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Madras Institute of Development Studies

# THE POLICY CHRONICLE

## READING THE STATE, BETWEEN THE LINES



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# Foreword



Recent discourses on public policy have been marked by three paradigmatic shifts. First, it has become more adaptive. There has been an attempt to move beyond efficiency to emphasize collaborative governance, public value, and inclusivity rather than just cutting costs or privatizing services. The focus is now on the government's role as a primary service provider, particularly in times of recurrent crises. Second, there has been a move away from rule based to evidence based policy making, which means that it is more data-driven.

Policies are increasingly built on evidence, big data analytics, and machine learning to predict outcomes. Further, policymakers are utilizing behavioral insights to influence public behavior toward desired outcomes, without restricting freedom. Third, there has been a trend towards participatory approaches to address complex, fast-evolving development challenges. There is a growing demand to include diverse stakeholders—citizens, NGOs, and industry experts—in the decision-making process to ensure legitimacy. Governments are increasingly using online platforms, crowdsourcing, and workshops to allow community voices to directly shape policy outcomes. These changes reflect an ongoing, dynamic interaction between governing bodies and the public, aiming to make policies more responsive to current needs.

Against this backdrop, the initiative by the students of public policy at MIDS to foster a culture of dialogue and discussions on important themes is welcome and commendable. They are embarking on a journey to create new spaces for conversation and sharing of ideas.

The ‘Policy Chronicle’ is a big first step and I hope it would arouse interest among research and policy community. I congratulate the team of students who have taken this bold initiative and wish them success.

**M Suresh Babu**
Director, MIDS

# Prolegomenon



It gives me immense pride and satisfaction to see the participants of the Malcolm Adiseshiah Fellowship in Public Policy and Management bring out this Policy Chronicle as part of the MIDS publication series. I extend my heartfelt congratulations to the team leader and all contributing students for this truly commendable initiative. I had the pleasure of reading through the policy notes with great interest, and I am delighted by the depth, breadth, and analytical rigour that the students have brought to a wide range of contemporary policy themes.

The Chronicle opens fittingly with a tribute to Dr. Malcolm Adiseshiah, the visionary founder of MIDS and the inspiration behind the Public Policy programme that bears his name. His pioneering contributions to development economics — and in particular, his enduring belief in education as an instrument of sustainable development — remain a guiding light for all those engaged in this field.

A policy note on Trump's tariffs and their impact on India's exports to the United States offers a nuanced assessment of the proposed India-US trade deal. It argues that while the deal holds genuine promise in terms of lowering tariffs and expanding export potential, it remains structurally incomplete — resting more on ambiguity than on firm commitments. The note cautions that economic gains in key sectors, however welcome, cannot by themselves address the deeper erosion of strategic trust between the two nations.

Another note turns its lens on Tamil Nadu's green initiatives, evaluating them critically within a public policy framework. It acknowledges the state government's efforts while clearly identifying the gaps, challenges, and unresolved issues that must be addressed for these initiatives to achieve their intended impact. The development of the Ladakh Union Territory is examined in a thoughtful note that surveys the range of measures undertaken by the Union Government. While appreciating the developmental momentum, the note sounds an important cautionary note: future efforts must exercise greater sensitivity toward the fragile ecology and environment of this unique region.

A note on India's tax rule for Cloud providers is revealing the nation's intent in developing the computing infrastructure, than just being service providers, with AI being a forerunner in shaping the digital world. The context also cautiously checks on the environmental trade-offs associated with large scale expansion of data centres. The Make in India programme receives a rigorous critical evaluation, with the note not only assessing its achievements and shortcomings but also charting a constructive course of action for the future.

A note on the 16th Finance Commission examines its recommendations on fiscal devolution between the Centre and the states. It calls for more substantive and equitable deliberation on resource sharing, and observes that the Commission's recommendations do not deviate significantly from those of its predecessor — the 15th Finance Commission — arguably in the interest of continuity and avoiding inter-governmental conflict.

In another conversational note on waste governance, a policy professional reflects on how macro aspirations translate into micro realities, the institutionalisation of technology for effective transformation, and the behavioural misconceptions that shape its management.

Finally, the Chronicle includes a book review of George Orwell's *Animal Farm* — a work published eighty years ago, yet startlingly relevant today. The review demonstrates how this celebrated satirical fiction, with its critique of political opportunism and the corruption inherent in unchecked power, continues to illuminate the enduring dynamics of governance and polity.

Taken together, the thematic range of this Chronicle and the quality of analysis brought to bear on these issues through a public policy lens are its defining strengths. I am confident that this modest yet meaningful endeavour by our participants will make a lasting impression on readers and contribute meaningfully to public discourse.

It is my sincere wish that this initiative endures and flourishes — continuing to inspire successive batches of students to engage thoughtfully with the pressing policy questions of their time, and carrying forward the legacy of intellectual inquiry that defines the spirit of MIDS.

**L Venkatachalam**
RBI Chair Professor

# From the Editor's Desk



Public policy now stands at decisive crossroads. The contemporary world is beset by climate change, geopolitical instabilities, and overwhelming technology – and it's obvious that, in the large context, the policy setting is no longer an economic subject alone. Policy making should become equitable and sustainable across all walks of life.

In this setting, the *"Policy Chronicle"* is poised to bridge research perspectives and practicalities by influencing decision-making. Objectives shall entail facilitation of analysis, critical reviews and debating to increase transparency and accountability.

This all, in the widest sense, aligns with the extant vision of Malcolm Adiseshiah – who institutionalized the Madras Institute of Development Studies (MIDS) about a half a century ago in January, 1971.

*Policy Chronicle* is mandated to foster evidence-based policy making in a sphere filled with hostile ideologies that hinder critical thinking. The magazine envisages opening dialogues between economists and ecologists – who often take the road not taken by the other. It is our ambitious attempt to facilitate an interdisciplinary approach in policy making stemmed at the core of a development question. At this juncture, we thank Prof. M. Suresh Babu, Director, MIDS for mooting and entrusting us to conceptualize the magazine and Prof. L. Venkatachalam, RBI Chair, MIDS for his unwavering support. We seize the moment to thank Mr. M. R. Prasanna, Publication Officer, for his constant nudging and generosity to letting us work with a free hand in all respects.

I humbly acknowledge the work of my colleagues, from editorial assistance to illustrations. It is needless to say that the success of this publication owes a lot to the contributors who put pen to paper. The cornerstone of Policy Chronicle is unequivocally its design. I sincerely appreciate the good work of Ms. Anuvarshini K. P., for meticulously designing the magazine. At MIDS, we see this as a beginning of an evolution in disseminating policy themes to all horizons, as we embark on this *"PolicyCal"* journey.

Welcome to Policy Chronicle.

**Yukesh Saravanan**
Malcolm Adiseshiah Fellow
in Public Policy

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**Yukesh Saravanan**

# The Adiseshiah Model

Walking down the streets of Adyar and into the 55-year-old Madras Institute of Development Studies (MIDS) as a new recruit for the Malcolm Adiseshiah Fellowship, I viewed Malcolm as just another name among a deck of economists, knowing little of the noble mind behind it. As I traversed the grand old corridors of this think tank, my perspective shifted. The distance between curiosity and reverence narrowed as his true legacy emerged.

Public policy professionals often look toward global frameworks, fiscal ratios, institutional reforms, and governance structures. Yet some of the most enduring policy insights come from individuals who combined intellectual depth with administrative experience and institution-building at home. Malcolm Adiseshiah stands as one such prominent economist-administrator, whose work reminds us that development is ultimately about people, not just production. While many of his contemporaries were preoccupied with the abstract mechanics of national income accounting, Malcolm brought the "human" back into development discourse.

Born in 1910 in Vellore, Tamil Nadu, Adiseshiah studied economics at reputed institutions in India and abroad. It was a time when debates on Keynesianism, planning, and colonial political economy were reshaping global thought. Unlike many of his counterparts who remained within academic theory, Malcolm entered the more demanding world of international public administration. His long tenure at UNESCO, where he eventually served as Deputy Director-General, placed him at the centre of post-war development policy during the great wave of decolonisation that swept across Asia and Africa.

*PeriyarThambi* is a Malcolm Fellow at MIDS with academic interests in public policy to drive social justice. He is an ardent Civil Service aspirant.





Jothi Varshini S A



At UNESCO, Adiseshiah did more than draft reports. He designed technical assistance frameworks that linked education systems to national development strategies. He believed that education was not a social luxury but the highest-return investment a developing country could make, even if its returns were not immediately visible in national accounts. At a time when institutions such as the World Bank emphasised physical infrastructure as the backbone of growth, Adiseshiah insisted that human capability was the true engine of economic transformation.

His development philosophy rested on two core principles. First, he rejected the "one-size-fits-all" model of policy prescription. Each country, he argued, required strategies grounded in its specific historical, cultural, and economic realities. Second, he believed that reducing inequality was not a peripheral concern but central to sustainable development, perhaps even more so today. For Adiseshiah, economic growth without social justice was neither morally defensible nor structurally stable. True national progress, he maintained, was possible only when the poorest sections of society were economically empowered.

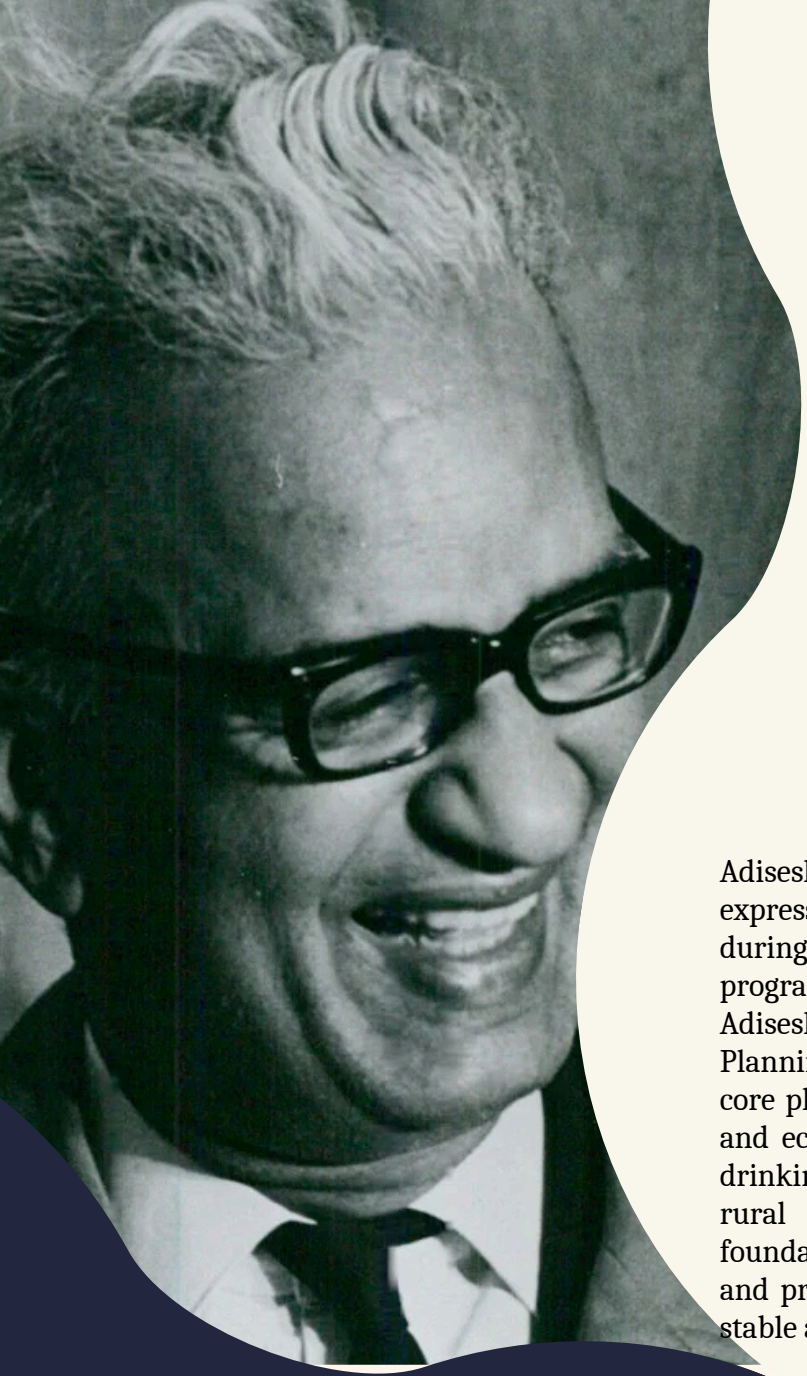
Despite his global stature, Adiseshiah's deepest commitments remained rooted in India. In 1971, MIDS was established and would go on to become a leading centre for sub-national policy research. Through MIDS, he created an institutional space where rigorous, independent analysis of state-level data could inform policy debates. He understood that effective policymaking requires not only expertise within government but also a culture of evidence-based scrutiny outside it.

Adiseshiah founded and edited the MIDS Bulletin for 24 years and established a monthly seminar series. While featuring academic papers, the Bulletin became renowned for his insightful editorials. These writings now form a vital socio-economic archive, chronicling decades of change across Tamil Nadu and the global economy from 1970 to 1994.

His influence on Indian public policy was particularly visible through his association with the Planning Commission and his advisory work for the Tamil Nadu government. Adiseshiah did not believe in policy for policy's sake; for him, policy was an instrument of radical equity. He was known for his "Mid-Year Review of the Economy," through which he held policymakers accountable.

Later, he became a nominated member of the Rajya Sabha. Serving in 1978, Adiseshiah emerged as a non-partisan model for nominated members. He leveraged his expertise to advocate land redistribution, taxes on wealthy peasants, and a coherent national energy policy. An ardent humanist, he prioritised rural poverty reduction and the expansion of education.





Adiseshiah also championed Tamil culture globally, leveraging UNESCO to support classical translations and temple restoration efforts, including those at Srirangam and the Thanjavur Brihadisvara Temple. He founded the International Institute of Tamil Studies, promoted Tamil research, and facilitated the publication of the UNESCO Courier in Tamil. Despite years abroad, he remained deeply committed to the language in his correspondence and oratory.

One of his enduring legacies lies in his advocacy for adult literacy and mass education. His intellectual imprint can be seen in initiatives such as the National Adult Education Programme (NAEP). He recognised that for India to function as a meaningful democracy, its citizens required functional literacy. Without an informed citizenry, policy delivery would remain partial and uneven.

Adiseshiah also championed principles that later found expression in the Minimum Needs Programme introduced during India's Fifth Five-Year Plan (1974–78). Although the programme was formally associated with D. P. Dhar, Adiseshiah's work as a member of the Tamil Nadu State Planning Commission closely mirrored and reinforced its core philosophy. He argued that the state had both a moral and economic obligation to ensure a baseline of nutrition, drinking water, primary education, health services, and rural electrification. This was not charity; it was foundational economics. By raising the purchasing power and productivity of the rural poor, the state could create a stable and expanding domestic market.

The "Adiseshiah model," if one may call it that, offers enduring lessons. For researchers, it underscores the importance of empirical rigour combined with social sensitivity. For policymakers, it demands that questions of distribution accompany questions of growth: not only "How much will this increase GDP?" but also "How much will this reduce inequality between the top and bottom deciles?" For citizens, it calls for accountability measured in outcomes rather than announcements.

Ultimately, Adiseshiah's life reminds us that the most sophisticated economic instrument is not an algorithm or a forecasting model, but an empathetic understanding of the person standing at the end of the queue. The true measure of policy, in his spirit, is the dignity it restores to the disenfranchised.



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# Fiscal Federalism at a Crossroads



***Samyuktha Subramanian*** is a Research Associate at MIDS. She's suspicious of tidy formulas, attentive to what they conceal, and can usually be found walking down a random road in search of good coffee.



On February 1, 2026, the report of the 16th Finance Commission for the period 2026–31, chaired by Dr. Aravind Panagariya, was tabled in Parliament. The Finance Commission recommends the basis for the distribution of the country's tax revenues between the Centre and the States (called vertical devolution) and also among the States (called horizontal devolution) for five years. The 16th Finance Commission was also tasked with recommending the principles governing grants-in-aid from the Centre to the States, including measures to strengthen the finances of urban and local bodies.

The major revenues for the Centre come from (1) tax sources such as Personal Income Tax, Goods and Services Tax, and Customs Duty; 2) non-tax sources such as dividends from Public Sector Undertakings and interest receipts; and (3) capital receipts such as disinvestment proceeds from selling the government's shareholding in PSUs. These together constitute about 60% of the Centre's total revenue. Prior to 2000, two major taxes of the Centre, Corporate Income Tax and Customs Duty, were not part of the divisible pool; only Income Tax and Central Excise Duties were shared. In 2000, following the 80th Constitutional Amendment Act, an alternative scheme of devolution of revenue between the Centre and the States was introduced. Except for cesses and surcharges, most central taxes became part of the divisible pool. It fixed a 29% share of central taxes to be distributed to the States, a higher share than earlier.

"While the share of the States may seem to have been increasing, it is important to note that the Centre's expenditure responsibilities are limited relative to its revenue collection."

While the share of the States may seem to have been increasing, it is important to note that the Centre's expenditure responsibilities are limited relative to its revenue collection. Although the Centre collects nearly two-thirds of all taxes, it is responsible for only about one-third of total public expenditure. Post-GST, the States have limited scope to increase their own revenues. Only minor taxes, such as stamp duties, excise on liquor, and property taxes remain within their domain, and these yield less than 20% of State revenue.

Southern States such as Andhra Pradesh, Karnataka, Kerala, and Tamil Nadu collectively expressed profound disappointment over the GST compensation cess ending after 2022, though it had been extended during the pandemic. They viewed this as a betrayal of the Centre's five-year revenue protection promise, leaving them with irreplaceable deficits amid shrinking tax autonomy and no viable alternatives.

Interestingly, cesses and surcharges, which lie outside the purview of the States, have continued to rise. Nilakantan RS, data scientist and author of the book South Vs North: India's Great Divide, argues that the Union effectively reclassified a growing portion of its tax collections as cesses and surcharges, which are excluded from the divisible pool, thereby neutralizing much of the intended increase in the states' share. While the divisible pool share rose by 10 percentage points after the 14th Finance Commission, the effective share of gross tax revenues transferred to the States increased by only about 3 to 4 percentage points, from 28.73% in 2010-11 to 32.16% in 2026-27.

Horizontal devolution among states relies on criteria such as income distance (45% favouring poorer regions); 2011 population data (15% hurting low-fertility southern States); geographical area (15% aiding larger ones like Uttar Pradesh); forest cover (10% benefiting forested northeastern and central areas); demographic performance (12.5% based on fertility trends from 1971 to 2011 yet skewed by population scale); tax effort (2.5% rewarding efficient collections); and, newly in the 16th Finance Commission, GDP contribution to partially address high-performing economies.

Southern States such as Tamil Nadu and Karnataka decry the population and forest criteria that shrink their roughly 18% share despite contributing nearly 30% of national taxes, while the late inclusion of GDP carries too little weight to balance these inequities. They argue for a fairer split that places greater emphasis on equity, with income or GDP weighted at 50% alongside need. Initially designed to incentivise population control by using the 1971 Census to reward low-growth States, the shift to 2011 data now creates a perverse incentive structure, as states that succeeded early in demographic transition find themselves relatively disadvantaged. Meanwhile those with larger baseline populations gain greater fiscal weight.

| Year | Finance Commission | States' Share |
|---|---|---|
| 2000-05 | 11th | 29.5 |
| 2005-10 | 12th | 30.5 |
| 2010-15 | 13th | 32 |
| 2015-20 | 14th | 42 |
| 2020-25 | 15th | 41 |
| 2026-31 | 16th | 41 |

The 16th Finance Commission appears to have considered the criticisms that surfaced against the 15th Finance Commission, which had attracted sustained opposition, particularly from southern States, on several fronts. The decision to rely on the 2011 Census rather than the 1971 Census for horizontal devolution was viewed as penalising states that had successfully controlled population growth. Although it introduced a "Demographic Performance" criterion to mitigate this effect, the measure remained closely correlated with population size and therefore had only a limited corrective impact.

Critics also questioned the substantial weight assigned to income distance, arguing that it tilted the formula heavily toward redistribution at the expense of rewarding fiscal and economic performance. Further concerns were raised about the lack of transparency in the methodology, especially the limited clarity on how individual criteria translated into final inter-se allocations.

However, it has not fully addressed these concerns and instead sought to sidestep them by offering limited transparency on its methodology. For instance, the 15th Finance Commission had introduced "Demographic Performance" in horizontal devolution, but it remained highly correlated with the population factor it was meant to offset.

The 16th Commission has revised this formula, adding a GDP contribution factor. While overall allocations suggest some correction for southern states, as intended, the inter-se shares assigned to each factor have not been disclosed, making it difficult to verify how effectively these revisions operate.

Nilakantan argues that the Commission's restraint reflects a broader institutional instinct to avoid direct confrontation with the Union government's fiscal approach. While a Finance Commission is not expected to enter partisan debate, he suggests that excessive caution can blur the distinction between independent constitutional arbitration and policy endorsement. In his view, when structural concerns about fiscal centralisation are left unaddressed, the report risks appearing as a technical refinement of the union's position rather than an autonomous assessment of federal balance. Such an approach may consolidate central authority in the short term, but over time it could strain the federal compact that the commission is constitutionally meant to safeguard.

# Tamil Nadu's Green Ambitions & Grey Realities

**Yukesh Saravanan**

Tamil Nadu is a dynamic state. Performance indicators across sectors testify to the state's growth in the economy, industrialisation, urbanisation, and the service sector. Environmentally, the Tamil state has unambiguously endeavoured with its robust green initiatives. Tamil Nadu has prioritised environmental sustainability with nearly 25% of its geographical area designated as forest cover, and contributing to the global Sustainable Development Goals 13, 14 and 15 envisioning Climate Action, Life below Water and Life on Land respectively.

While the southern state is poised for incremental progress in the environmental sector, the government should also dive deeper into addressing challenges that unequivocally demand a presently intervention.



## Green Ambitions

TN is going the extra mile to achieve net zero emissions well before 2070. Action Plans are clearly defined, which entail adaptation of green energy, transforming mobility, industrial efficiency, enhancing green cover, waste management, and nature-based solutions for combating natural disasters. In the recently concluded Climate Summit, too, the government emphasized the need to invariably integrate climate action across schemes implemented by all departments and introduce a micro-level indicator to determine Carbon emissions in the state, similar to Nationally Determined Contributions. The state Ministry of Environment, Forest and Climate Change's desperate attempt to involve local communities in conservation efforts is timely across terrains - from mountains to sea.

For instance, Project Nilgiri Tahr, a flagship initiative launched in 2022 to save the endangered state animal (in the Red List of the International Union for Conservation of Nature), has paid off. The population of the state animal in fragmented pockets across Mukurthi National Park, Anamalai Tiger Reserve and Grass Hills National Park has increased to 1,303 in the 2025 year's survey from 1,031 in the previous year, thanks to the forest department's grassland restoration efforts in its mountainous habitat. On the flip side towards the sea, the International Union for Conservation of Nature (IUCN) recognised India's first Dugong reserve in TN's Palk Bay. This was followed by the state's diligent attempt to conserve the 'vulnerable' marine species from becoming extinct.

Tamil Nadu Green Climate Company (TNGCC), a Special Purpose Vehicle, is also embarked on a journey against climate challenge. Green Tamil Nadu Mission, Tamil Nadu Wetlands Mission, among others, is on the bandwagon confronting climate change, influencing the natural environment and human well-being.



## Gaps in the Green Momentum

Given the state's commitment to a sustainable environment and biodiversity conservation, it's inevitable to sideline challenges that translate into results. Several critical challenges demand non-trivial scrutiny, which have long been overlooked.

Issues range from conservation of native species to prudent maximisation of development initiatives in the sector. For instance, conservation of an endangered native floral species is in limbo. The government's spree to construct nature conservation centres is drawing flak, and incidents of mismanagement in the translocation of rogue jumbos explicitly question its might. Oddly, deteriorating Air Quality Index (AQI) in urban areas is triggering health ailments, and our beautiful mountains are exposed to over-exploitation, water bodies are biologically dead as a consequence of net-zero dissolved oxygen, plastic pollution is perpetuating, tourism is unregulated, and climate disasters are anthropogenic.

At a time when conservation of native trees is given the highest priority by stakeholders, the TN government decided not to extend the Rosewood Conservation Act 1995, after its extended term ended in February 2025. The heritage trees, Dalbergia Latifolia or ivory of the forests, have become susceptible to facing the axe, albeit bearing an IUCN "vulnerable" tag.

Not long ago, it was reported that TN has the lowest density of Indian Rosewood, with only 17.2% lying within the protected areas. Those surviving in its fragmented habitats in the Nilgiris, Anamalai and Parambikulam are on thin ice as the state is yet to initiate the extension of the act to save the keystone species from becoming extinct.

Allowing a vulnerable species to lose statutory protection undermines the very essence of conservation in an ethical policy contradiction. TN is on a construction spree to establish thematic environmental centres across the state. The latest proposals, being six centres of excellence for coastal conservation, restoration and climate adaptation, have drawn mixed reactions. Mulling to establish such centres along the coastline and wetlands is neither beneficial nor conservative. It's nay pernicious to the ecosystem and often counterproductive.

Conservation centres have always been contentious for a long time. Lack of skilled staff, weak audience engagement and bungling neglect have resulted in inefficiency of such centres to thrive in the long run. This writer reckons a similar proposal to build a centre in Longwood Shola Reserve Forest (Ramsar site) before being dropped owing to resentment from greens and local communities. Developmental proposals must sieve the ecological and cultural significance of sites chosen, as indiscriminate activities could throw the baby out with the bathwater.

The state of TN is facing the worst cases of negative human-wildlife interactions. The Western Ghats districts have frequently reported human losses owing to attacks by a carnivore or a jumbo. Unlike earlier decades, there is an unprecedented spurt in such vile incidents. The state lost 685 human lives to negative interactions involving wild animals over the past decade, including 43 deaths in the previous year. Pathetically, indigenous people, members of the marginalised communities and migrant plantation workers have fallen prey to charging animals. Notwithstanding measures, indigent lives perish, and palliative measures like tendering a solatium aren't the remedy.

Think tanks must bolster existing strategies that uncover the primary cause of animal intrusions into human habitat, or otherwise anthropogenic transgressions in the wild.

In reference to the 2025 translocations of “Radhakrishnan” and “Rolex” and incidents following, what drew more flak were not the unfortunate demise of the two captives, but the undisguised fact that initiations were bereft of standard procedures of operations.

Tamil Nadu’s transport sector’s share in total Greenhouse gas emissions had increased from 12 to 19 per cent. Cities like Chennai, Coimbatore and Tirupur witness high emissions of particulate matter and carbon monoxide with major contributions from automobile production and textile dying industries. In stark contrast to what is often perceived as moderate in the scale of AQI, debilitating respiratory diseases become evident across all age groups.

We often argue over the frivolous enforcement of the plastic ban across all Western Ghats districts in the state. Incidentally, plastic landfills are encroaching upon sensitive water sheds. Complaints of non-compliance with solid waste management rules by generators are on the rise. Hill stations like the Nilgiris and Kodaikanal are bearing the brunt of indiscriminate tourism and irresponsible peregrinators, choking the mountains.

The fragile highlands of the Nilgiris Biosphere Reserve are jolted owing to challenging green energy proposals. While a core area of the reserve has been demarcated for the construction of the Upper Bhavani Pumped Storage Hydroelectric project, the sensitivity of the terrain, also contiguous with Mukurthi National Park is ecologically undermined. Proponents, however, look upon the project with hope, even as a case-specific exigency for conservation is mounting in the face of an environmental catastrophe.

**Time-tested Achievement**

Environmental disorders are innumerable. Yet, few of those out in the air remain to run scot free. Tamil Nadu’s action plan and approach must decisively prioritise maximising conservation that would amplify development in the sector, besides bridging the gap between intent and implementation.

Green developments have evolved with no less challenge. In the puzzle between conservation and development, the former is the cornerstone for sustainability. Ultimately, green goals are time-tested, yet achievable – given the intent is decisive.



Y*ukesh Saravanan* is a Malcolm Adiseshiah Fellow and a member of the United Nations Convention to Combat Desertification - Youth Caucus.



# Make in India

## The Reality of Where We Stand

The ‘Make in India’ scheme, launched in September 2014, was marketed as a revolutionary economic strategy to make India a world manufacturing center. With its ambitious goals of increasing manufacturing to 25% of GDP, generating 100 million jobs, and drawing foreign direct investment (FDI), the plan is guaranteed to transform India's manufacturing sector. A decade on, the imprint of ‘Make in India’ is felt in every sector. But the question is: has the scheme lived up to its potential?

### The Vision vs the Reality

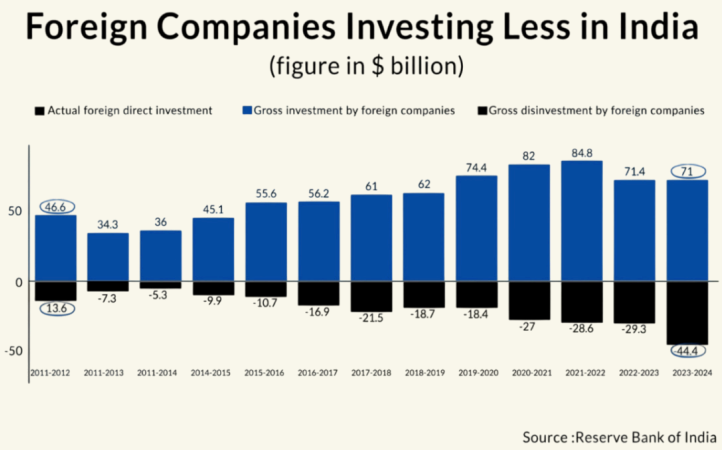
At the center of it all, 'Make in India' was supposed to increase the manufacturing contribution to GDP to 25% by 2022, generate 100 million jobs and considerably increase FDI and exports, while also to decrease import dependence in major sectors. Talking about the share of GDP in manufacturing sector, numbers are still way short of 25%. At 15% in FY14, it remains mostly stuck at about 17.7% a decade later.

In job creation, according to the Centre for Monitoring Indian Economy (CMIE), only 18.5 million jobs have been added in manufacturing so far as of 2024. This indicator is also short of even 20% of the initial target.

### Successes Worth Mentioning

Despite the gaps, some achievements are noteworthy. Electronics and mobile production has increased, partly owing to the Production Linked Incentive (PLI) programs. India is currently the second-largest producer of mobile phones in the world after China. Automotive and electric vehicles (EVs) have received robust policy intervention and investment. Ola Electric, Tata, and TVS have invested in increasing manufacturing and R&D facilities. Pharmaceuticals and defense production have increased domestically, partly due to strategic policy reforms and purchases from Indian suppliers. Yet, these gains are still sector-driven and not yet a pan-industrial turnaround.

## FDI: Increasing Inflows, But with Exceptions

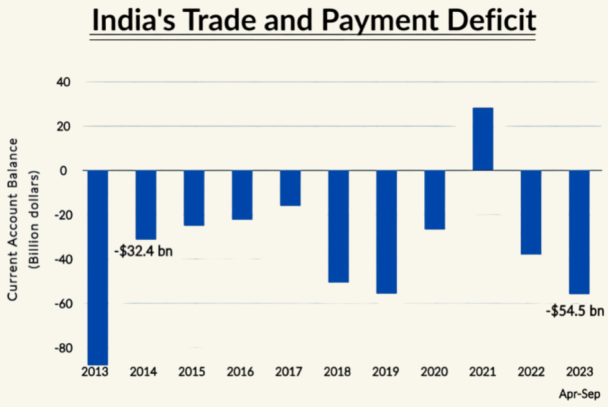



Source :Reserve Bank of India

FDI inflows have, in fact, increased from $46 billion in 2014 to $71 billion in 2023. Yet, disinvestments also jumped from $13.6 billion to $44.4 billion, reducing net gains. Furthermore, most of the FDI has gone into services and technology sectors, rather than the core manufacturing. The government's intransigent attitude, as evidenced in the Tesla case, has at times killed flexibility that overseas investors anticipate.

## Trade Balance: Exports Up, But Imports Too

Exports have more than doubled from $375 billion in 2014 to $776 billion in 2023. But import growth has surpassed exports, leading to a wider trade deficit of $54.5 billion in 2024, up from $32.4 billion in 2014.




## Structural and Policy Bottlenecks

### 1. Red Tape & Ease of Doing Business

In spite of communications on single-window clearances and ease of doing business, ground reality is different. Establishing operations (ranging from company registration to land acquisition) involves inter-ministerial approvals and bureaucratic layers. File movement delays, topped by absenteeism or procedural stickiness, can keep industrial projects stuck for years. For example, even company registration could be done in 15–30 days, but obtaining land, environmental clearances, and commencing construction would take 1.5 to 5 years, while in Vietnam it would be only 6 months.

### 2. Import Tariffs That Dissuade Entry

India's steep import tariffs have been a strong disincentive for international players, particularly in high-tech areas. India has imposed 100% import duties on electric vehicles (EVs) in 2021, making foreign brands like Tesla uncompetitive in entering the Indian market prior to establishing manufacturing operations.

### 3. Environmental Clearances: A Systemic Roadblock

Environmental clearances have been another bottleneck. More than 1,000 projects in Gujarat alone were held up as of mid-2024 due to the delay in green clearance. What ought to be a speedy process for essential infrastructure takes years, undermining investor sentiment and increasing the costs of the project.

### 4. Land Acquisition: The Achilles' Heel

Land acquisition continues to be one of India's long-standing policy failures. Consider South Korea's POSCO, which had planned to invest $12 billion in a steel plant in Odisha, the single largest FDI proposal at the time. Despite memorandums being signed in 2005, the project got entangled in protests, bureaucratic delays, and clearance roadblocks. After a 10-year stalemate, POSCO officially withdrew in 2017. And it is not only foreign players. Domestic infrastructure projects are also in limbo for the same reason.

- Bharat Mala Project: Initiated in 2017 to construct 34,800 km of national highways, it was to be finished by 2022. By 2024, just 23% of the work is done, and the Ministry has now extended the deadline to 2027. Cost per km has risen to ₹32 crore, more than doubling the total spending from ₹5.35 lakh crore to ₹10.63 lakh crore.
- Mumbai–Ahmedabad Bullet Train: Earlier touted as India's new infrastructure crown jewel, it was to be finished in 2023. Land acquisition delays, particularly in Maharashtra, have now pushed the deadline to 2028, and the cost has escalated to ₹2 lakh crore.

Such delays not only cause cost escalations but also cascade through the generation of jobs, inflows of investment, and public opinion.

### 5. Skills Deficit

Just 2% of India's workforce possesses certified technical skills, as opposed to 96% in South Korea and 40% in China (Skill India Report, 2024).The Skill India mission has tried, yet just 5% of India's workforce has been formally trained so far. Most B.Tech, ITI, and polytechnic graduates are jobless.

## What needs Fixing

**Ease of Doing Business**
Change the processes, not the laws. Empower local government, simplify digital clearances, and cut unnecessary paperwork.

**Land Banks & Acquisition Reform**
Scale Gujarat's land bank model. Ensure community participation and transparent compensation schemes.

**Infrastructure Upgrade**
Expand freight corridor development, port updates, and last-mile logistics. Shorten turnaround times with investments in smarter technology and process automation.

**Skilling at Scale**
Connect skilling initiatives to industry needs. Scale up apprenticeship models, vocational training, and public-private partnerships in technical education.

## Future Outlook

Make in India was not an all-out failure. It did spur discussions and policy focus towards manufacturing. But the program has mostly underachieved due to structural rigidities, bureaucratic resistance, and sluggish infrastructure expansion. With India's goal of becoming a $5 trillion economy, manufacturing should take center stage, not merely in GDP contribution but also in job creation and import substitution. The subsequent phase needs to be bold, multi-stakeholder, and reform-oriented.

The vision still deserves. But the implementation now must catch up.



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# From Market to Infrastructure Hub

## Why India is Rewriting Tax Rules for Cloud Providers

### The Story So Far

In the Union Budget 2026–27, the Government of India introduced a tax exemption framework extending to 2047 for notified foreign cloud service providers that operate using India-based data centre infrastructure.

### Why is the government treating data centres like a strategic infrastructure?

Data centers are the physical backbone of the digital economy. UN Trade and Development (UNCTAD) notes that data centers are becoming central to global investment patterns because they support digital production and cross-border services. AI has massively increased demand for computing power. Goldman Sachs' analysis highlights that countries and firms are investing tens of billions into data center expansion because AI workloads are exploding. Generative AI and large language models require enormous processing and computing capacity. Infrastructure location now shapes economic power. Hence, governments are actively intervening to influence location. Countries are not leaving data center location to markets anymore. The White House announced that the US focuses on accelerating permits for data center infrastructure - showing governments see computing capacity as a strategic priority.

### What's with India ?

India already possesses significant scale in talent, firms, and adoption within the AI and cloud computing ecosystem. More than six million people are employed in the country's technology and AI ecosystem, and with around 1.8 lakh startups and nearly 89 percent of new ones incorporating AI into their products or services.

Yet while this ecosystem is expanding rapidly, the scale of domestic computing capacity and supporting infrastructure is still developing. As a result, AI and computing infrastructure is located is becoming increasingly important for India's position in the global digital climate.

## What Problem Is the Tax Framework Solving?

Decisions on where to locate infrastructure depend on several factors such as energy supply, connectivity, operating costs, and the broader regulatory environment. A World Bank report notes that these structural factors often matter more for investment decisions than market size alone. This means that having a large digital user base (demand) does not automatically ensure that the underlying computing infrastructure will be located within the country.

OECD (2015, 2020) reports on the taxation of the digital economy note that cross-border digital firms face uncertainty regarding jurisdictional tax claims and profit attribution when they maintain infrastructure or significant economic presence in multiple countries. For cross-border digital firms, tax treatment and legal exposure can be particularly important when deciding where to locate infrastructure. If operating servers in a country creates the possibility that part of a firm's global income could be taxed there, companies may worry that similar claims could arise in other jurisdictions, increasing the risk of disputes or overlapping tax obligations. In international tax discussions, this type of exposure is often linked to what is known as "permanent establishment" risk. Data centres involve large, long-term capital investments, and companies tend to avoid locations where the policy or tax environment appears uncertain or unpredictable. As a result, even strong digital markets may not automatically attract core infrastructure, if these risks are not clearly addressed.

If a large foreign cloud company operates its global services using data centre infrastructure located in India, the government will not treat that presence as a basis for taxing the firm's global cloud income in India, provided certain structural conditions are met. At the same time, income arising from domestic economic activity such as services provided by the Indian data centre company or sales to Indian customers routed through a local reseller remains taxable under normal rules. In effect, the policy offers tax certainty for global operations while preserving India's ability to tax domestic value creation.

This design directly addresses the permanent establishment concern discussed earlier. By explicitly stating that the presence of India-based data-center infrastructure will not, by itself, lead to taxation of a foreign provider's global cloud income, the framework reduces the uncertainty that firms typically associate with locating long-term infrastructure in a jurisdiction. The policy therefore lowers the risk that operating servers in India could trigger profit-attribution disputes or overlapping tax claims across countries. In doing so, it signals to global cloud providers that they can base computing capacity in India without exposing their worldwide revenues to additional tax exposure, thereby making local infrastructure investment more predictable and commercially viable.

The eligibility rules are meant to ensure that the policy actually anchors real infrastructure and economic activity in India rather than becoming a loophole for tax planning. By requiring cloud providers to use an India-based data-centre company, the framework ensures that the physical infrastructure, investment, and related ecosystem remain domestic. The condition that Indian customers must be served through a local reseller keeps revenue generated from the Indian market within the domestic tax net. At the same time, the notification requirements allow the government to retain oversight over which firms and facilities qualify, preventing misuse while aligning the policy with broader digital and industrial strategy objectives.

The safe harbour provision serves to reduce disputes where the Indian data centre is a related entity of the foreign cloud provider. By fixing a minimum 15 percent margin on cost for such arrangements, the policy limits prolonged transfer-pricing negotiations over how much profit should be attributed to the Indian unit. This gives firms greater certainty on tax treatment while allowing the government to ensure that a reasonable share of domestic value creation remains taxable.

## What are the broader perspectives?

The tax framework for foreign cloud providers' forms part of a broader set of measures in Budget 2026–27 aimed at strengthening India's technology and digital manufacturing ecosystem. Taken together, these initiatives address multiple layers of the technology value chain, from semiconductor design and electronics components to IT services and digital infrastructure. The launch of India Semiconductor Mission 2.0, along with expanded support for electronics components manufacturing, reflects a push to deepen domestic capabilities in chip design, materials, and component production. While these programmes are not directly targeted at cloud providers, they address the physical inputs required for large-scale computing systems, including servers, networking equipment, and advanced electronics. In this sense, attracting data centres creates long-term demand for such hardware, while strengthening semiconductor and electronics production improves the viability of hosting compute infrastructure domestically. The two policy directions therefore reinforce each other rather than operating separately.

Proposals to consolidate IT-enabled services into a single category, expand safe harbour thresholds, and accelerate advance pricing agreements are intended to provide greater predictability for one of India's largest export sectors. When viewed together with the cloud infrastructure tax framework, these reforms suggest an attempt to reduce uncertainty across both sides of the digital economy: the services layer that exports software and the infrastructure layer that hosts computing capacity.

India's policy moves also reflect a wider global shift in how governments treat data centres and AI computing capacity. Across major economies, public policy is increasingly being used to accelerate infrastructure deployment and secure long-term investment. In the United States, for instance, recent executive actions aimed at speeding up permitting processes and supporting energy and semiconductor systems linked to data centres illustrate how states are actively intervening to attract such projects. Similar trends are visible in other regions as countries seek to position themselves within emerging AI supply chains. Against this backdrop, India's long-horizon tax framework can be seen as part of a broader effort to ensure that the country is not only a large consumer of digital services but also a host for the infrastructure that powers them.

## How India's digital infrastructure is hosting the future?

At its core, the tax framework seeks to address a specific strategic risk: that India could remain a large consumer of cloud and AI services while the infrastructure powering them continues to be located elsewhere. Uncertainty over tax treatment and the possibility that hosting servers in India could expose global income to local taxation may have discouraged firms from committing long-term computing capacity domestically. By clarifying that infrastructure presence alone will not trigger taxation of global cloud income, while ensuring that domestic economic activity remains taxable, the policy attempts to remove this barrier without sacrificing revenue.

At the same time, expanding large-scale data-centre infrastructure brings its own challenges. Such facilities are energy-intensive and can place pressure on power systems, land use, and in some regions even water resources used for cooling. Without parallel investments in renewable energy, grid capacity, and sustainable infrastructure planning, rapid expansion could generate environmental and regional imbalances.

Seen in this broader light, the measure is less about offering a fiscal incentive and more about shaping the geography of digital infrastructure investment. It signals that India intends to host not only the users and applications of the digital economy but also the computing capacity that sustains it. Whether this strategy succeeds will depend not only on tax certainty but also on how effectively the country manages the economic, infrastructural, and environmental trade-offs that accompany large-scale digital infrastructure growth.



***Madhumitha Ramakrishnan*** is an aspiring economist, curious by default, analytical by habit, and usually somewhere between reading, questioning, and figuring things out properly.

AN UNTAPPED POTENTIAL IN

# LADAKH

A Viksit Bharat needs a new vision for its frontier areas. The abrogation of Article 370 saw the birth of the Union Territory of Ladakh. The region, which was long viewed for tourism and security, demands to be perceived as a treasure trove of resources for amplifying national growth. With its high solar flux, massive glacial resources, mineral endowments, and strategic location, Ladakh has the potential to drive India's leadership in renewables, semiconductor sustainability, AI infrastructure development, and climate action.

The region's potential for renewable energy is enormous. Ladakh gets more than 300 clear days of bright sunshine every year and has some of the highest solar radiation values in the country. The planned 13 GW hybrid renewable energy park that combines solar, wind, and storage technologies has the potential to turn the region into a green energy supplier to the rest of the northern grid. This meets India's Panchamrit commitment to develop 500 GW of non-fossil fuel-based power capacity by 2030 and move towards achieving net-zero emissions by 2070.




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Semiconductors power the modern economy. China's eye on Taiwan is a prime example to infer the role of semiconductors in shaping the world's technology. Production of semiconductors requires highly pure silica and massive water inputs. About 10,000 liters of water are required for processing a single 30 cm silicon semiconductor wafer. The trans-Himalayan region, including the heavily glaciated Shaksgam Valley, is home to 242 glaciers, making it one of the most conducive regions.

The government has set aside more than ₹1.25 lakh crore to boost semiconductor production in India. This is to reduce imports and improve defence technology. The high altitude of the region is an advantage that reduces the cost of cooling in the fabrication process. The much-awaited move is resource mapping in Ladakh. It can help in the supply chain development, such as silica processing and power tertiary industries under the renewable energy category.



The mineral stronghold of Ladakh includes lithium, borates, tungsten, and copper, which are of strategic importance for battery, electric vehicle, and clean technologies. Sustainable extraction and processing can enhance the manufacturing ecosystem and export competitiveness of India.

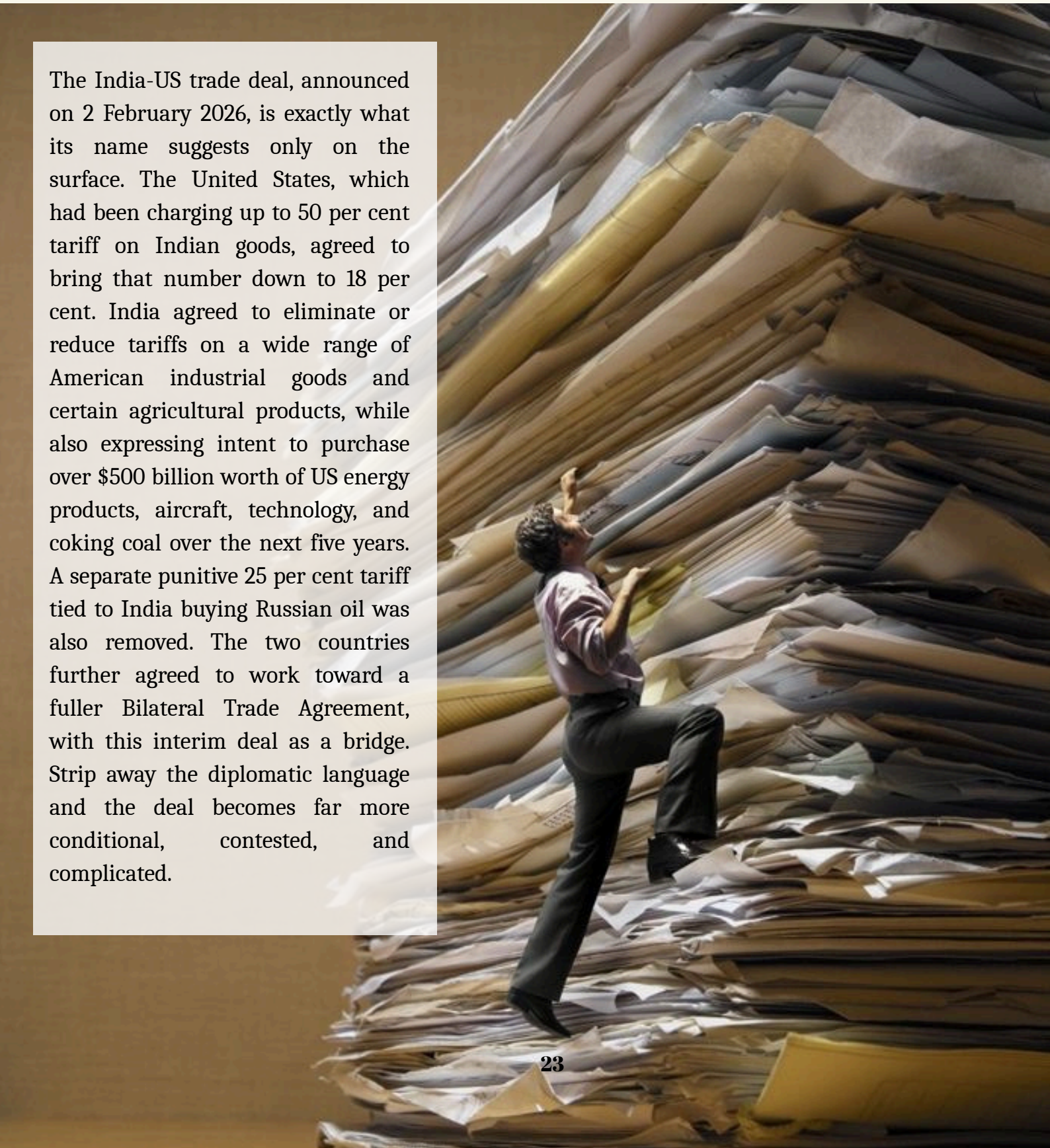


Economic development in Ladakh can trigger employment opportunities in renewable energy engineering, transmission infrastructure, mineral exploration, eco-tourism, climate research, and other digital services. Skill development in green technologies and semiconductor supply chains can help integrate youth in the region, which boosts local development in various ways. A sustainable border development can add to the GDP growth of the country, as well as human capital development, which can be interpreted using various development indicators.

It is also stressed that development cannot come with the cost of ecology. The glacial region of Ladakh is vulnerable to climate change. High altitude areas are under stress. A prudent assessment of geological and hydrological aspects must precede developmental objectives. One factor that cannot be forgotten is the strategic defence moves with China. Development plans must also coincide with national security interests and ecological balance for sustainability.



# India's Return to the Trade Game?



The India-US trade deal, announced on 2 February 2026, is exactly what its name suggests only on the surface. The United States, which had been charging up to 50 per cent tariff on Indian goods, agreed to bring that number down to 18 per cent. India agreed to eliminate or reduce tariffs on a wide range of American industrial goods and certain agricultural products, while also expressing intent to purchase over $500 billion worth of US energy products, aircraft, technology, and coking coal over the next five years. A separate punitive 25 per cent tariff tied to India buying Russian oil was also removed. The two countries further agreed to work toward a fuller Bilateral Trade Agreement, with this interim deal as a bridge. Strip away the diplomatic language and the deal becomes far more conditional, contested, and complicated.

## Relief over ambiguity

Starting with the numbers, according to SBI Research, at an 18 per cent tariff rate, India now has one of the lowest effective tariff burdens among Asian exporters in the US market. India sits below Vietnam at 20 per cent and far below China at 37 per cent. Sectors like textiles, gems and jewellery, pharmaceuticals, seafood, and engineering exports stand to gain meaningfully. SBI's preliminary estimates suggest Indian exporters could increase exports by over $100 billion annually, translating into a GDP lift of approximately 1.1 per cent.

That sounds compelling. But there is a meaningful difference between potential and policy. The interim deal has not been formally signed. No legal text has been ratified by any parliament. PM Modi's public messaging focused on tariffs without mentioning the $500 billion purchase commitment or the Russian oil undertaking. Moscow publicly stated it had received no communication from India about stopping oil purchases. These are not minor gaps. They are structural contradictions in a deal that are still, at its core, an agreement to agree.

Then there is the fact sheet debacle. Within 72 hours of the joint statement issued on 7 February 2026, the White House had quietly revised its own fact sheet twice. References to India removing its digital services tax were scrapped. The word "committed" became "intends" regarding the $500 billion purchase. Pulses disappeared from the agricultural concession list. India's Ministry of External Affairs, through spokesperson Randhir Jaiswal, clarified that the joint statement remains the operative document and that the amendments reflect shared understandings. That may well be true. But the back-and-forth reveals a deal built on ambiguity more than architecture.



## Indian Game

This ambiguity is not accidental. US tariffs throughout this entire episode functioned less as trade correction tools and more as diplomatic pressure instruments. The 50 per cent tariff was not calibrated to India's actual trade behaviour. It was a blunt instrument aimed at extracting concessions on oil, on Russia, and on market ac cess. India, to its credit, played the long game. Commerce Minister Piyush Goyal stated in Berlin last year that India does not do deals with a gun to its head. New Delhi spent the intervening months signing agreements with the EU and UK, reducing dependence on any single partner and building alternative pathways for exporters. That strategy gave India enough room to protect dairy, poultry, and pulses from concession.

Still, calling this a win without qualification would be premature. The strategic damage to bilateral trust runs deeper than a tariff reduction can fix. The US National Defence Strategy released by the Trump administration makes no mention of India. The QUAD has not held a leader-level meeting since 2024. The US decision to express warmth toward Pakistan after Operation Sindoor did India's confidence in Washington no favours.

What this deal does is buy time. For exporters in Surat's textile industry, for fishermen whose seafood now faces a lower tariff wall, for pharmaceutical companies that direct nearly 35 per cent of total exports to the US market, the relief is real even if the larger strategic picture remains unsettled. Sound economics alone cannot rebuild a relationship that has taken visible hits. Trust does not recover on a tariff schedule.

A deal announced on Truth Social before diplomats could finish reading it deserves exactly this level of scrutiny. Not cynicism and just clear eyes.



***Soumyadeep Khan*** is currently pursuing his M.A. (Development Studies) at IIT-Mandi and is also a Malcolm Adiseshiah Fellow at MIDS.

# LITERARY REVIEW

"ALL ANIMALS BUT SOME MORE EQ OT

# ANIMAL FARM

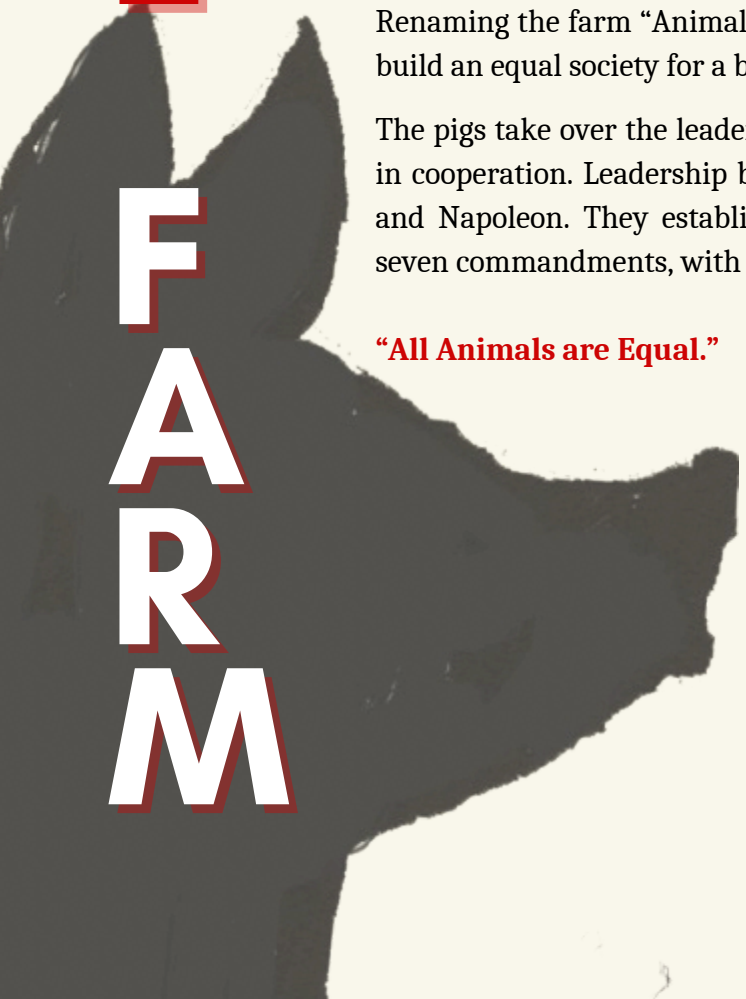
Have you ever thought that a book written in 1945 still questions contemporary society?
Yes, it does. The book Animal Farm, a work of fiction written by George Orwell, portrays the animals rising up to take over their own destiny and overthrow their tyrant human owner for a utopian dream.

George Orwell (1903–1950) was an English novelist and political critic. Born as Eric Arthur Blair in British India, Orwell adopted his pen name to separate his literary identity from his personal life. He is best known for his influential works Animal Farm (1945) and 1984 (1949), both of which critique authoritarian regimes and the manipulation of truth.

The plot revolves around Mr. Jones, the intoxicated owner of Manor Farm, who mistreats and underfeeds the animals. After the benevolent Old Major, a wild boar on the farm, delivers an inspiring speech about his dream to create a society where animals are free from human exploitation, the animals unite after his death to overthrow Mr. Jones. Renaming the farm "Animal Farm," they begin their ambitious attempt to build an equal society for a better life.

The pigs take over the leadership, and the animals initially work together in cooperation. Leadership becomes centralized in the hands of Snowball and Napoleon. They establish a system called "Animalism" by creating seven commandments, with the important principle:

**"All Animals are Equal."**



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In the final stage of the story, the revolution has completely lost its original purpose. Napoleon now rules the farm as a tyrant. The pigs live in the farmhouse, trade with humans, and enjoy privileges denied to the other animals. The Seven Commandments are gradually altered until only one remains: “All animals are equal, but some animals are more equal than others,” thus creating inequality. The pigs start behaving exactly like the humans they once rebelled against. The creatures outside look from pig to man, and from man to pig, and from pig to man, but already it is impossible to say which is which.

Animal Farm is an allegory of the Russian Revolution and the rise of Marxism in the early 20th century. The characters symbolize historical figures from the Russian revolution, making the novel a pointed critique of communism’s implementation. Language manipulation and propaganda are central tools for authoritarian control. Fear is systematically used to suppress opposition and maintain power, mirroring tactics seen in real-world totalitarian states. Even today, one can see similar patterns in society.

Personally, I feel that this book pushed me to think beyond the herd mentality. It made me reflect deeply on the importance of political awareness and critical thinking. The novel suggests that citizens must question authority, remain informed, and actively participate in safeguarding their own freedoms.

The novel speaks not only about the Soviet Union or the Russian revolution but also about human political behaviour. It shows how fear, misinformation, and blind loyalty can weaken democratic structures and strongly reinforces the thought that absolute power corrupts absolutely.



***Mariyam Siddika*** is a Political Science post-graduate and is currently a Malcolm Adiseshiah Fellow at MIDS.




# TECHNOLOGY IS TRANSFORMING WASTE GOVERNANCE

but only when embedded in institutional design - says **Babu Abdul Khadeer** in a conversation with **Periyarthambi.** Edited excerpts.

# VOICES FROM GOVERNANCE

## INSIGHTS FROM BABU ABDUL KHADEER

***Babu Abdul Khadeer*** **is an expert member in Urban Development and Resource Management at the Tamil Nadu State Planning Commission.**

**How has your international academic exposure shaped your approach in public policy and governance?**

When I entered the civil service, my instinct—like most young officers—was to create macro-level impact. But the streets of Delhi, Kochi, and later Chennai taught me a different truth: in urban governance, macro outcomes are built on micro routines. Waste is the most honest teacher. It arrives every morning whether systems work or not. In Kochi and Chennai, managing the daily lifecycle of waste for millions shifted my understanding of institutions. I came to see progress not as skylines, but as basic guarantees: clean streets, breathable air, workers with dignity, and systems that do not collapse during crises. My policy journey evolved from designing big reforms on paper to learning how incentives, contracts, daily enforcement, and worker conditions determine whether any reform survives its first week. This grounding is what now informs my work in Tamil Nadu—moving from city-level firefighting to building state-wide governance tools that embed climate risk, land-use discipline, and accountability into routine decision-making.

**How do you define success in a sector with no finish line—and protecting yourself from burnout?**

In a metropolis, garbage never stops coming. Perfection is impossible; predictability is not. For me, success looks like fewer fires, fewer landfill trips, fewer informal exploitative systems with higher segregation and safer working conditions for all. It must ensure stable revenue and transparent data, and ultimately citizens feeling that their city works every single day, without headlines. To protect me from burnout, I anchor myself to two things importantly. Firstly, process discipline that focuses on whether the system is becoming more predictable, not whether we "solved" waste. Secondly, it is moral clarity that comes with me reckoning the women I saw handling hazardous waste with bare hands in Kochi. Their dignity is the compass that keeps me grounded.

**How do we balance efficiency with dignity for sanitation workers?**

The waste sector rests on the shoulders of thousands of frontline workers mostly women - invisible but indispensable. My defining professional experience was dismantling an exploitative informal cartel in Kochi and replacing it with formal, contract-based all-women Haritha Karma Sena, linked to bank payments, alongside safety gear, training, and insurance. Reform began not with new trucks but with power and dignity. Efficiency and dignity are not trade-offs. Dignity creates efficiency when workers take ownership, leakages fall, compliance improves and public trust rises. A city cannot aspire to be world-class if its workers remain invisible.

**With a buzz around four-stream segregation—how to enforce without alienating the public?**

Moving from two bins to four is not a technical challenge; it is a behaviouralone. Our approach is hyper-local as we implement a strategic component—Information, Education, and Communication (IEC)—through schools, resident welfare associations, and trustworthy volunteers, with predictable collection schedules, digital nudges, and reminders. We also make sure to clearly communicate why this matters for health and flooding, and only after adequate facilitation do we introduce a firm but fair enforcement regime. We are not enforcing compliance; we are building social norms. Our goal is to make non-segregation socially unacceptable, not just legally penalised.

**"Efficiency and dignity are not trade-offs. Dignity creates efficiency when workers take ownership, leakages fall, compliance improves and public trust rises. A city cannot aspire to be world-class if its workers remain invisible."**

**In waste governance what is a biggest misconception, hardest behavior change, and advice to young professionals?**

A biggest misconception is that waste management is a “cleaning” problem. It is actually an aggregation of supply chain, finance, behaviour and climate challenge. Changing household behaviour is tricky. Habits become harder to reform than infrastructure. Most underestimated aspect is the power of informal systems. Cartels, middlemen, informal workers, local politics—these determine whether reforms survive. I would urge young policy professionals to respect field work. It teaches more than any classroom. They must learn systems thinking, finance, behavioural insights, and negotiation, while anchoring to fairness and not to ideology. This means designing reform with the people who must live it — not for them.

**What are your thoughts on AI, and the future of waste governance?**

Technology is transforming waste governance, but only when embedded in institutional design. My experience building QuickPass in Kochi taught me that sensors don’t govern—institutions do. AI can enable predictive routing for collection vehicles, computer vision for segregation monitoring. It can assist in real-time compliance dashboards and dynamic pricing and enforcement. Of course, this is about improving climate-risk modeling for cities. The future is not tech-heavy—it is governance-smart.

**Your vision for the future of urban waste governance.**

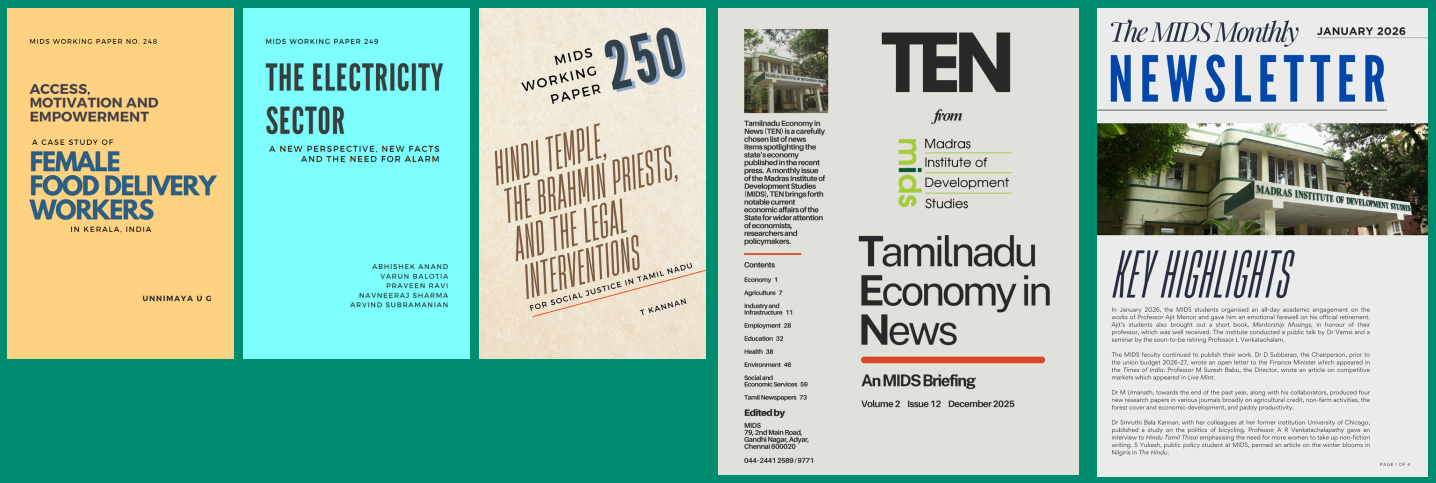
My long-term vision rests on three pillars of circularity, climate alignment and human centered institutions. Cities must treat waste as a resource. Large-scale composting, black soldier fly bioconversion, producer responsibility, and decentralised processing are essential. Waste governance must integrate heat, floods, and carbon impacts. In Tamil Nadu, we are embedding climate risk directly into land-use approvals and urban planning dashboards. No reform is sustainable without worker dignity, citizen trust, and transparent financial systems. Ultimately, India deserves cities that are clean, climate-ready, fiscally stable, and socially just. My goal in the coming decade is to build state-level and eventually national governance frameworks that turn pilots into institutions—so outcomes don’t depend on individual officers, but on systems that endure.



*PeriyarThambi* is a Malcolm Fellow at MIDS with academic interests in public policy to drive social justice. He’s an ardent Civil Service aspirant.

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