanistan, Sri Lanka and the Maldives backed India's decision to stay away from the South Asian Association for Regional Cooperation summit in Pakistan after the Uri attack. In 2019, global solidarity with India forced even China to back a United Nations Security Council (UNSC) terror designation for Jaish-e-Mohammad chief Masood Azhar. Earlier, in 2008, there was international consensus in India's favour after the Mumbai attacks, when Hafiz Saeed and a number of Lashkar-e-Taiba terrorists were designated by the UNSC, and Pakistan was put on the Financial Action Task Force (FATF) grey list for the first time. Instead, this time, unfavourable comparisons have been made to Pakistan for the lines of support it received from China, Türkiye, Azerbaijan, Malaysia and the Organisation of Islamic Cooperation (OIC).

Second, the perception is that Pakistan has scored some diplomatic wins, despite widespread global understanding that Pakistan uses terrorists as state proxies. In April, Pakistan, a non-permanent member of the UNSC, managed to amend the resolution on Pahalgam to delete any reference to The Resistance Front (TRF), that claimed responsibility for the heinous attack.

Earlier this month, Pakistan was chosen as chair of the Taliban Sanctions Committee and vice-Chair of the Counter-Terrorism Committee at the UNSC, and secured loans from the International Monetary Fund and Asian Development Bank despite New Delhi's opposition. Next was the White House's lunch invitation to Pakistan Army chief (now Field Marshal) General Asim Munir, despite the belief in India that his "jugular vein" speech was a virtual green signal for the Pahalgam attack. In



Suhasini Haidar

July, as Security Council President for the month, Pakistan will try to schedule meetings on the India-Pakistan conflict and Kashmir, even as India accelerates efforts to designate the TRF at the UNSC, and place Pakistan on the FATF greylist. India's diplomats will be tested again.

The third aspect pertains to United States President Donald Trump, who, despite official denials from India, has chosen to muddy the narrative of how the May 10 ceasefire was achieved, hyphenating India and Pakistan in more than a dozen public statements, and offering to mediate on Kashmir. His latest iteration of the comments this week, just hours after a telephone conversation with Prime Minister Narendra Modi, and just before his meeting with Gen. Munir, was possibly the most blatant. Thus far, Mr. Trump's statements, post-ceasefire, have not had a single word on the scourge of terrorism itself, showing just far apart the understanding between Delhi and Washington is at this time.

A flurry of diplomacy does not seem to have moved the needle on these criticisms. After Operation Sindoor, special delegations of Members of Parliament and former diplomats travelled to 32 countries. The most time (six days) was spent in the United States. After the G-7 meet, Mr. Modi has meetings ahead with BRICS leaders. External Affairs Minister S. Jaishankar is visiting the U.S. for the Quad Foreign Ministers Meeting soon, after several visits to European capitals recently. The government had not essayed such a campaign after the 2016 or 2019 actions against Pakistan, indicating that it too feels that diplomatic efforts by the Ministry of External Affairs and missions abroad have been found wanting and need bolstering.

But much as the messenger in Shakespeare says, India's diplomats do not decide the message that India wishes to send after Operation Sindoor, and cannot be held responsible for its resonance. It is necessary for the government to study the contents of that message, the shift in geopolitical narratives and in how India is perceived, in order to build a more realistic assessment of how far international diplomacy can ensure the outcomes New Delhi desires vis-à-vis Pakistan.

The 'new normal'

With reference to the content of the message, Mr. Modi's three-pronged "New Normal" has raised eyebrows in some capitals. The first prong – 'Any act of terror is an act of war' – lowers the

threshold for future conflicts, passing the trigger for Indian strikes into the hands of any terrorist, acting on orders on their own. The second – 'India will not bow to nuclear blackmail' – is not necessarily new, but has been left unarticulated thus far because it gives the appearance of a heightened nuclear risk for the region. The third – India will not distinguish between state and non-state actors henceforth – sends out an escalatory message, indicating that the next terror attack could well invoke 'Armageddon',

rather than the controlled four day conflict in Operation Sindoor. While India's partners have not asked for evidence of Pakistan's links to Pahalgam, they look askance at other aspects – like why India has been unable to trace the terrorists responsible yet.

Next, it is necessary to note that global shocks in the past few years have changed how the world views India's tough messaging. Take for example, a growing number of statements by Indian Ministers about "taking back Pakistan occupied Kashmir" by force if necessary. These make many of India's interlocutors uncomfortable, given the current number of conflicts over territorial aggression underway, from West Asia, to Ukraine to the South China Sea. In the light of Israel's retaliation for the October 7, 2023 terror attacks, few wish to give any state a free hand for "retribution". New Delhi's refusal to criticise Russia for its invasion of Ukraine in 2022 and to raise its oil imports from Russia in the face of sanctions, lost it some support in the western world, especially Europe. The Modi government's silence on Israel's devastation of Gaza has also been met with disappointment in the Global South.

India, as Mr. Modi told Mr. Trump this week, views terrorism emanating from Pakistan, "not as a proxy war, but as a war itself". India's diplomats have been left explaining why their stock responses that "this is not an era of war" and that "dialogue and diplomacy" are the only way forward do not apply to India and Pakistan. Thus, it may be necessary for New Delhi to rethink how it frames its message in view of these changes, notwithstanding the global double standards inherent in the expectations from India.

Democracy in decline

Finally, there is need for introspection over how the Modi government's image itself has altered in the world since 2019, leading to diplomatic challenges on a number of fronts. These range from concerns abroad over laws such as the Citizenship (Amendment) Act, the amendment of Article 370, Internet bans and summary arrests in different parts of the country, and accusations against Indian government agents of involvement in transnational killings in the U.S. and Canada. Questions over the broader decline in democracy and the status of minorities within India have also increased in the past few years. India's delegations abroad (Operation Sindoor) had to field some of those questions during their travels.

India's right to defend itself from decades of Pakistan-backed, trained and funded terrorists is unassailable. But carrying a tough message on terror is easier for the diplomats tasked with the role, if in a strife-roiled world, the government plays to India's advantages, and what differentiates it from Pakistan – as a secular, stable, pluralistic, rule-abiding democratic and economic power.

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India's tough message on terrorism and Pakistan will find more takers if it plays to its advantage it being a secular, stable and rule-abiding democracy

Paper 02: Internaional Relations

UPSC Mains Practice Question: India's post-terror diplomatic responses are increasingly misaligned with global geopolitical trends. Discuss with reference to Operation Sindoor and India's diplomatic strategy.(250 words)

Context :

The article evaluates the **global diplomatic response to India's Operation Sindoor (May 2025)** — a military retaliation following the **Pahalgam terror attack** — and argues that criticism of India's **diplomats** is misplaced. The core issue lies not in *how* the message was delivered, but *what* was messaged and how **global geopolitics** has evolved.

Key Issues Highlighted

1. Weak Diplomatic Support Post-Operation Sindoor

Unlike after previous cross-border strikes:

- **2016 (Uri)**: Regional solidarity (SAARC boycott by Bangladesh, Sri Lanka, Afghanistan, etc.)
- **2019 (Pulwama)**: Masood Azhar designated by UNSC after global pressure
- **2008 (Mumbai Attacks)**: UNSC sanctions on Hafiz Saeed & Pakistan on FATF grey list

In 2025:

- **Minimal support** post-Sindoor strike.
- **OIC, China, Turkiye**, and others **sided with Pakistan**.
- **South Asian and Western support was lukewarm**.
- This reflects a **diplomatic disconnect** between India's expectations and global priorities.

2. Pakistan's Recent Diplomatic Gains

Despite its terror links, Pakistan has:

- **Amended the UNSC Pahalgam resolution**, removing reference to TRF (The Resistance Front).
- **Gained UNSC roles** (Taliban Sanctions Chair, Counter-Terrorism Vice-Chair).
- Secured **IMF and ADB funding** despite Indian opposition.
- **Pak Army chief Gen. Munir invited to the White House**.
- May attempt to raise **Kashmir** at the UNSC as July President.

These developments suggest that **India's message didn't resonate globally**, while Pakistan was able to **maneuver diplomatically**, even amid its economic and political crisis.

3. Problematic Messaging: India's "New Normal" Doctrine

The article critiques the three-pronged strategic doctrine articulated by PM Modi post-strike:

i) "Any act of terror is an act of war"

- **Over-escalatory:** Allows any rogue non-state actor to provoke large-scale retaliation.
- **Creates instability:** Lowers the threshold for war.

ii) "India will not bow to nuclear blackmail"

- **Risky signaling:** Breaks previous restraint on nuclear rhetoric.
- Alarms **foreign capitals** already worried about nuclear conflict zones.

iii) "No distinction between state and non-state actors"

- **Implied full-scale retaliation:** Against Pakistan even for non-state actions.
- Suggests **all-out war potential**, not controlled military ops.

This **rhetorical hardline** made even friendly countries hesitant to offer explicit support, especially in a world already anxious about **territorial aggression and military adventurism**.

4. Diplomatic Misalignment with Global Norms

India's assertive approach is being **viewed differently now** than in the 2010s due to:

- **Geopolitical shifts:** World is cautious post-Ukraine, Gaza, and South China Sea.
- **India's ambiguous stance** on Ukraine (not criticising Russia) and Gaza (silence on Israel's actions) **weakened its moral appeal** in the West and Global South.
- **"Taking back PoK" statements** by Indian leaders fuel fears of territorial revanchism.

Diplomatic **double standards** (India demanding global support for its actions, while remaining silent on others) have undermined India's narrative consistency.

5. Decline in India's Global Democratic Image

Rising global criticism around:

- **CAA, Article 370 abrogation, Internet shutdowns, minority rights issues**
- Allegations of **transnational killings** (e.g., in Canada and the US)

Daily News Analysis

- **Democratic backsliding narratives** in foreign media and parliaments

These issues make India's **moral argument on terrorism and sovereignty** harder to sell, especially when contrasted with Pakistan's **low global credibility**. Instead of highlighting its **democratic distinctiveness**, India has risked appearing authoritarian.

Core Argument

India's **diplomats ("messengers") should not be blamed** for the lack of international support. The **problem lies in the message and the context**:

- Aggressive messaging must consider the **changing global mood**.
- **Moral high ground** is key — India must **differentiate itself** from Pakistan not just militarily, but as a **secular, democratic, pluralistic power**.
- The **tone of diplomacy** needs recalibration, not just more of it.

Conclusion: Rebuilding a Credible Global Narrative

To regain international diplomatic traction, India must:

- Focus on **soft power and moral credibility**
- **Align messaging** with democratic values and international norms
- Avoid **escalatory rhetoric** that contradicts its calls for dialogue in other forums
- Strategically leverage **multilateral platforms** without sounding belligerent

This also requires **internal democratic strengthening** — foreign policy credibility begins at home.
