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Thru' the Desk of the Editor

Editorial: U.S. - Iran Deal: Resolving Crisis or Refinancing it; Temporary De-escalation or Deferred Explosion

On June 18, 2026, United States (U.S.) and Iran signed a 14-point Memorandum of Understanding (MoU), dubbed 'Islamabad MoU', committing to negotiate a roadmap to end hostilities that had commenced in late February 2026. Over four months, conflict rippled across the region, exacting significant costs on neighbouring states, severely disrupting traffic through critical maritime chokepoint of Strait of Hormuz, affecting global economy.

The 14-point framework mandates an end to hostilities and opens a track for establishing a lasting settlement, essentially converting a difficult stalemate into a diplomatic process while deferring the most complex challenges to a 60-day negotiation window. While the deal is a positive development for warring parties, affected neighbouring states, wider region and international community, enforcing it will be difficult without addressing several issues. Some of these issues were contentious throughout the war, such as the nuclear file, while others are new dynamics that will make the regional picture significantly more complicated.

The truce agreement signed by U.S. and Iran on 18th June 2026 has sparked debate over its true nature and ultimate objectives. Some view it as significant diplomatic step that averted perilous regional confrontation successfully, while others see it as merely postponing the crisis, rather resolving it. A key question arises: Is this an agreement that lays foundation for long-term stability or merely a political truce that masks deep-seated disagreements?

One of the most striking paradoxes of nearly five-decade U.S.-Iran conflict, it appears that a confrontation that lasted three months, marked by displays of military might, technological superiority, and U.S.-Israeli bombing of Iran, appears to be heading toward temporary conclusion via an electronic signing ceremony. Provided the agreement's terms are honoured, this means that a war waged through hard power, missiles, assassinations, blockades, and sanctions will end with simple electronic click on digital screen. The agreement was signed without diplomatic pleasantries. U.S. and Iranian leadership recognize that any public scene—such as handshake or signing ceremony—could be interpreted domestically as concession to an adversary. An electronic signature appears an ideal solution that minimizes political cost for both parties. Yet end of confrontation does not signify end of hostility; political and psychological baggage accumulated over half century cannot be erased by agreement of this kind, even if it is a significant moment. Even as two sides approach mutual understanding, lack of trust remains dominant factor in their relationship. Accumulated disputes, legacy of past agreements, and mutual suspicions make any celebration of deal premature. The implicit message is clear: We can live with the agreement, but we are not ready to celebrate it; we can manage conflict, but we have not yet reached stage of reconciliation.

The U.S.-Iran agreement to extend the ceasefire centres around these 14 core points:

1. "The immediate and permanent termination of military operations on all fronts, including in Lebanon"
2. U.S. and Iran to "respect each other's sovereignty and territorial integrity and to refrain from interfering in each other's internal affairs"
3. They "commit to negotiating and achieving the final deal in maximum 60 days, extendable with mutual consent"
4. Immediately, U.S. "will begin the removal of its naval blockade... and will fully end the naval blockade within 30 days"
5. In Strait of Hormuz, Iran "will make arrangements using its best efforts for the safe passage of commercial vessels with no charge, for 60 days"
6. U.S. undertakes "with regional partners to develop a definitive, mutually agreed plan with at least \$300 billion for the reconstruction and economic development of" Iran

7. U.S. to "terminate all types of sanctions against" Iran
8. Iran "reaffirms that it shall not procure or develop nuclear weapons", but other parts of the programme are still to be negotiated. The two parties "agreed to discuss the issue of enrichment and other mutually agreed matters related to the Islamic Republic of Iran's nuclear needs"
9. Pending final deal, U.S. and Iran "agree to maintain the status quo"
10. Upon signing, and until the termination of sanctions, U.S. Treasury will "issue waivers for the export of Iranian crude oil, petroleum products, and derivatives, and all associated services"
11. U.S. undertakes "to make fully available for use the frozen or restricted funds and assets" of Iran
12. "An executive mechanism will be established to monitor the successful implementation" of this memorandum.
13. After signing - subject to implementation of points 1, 4, 5, 10 and 11 – U.S. and Iran "will start negotiations regarding the final deal exclusively on the other paragraphs"
14. "The final deal will be endorsed by a binding UNSC (United Nations Security Council) resolution"

Memorandum of Understanding (MoU) Clauses

Clause 1 of MoU states that U.S. and Iran have agreed to "immediate and permanent termination of military operations on all fronts, including in Lebanon". The MoU adds that both sides will commit to ensuring "territorial integrity and sovereignty of Lebanon".

Clause 2 of MoU states that U.S. and Iran will "undertake to respect each other's sovereignty and territorial integrity, and to refrain from interfering in each other's internal affairs". This appears to suggest goal of regime change, has been abandoned, and replaced by logic focused on stabilizing the situation and averting an explosion.

Clause 4 of MoU states that U.S. "will begin the removal of its naval blockade" and "will fully end the naval blockade within 30 days". It also states that U.S. "undertakes to remove its forces within 30 days after the final deal".

Clause 5 of MoU states that Iran will make "its best efforts for the safe passage of commercial vessels with no charge for 60 days only from the Persian Gulf to the Sea of Oman, and vice versa ... Iran will conduct dialogue with the Sultanate of Oman to define the future administration and maritime services in the Strait of Hormuz". The issue about control of the strait has been major sticking point in peace negotiations between U.S. and Iran, which sees it as its most important piece of leverage. In its previous proposals to end the war, Iran has referred to charging transit tolls for vessels. U.S. and other countries have repeatedly rejected the prospect. Under international maritime law, it is not permissible to charge tolls for passage in natural straits such as Hormuz, however, adjacent countries may charge fees for services such as insurance or docking. The 14-point agreement makes little reference to this.

Clause 6 of MoU states that U.S. "undertakes with regional partners to develop a definitive, mutually agreed plan with at least \$300bn for reconstruction and economic development of the Islamic Republic of Iran ... All required licenses, waivers and permissions needed for the relevant financial transactions will be granted by the United States of America".

Clause 7 of MoU deals with sanctions. It states that U.S. "undertakes to terminate all types of sanctions against Iran in an agreed-upon schedule as part of the final deal". However, it does not specify if this relates to U.S. sanctions only, or also to UN-mandated sanctions. Iran is one of most heavily sanctioned countries in the world. Billions of dollars of Iranian assets remain frozen in foreign banks as a result.

Clause 8 of MoU states that Iran "reaffirms that it shall not procure or develop nuclear weapons". It also states that U.S. and Iran "have agreed to resolve the disposition of stockpiled, enriched material pursuant to a mechanism that will be mutually agreed upon ... with the minimum methodology to be down-blending on site under the supervision of the IAEA". Iran's uranium enrichment programme has also been major bone of contention between U.S. and Iran. Iran has consistently stated in past that it does not intend to build a nuclear weapon and has insisted on right to develop a nuclear power programme. This clause suggests U.S. may agree to Iran diluting its stockpile back to nuclear power levels.

Downblending, which would most likely be carried out under supervision of International Atomic Energy Agency (IAEA), is an irreversible process.

MoU makes no mention of Israel, which has subjected Lebanon to near-daily strikes since early March, killing at least 3,000 people and displacing more than one million from their homes. Given that MoU is solely between U.S. and Iran – Israel and Lebanese group Hezbollah it is at war with are not signatories – it is unclear how ceasefire in Lebanon would be implemented, or whether it means Iran must stop funding Hezbollah. In fact, Iran's support for proxy groups around the region generally is not mentioned in MoU.

The wording of MoU reveals clear shift in American priorities. There is little sign of ambitions represented in first Trump administration's strategy of "maximum pressure" and accompanying efforts to change regime's behaviour. In their place is more realistic goal of reducing escalation, securing energy markets, allaying fears of allies, and ensuring safety of shipping lanes. The agreement is formula for managed withdrawal from escalation, rather than framework for reshaping U.S. relations with Iran.

MoU which has been promoted as ending the crisis, carries within it seeds of crisis deferred. According to MoU, U.S. did not obtain any substantial concessions on nuclear file or Iran's regional role. What was achieved was temporary halt to deterioration, keeping main subjects open for further negotiation rounds. It restrains military activity, but leaves questions of missiles, proxies, navigation, and nuclear oversight in grey area. Despite all this, significance of MoU should not be played down. True value of MoU lies not in ending conflict, but in providing means to manage it, and limit likelihood of escalation.

MoU would allow Iran to access large sums of its frozen assets or restricted revenues. Today's talk of releasing approximately \$24 billion makes settlement is costly from political and strategic standpoint. Money that will enter Iranian economy will not be restricted to addressing its domestic needs. Part of it will help restore Iranian Revolutionary Guard Corps (IRGC)'s activities, in developing missile and drone capabilities, restoring Iran's networks of proxies.

Issue of Strait of Hormuz is vital to understanding broader repercussions of MoU. U.S. insists that Strait will remain open and free for international navigation, whereas Iranian narrative points to transitional arrangements for 60 days, paving way for discussions on transit or insurance fees for passing vessels. Merely opening this door alters nature of debate. The Strait, long treated as international waterway that must not be turned into tool for extortion, has become subject of political and economic negotiations with regional power capable of disrupting it. Energy stability is no longer dependent solely on ceasefire, but also on extent to which Iran is willing to refrain from exercise its maritime leverage.

The real challenge lies in gap between de-escalation and achieving stability. The first merely entails preventing an imminent explosion, whereas second requires addressing root causes that could trigger future flare-ups. While MoU succeeds in temporarily averting spectra of war, it offers no definitive answers regarding future of Iran's nuclear program, sets no clear limits on its ballistic missiles, and establishes no binding mechanisms to address influence of its regional proxies and maritime corridors.

U.S. has managed conflict without resolving it; Israel has made advances, but finds its strategic position little better than before; Iran has survived, but grown weaker. It appears that agreement has achieved a much-needed de-escalation, which appears to be more of a freezing and organised deferral of conflict than a sustainable solution. The region has remained suspended between temporary de-escalation and deferred explosion. This phase will produce an Iran more capable of financing its influence, allies more skeptical of U.S. and regional order of fragile equilibrium.

Navigating tensions surrounding these issues will define trajectory of next sixty days, and whether deal is realized, negotiating parties and mediators will have to contend with questions surrounding reconstruction, non-aggression guarantees, and restoration of freedom of navigation. The durability of agreement, and of regional security, will depend on willingness of Iran and U.S. to sustain meaningful engagement throughout sixty-day implementation period. Next two months will be critical in determining whether the deal evolves into durable framework for regional stability. MoU's significance may lie in its potential to open a diplomatic channel that could form basis of more comprehensive settlement. Yet lasting peace remains elusive goal.

Implications of MoU for India

For India, Iran is both an energy-security problem and connectivity opportunity. Safe passage of Indian-flagged tankers through Hormuz after MoU showed immediate significance of de-escalation. India cannot treat Iran crisis as distant Middle Eastern conflict when its oil, seafarers and shipping routes pass through same contested waterway. Hormuz is not only global energy chokepoint; it is part of India's economic bloodstream. For India, which relies on imports for over 85% of its crude oil needs, this development has significant implications for energy security, fiscal health. As one of world's largest energy importers, India depends heavily on oil and gas supplies that pass-through Strait of Hormuz. Any disruption in this narrow maritime corridor quickly translates into higher fuel prices, inflationary pressures, and larger import bill. The sharp drop in global crude prices will directly compress India's import bill, rein in current account deficit and tame fuel-led domestic inflation.

A stable or decreasing crude price after reopening of Hormuz would lower input costs for food processing and logistics. For policymakers in New Delhi, immediate focus should be practical: turn any short-term relief in energy costs into sustainable fiscal choices that protect services, stimulate growth, and reduce long-term vulnerability.

Reduced transit times and slashed logistics overheads will immediately improve global competitiveness of heavily crude-dependent Indian export sectors, such as plastics, chemicals, textiles, and engineering goods destined for Europe and West Africa.

The lifting of naval blockade on Iranian coastal waters clears path for unhindered operationalization of India-backed Chabahar Port, on Iran's southeastern coast, which remains one of New Delhi's most important strategic connectivity projects and accelerates viability of International North-South Transport Corridor (INSTC), granting India vital, secure access to Central Asia and Russia. India signed a 10-year agreement in 2024 to develop and operate Chabahar port. If U.S.-Iran MoU creates more predictable sanctions conditions, Chabahar could regain momentum. If not, it will remain politically useful but commercially constrained.

Indian maritime workers face acute risks from geopolitical conflicts, as exposed by fatal MT Settebellow strike. Halt in attacks mandated by MoU can secure protection of Indian mariners.

MoU is fragile diplomatic achievement with real potential for India's energy security and fiscal stability. While economically beneficial, MoU complicates India's strategic balancing act. India will need to carefully recalibrate its deep strategic partnership with Israel while simultaneously capitalizing on newly opened economic avenues with Iran.

Articles in this edition of the Journal examine various dimensions of Diplomacy and Security related issues. All authors have presented their views on topics ranging from Chemical Warfare to State-Sponsored Terrorism, Missile Diplomacy to Fast Breeder Reactors, with well-planned research on the topic. Their views will surely help in instilling the subjects and topics under discussion in minds of readers.

POST SCRIPT / STOP PRESS:

Collapse of the Truce

Despite signing a preliminary memorandum of understanding (MoU) to end the war on 18th June 2026, U.S. and Iran have collapsed into renewed conflict. U.S.-Iran MoU intended to end their military conflict and reopen Strait of Hormuz has collapsed. Following alleged Iranian attacks on vessels and U.S. sites in the Gulf, U.S. resumed naval blockade of Iranian ports and launched additional retaliatory strikes. U.S. accused Iran of negotiating in bad faith and violating ceasefire by attacking commercial ships and U.S. assets in Bahrain and Kuwait. In response, President Donald Trump declared the truce void. U.S. military launched fresh wave of airstrikes against Iranian targets and renewed naval blockade of Iranian ports, while Iran retaliated with strikes targeting U.S. bases in Bahrain, Jordan, and Kuwait, rendering ceasefire virtually broken. U.S. blew up Hormuz cease-fire agreement because it did not understand—or did not care—what it had agreed to. The results will cast a long shadow over the strait. When it comes to peace and cease-fire agreements, details matter. This applies to any international agreement, but when armed conflict is involved, lack of trust or goodwill between parties allows for almost no room for error or imprecision.

MoU signed by U.S. on 18th June 2026 at Versailles was essentially lucrative deal for Iran to reopen the strait – conduit for 20 percent of world’s oil and gas. U.S. pledged billions of dollars in economic relief for Iran by lifting sanctions, unfreezing Iranian funds, and providing reconstruction assistance. In return, Iran had to allow normal commercial traffic to flow through the strait and enter into negotiations with U.S. over status of its nuclear programme. This deal was criticised as act of appeasement on Trump’s part after failing to reopen waterway by military force or to achieve his other military objectives of overthrow of Iranian regime and abandonment of its nuclear programme. Hardliners in Iranian regime are apparently not satisfied to pocket gains Iran could accrue from this deal. Iran has seen how it could hold entire world hostage by controlling Strait of Hormuz. Iran is insisting that any ships that go through the strait pass through its own waters, and the Islamic Revolutionary Guard Corps is attacking any that refuse to comply. Iran pledged to abstain for only sixty days from charging “user fees” - i.e. tolls on shipping and it is intent on ensuring that shipping lines will be forced to pay up or else. Trump responded by bombing Iran and reinstituting U.S. blockade while claiming that U.S. will charge its own tolls on traffic through the strait thereby seemingly abandoning U.S. age-old commitment to freedom of navigation through international waterways. Trump’s threat to collect tolls is probably just bluster, but bombing and blockade are real. The question is what will they accomplish?

The collapse of U.S.- Iran agreements and subsequent naval blockades of Strait of Hormuz will severely impact India by triggering inflation, disrupting vital energy and trade routes, and escalating regional maritime security risks.

1. Energy Shock and Inflation

- **Price Spikes:** Closure of Strait of Hormuz halts transit of 20% of global oil and LNG, causing crude prices to spike.
- **Import Burden:** India relies heavily on West Asian crude; renewed hostilities and blocked maritime lanes directly increase import bills, leading to inflation and putting severe pressure on Indian Rupee.

2. Trade and Connectivity Disruptions

- **Chabahar Port Operations:** Expanded U.S. military actions impact Iran's port of Chabahar, threatening India’s strategic investment and management of the Shahid Beheshti terminal and disrupting International North-South Transport Corridor (INSTC).
- **Freight and Insurance:** Commercial maritime traffic in region faces near standstill conditions, driving up shipping delays, freight rates, and marine insurance premiums for Indian exporters.

3. Geopolitical and Security Threats

- **Diaspora Vulnerabilities:** The conflict threatens livelihoods and remittances of millions of Indian migrant workers residing in Gulf Cooperation Council (GCC) countries. To mitigate these economic and strategic challenges, India has to accelerate energy supply diversification and seek diplomatic maneuvering through other forums to stabilize regional ties.

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Prototype Fast Breeder Reactor and the Reconfiguration of India's Nuclear Energy Architecture: A Policy Framework for Strategic Resilience and Energy Sovereignty

Abstract

The thorium-centred trajectory of Viksit Bharat is, in a deliberate and sustained manner, shaping a distinct pathway to strengthen India's energy sovereignty and technological autonomy in a global environment marked by supply chain fragility and fuel dependencies. In this context, nuclear energy is no longer confined to its conventional role as a source of electricity; it is increasingly being repositioned within a broader national framework that links energy security with industrial continuity and long-term capability building, and the emphasis now lies on developing a self-reliant thorium-based fuel cycle capable of sustaining industrial growth, supporting strategic manufacturing, and ensuring the uninterrupted operation of critical infrastructure. This transition is accompanied by advances in reactor technologies, including fast breeder systems and future thorium-based designs, which offer reliable, scalable, and low-carbon energy aligned with India's long-term developmental priorities and its broader aspirations of technological self-reliance.

The progression of the three-stage nuclear programme, reinforced by the operationalisation of fast breeder systems, reflects a deliberate effort to convert what were once resource limitations into strategic capacity. Uranium utilisation is no longer treated as an end state but as a transitional phase, one that enables access to thorium-based energy pathways and lays the ground for a fuel cycle that does not depend on external inputs. Concurrently, the expansion of indigenous capabilities across reactor engineering, fuel reprocessing, and precision manufacturing is strengthening domestic industrial ecosystems and reducing the country's exposure to external supply risks. The outcome, it is argued, is a more resilient technological base embedded within national institutions, where nuclear energy provides a stable base load that complements renewable expansion, ensures grid reliability, and advances decarbonisation objectives without compromising continuity of supply.

At a broader level, these developments are reshaping India's position in the global nuclear landscape. The combination of thorium potential and indigenous technological depth creates opportunities to influence emerging reactor technologies and international partnerships. It is argued that energy security, industrial capability, climate commitments, and national security converge within a single framework, and that nuclear infrastructure emerges not as an isolated sector but as a central component of a wider national capability matrix, where long-term growth, technological independence, and strategic stability reinforce one another.

Keywords: Prototype Fast Breeder Reactor (PFBR); three-stage nuclear programme; thorium fuel cycle; energy sovereignty; closed fuel cycle; critical infrastructure resilience; nuclear energy policy; small modular reactors; SHANTI Act 2025; Bharat National Resilience Index (BNRI); fast breeder technology; base-load energy; decarbonisation; strategic manufacturing; Viksit Bharat

Methodology: This study adopts a qualitative, policy-analytical approach grounded in documentary analysis of publicly available institutional, legislative, and technical sources, including official publications from the Department of Atomic Energy, the Press Information Bureau, the Atomic Energy Regulatory Board, and international bodies such as the IAEA, alongside peer-reviewed literature on nuclear engineering, energy security, and infrastructure resilience. The analysis is structured around ten thematic domains, each examined through a combination of technical evaluation and policy interpretation, with the aim of situating the PFBR within a broader national resilience and energy sovereignty framework. The study does not involve primary data collection, human participants, or classified materials. The intellectual content, research architecture, analytical framework, core arguments, and all substantive conclusions are entirely the work of the author. The AI tool was used strictly for language refinement and the identification of repetitions.

Introduction

The achievement of first criticality of the 500 MWe Prototype Fast Breeder Reactor (PFBR) at Kalpakkam marks a decisive inflection point in India's energy trajectory, and it does so by signalling a transition away from incremental capacity addition toward a model centred on resource multiplication and long-term strategic control¹. Nuclear energy, in this context, exceeds the functional limits of electricity generation; it is increasingly embedded within a broader framework that connects energy security with industrial capability and technological self-sufficiency, and the PFBR operationalises the second stage of the three-stage nuclear programme by translating a long-standing resource optimisation strategy into an executable system that addresses uranium constraints while advancing the utilisation of thorium reserves². The practical consequence is clear and cannot be understated: dependence on external fuel sources is reduced, and energy planning becomes less vulnerable to geopolitical disruptions, supply shocks, and the price volatility that has historically constrained India's options³.

The reactor's indigenous design and its integration within a closed fuel cycle reflect sustained institutional effort across decades. These are not isolated technical outcomes but indicators of the maturation of a domestic ecosystem spanning reactor engineering, materials science, and high-precision manufacturing⁴. The implications extend well beyond the nuclear sector, and what is evident is that strategic manufacturing capabilities are being strengthened, industrial supply chains are acquiring greater depth and reliability, and within the national power system, nuclear energy provides a capability that remains difficult to replicate at scale, namely consistent, uninterrupted base-load supply that supports industrial expansion, urban growth, and large-scale electrification even as renewable capacity continues to expand⁵. The PFBR simultaneously contributes to long-term decarbonisation objectives by enabling low-carbon power generation without compromising continuity of supply⁶.

These developments place the PFBR within a broader critical infrastructure and national security context, where reliability alone is no longer sufficient; equally critical is the ability to sustain operations under conditions of disruption⁷. The reactor's significance lies in the way it integrates multiple domains, and what has changed is that energy, industry, policy, and security are no longer treated in isolation but function within a unified framework of national capability, and this marks a clear shift in India's energy strategy wherein resource constraints are being systematically reworked into instruments of strategic autonomy⁸.

Research Objectives

This study examines the Prototype Fast Breeder Reactor (PFBR) as a decisive step in India's transition from a resource-constrained nuclear system to a self-sustaining fuel cycle based on multiplication and regeneration, and analyses the three-stage nuclear programme as a structured response to limited uranium reserves and the strategic use of thorium. The study evaluates the technological architecture of fast breeder systems for enabling closed fuel cycles, fuel multiplication, and advanced reactor engineering capabilities, while assessing the role of nuclear energy as a stable base-load component supporting industrial expansion, electrification, and grid reliability.

It further investigates the extent to which the PFBR has catalysed a domestic ecosystem of high-precision manufacturing and specialised supply chains linked to strategic sectors, while examining evolving policy, legal, and institutional frameworks, including calibrated private participation, international cooperation, and regulatory adaptation. The analysis explores the implications of emerging reactor technologies, particularly small modular reactors and thorium-based systems, and situates nuclear infrastructure within the domain of national security by addressing physical safeguards, cyber resilience, and insider risk, ultimately interpreting the PFBR within a Bharat National Resilience Index (BNRI)-oriented framework as an integrated node connecting energy security, industrial capability, and strategic autonomy.

Critical Questions

The study asks how the operationalisation of the PFBR alters India's dependence on imported energy resources and global nuclear fuel markets, and whether the three-stage nuclear programme can convert structural resource constraints into a durable strategic advantage. It examines the extent to which fast breeder technology can achieve fuel multiplication at scale under Indian conditions,

and how effectively nuclear energy complements renewable expansion to maintain grid stability and an uninterrupted industrial power supply.

It further evaluates the measurable spillover effects of the nuclear programme on India's manufacturing base and high-precision engineering capabilities, and assesses whether the current policy and regulatory framework maintains an effective balance between private participation and national security requirements. The analysis considers the viability of emerging technologies, including small modular reactors and thorium-based systems, to accelerate deployment and address capital constraints; examines evolving threat vectors affecting nuclear infrastructure, including cyber, insider, and geopolitical risks; evaluates the role of nuclear energy in advancing India's net-zero commitments relative to other low-carbon alternatives; and considers how the PFBR functions within a broader national resilience architecture that integrates energy, industrial, and strategic domains.

Core Arguments

The central argument of this framework is that the PFBR marks a transition from a consumption-based nuclear model to a regenerative system in which fuel is bred, and that this transition reduces the structural limitations imposed by uranium scarcity while positioning thorium as a long-term resource for energy security. Accordingly, the three-stage nuclear programme is interpreted not as an incremental expansion plan but as a deliberate national strategy aimed at achieving fuel cycle sovereignty and reducing exposure to external dependencies.

The analysis further contends that nuclear energy, particularly through breeder systems and prospective thorium-based technologies, offers a credible pathway to combine large-scale reliability with low-carbon generation, and that this combination is critical for sustaining economic growth while meeting climate commitments, especially when measured against the variability that characterises renewable energy sources. The PFBR reflects, in this reading, a deepening of indigenous technological capability, with implications that extend into precision manufacturing, advanced materials, and safety-critical engineering across strategic sectors.

At the same time, evolving policy and institutional arrangements, including selective private participation and investment in modular reactor technologies, signal a shift toward scalability and diversification that seeks to address the capital intensity and long gestation periods that have historically constrained nuclear deployment. It is argued that integrating nuclear infrastructure into national security planning reinforces its status as critical infrastructure, where resilience is defined not by the absence of disruption but by the ability to withstand and recover from physical, cyber, and geopolitical threats. In this context, the PFBR emerges as a system-level capability that links energy security, industrial development, and strategic depth, and that enables a transition toward long-term technological independence and national resilience.

Discussion

1. Strategic Milestone in Nuclear Infrastructure

The attainment of first criticality of the 500 MWe Prototype Fast Breeder Reactor (PFBR) at Kalpakkam on 6 April 2026 marks a clear turning point in India's energy architecture, one that shifts the trajectory from incremental capacity addition to a system oriented around resource multiplication, technological autonomy, and long-term resilience⁹. In operational terms, criticality denotes the initiation of a self-sustaining nuclear chain reaction, but more significantly, what it confirms is that India now exercises functional control over one of the most complex reactor technologies deployed at scale, and that a central concern regarding dependence on external energy inputs is being addressed through the reduction of vulnerabilities linked to imported fossil fuels and constrained uranium supply chains¹⁰. Kalpakkam, in this context, assumes a wider role, one that goes beyond a single reactor site; it functions as a national demonstration of advanced fuel cycle capability under indigenous control, closely tied to industrial continuity and security preparedness¹¹.

The transition into the second stage of the three-stage nuclear programme reflects the execution of a long-standing national strategy, converting what was once conceptual into operational reality.

The movement from pressurised heavy water reactors to fast breeder systems marks a fundamental shift in which consumption gives way to regeneration and fissile material is no longer simply utilised but expanded through breeding¹². This shift directly engages the question of scalability, since the PFBR establishes a pathway through which the usable nuclear fuel inventory can grow without proportional increases in extraction, and this strengthens long-term planning autonomy in ways that have direct consequences for how energy security is understood and pursued at the national level¹³.

Once fully operational, India will become only the second country after Russia to operate a commercial fast breeder reactor, and this carries implications that extend beyond the technical domain. It alters the country's position within the global nuclear landscape and introduces new dimensions to technological engagement and strategic cooperation, where capability translates into credibility and strengthens India's standing in civil nuclear partnerships while reinforcing its role in multilateral discussions on energy security and climate commitments¹⁴. This simultaneously opens avenues for technology diplomacy, particularly with states seeking alternatives to established suppliers, and shifts the basis of engagement from dependency to capability-led participation¹⁵.

The execution of the PFBR programme highlights the role of sustained indigenous capability in shaping long-term national transformation. Institutional continuity is central to this, and it is worth noting that the Department of Atomic Energy, the Indira Gandhi Centre for Atomic Research, and an extensive domestic industrial network have maintained alignment across policy, research, and implementation over several decades, and this addresses a persistent challenge in large-scale infrastructure delivery, namely the ability to sustain complex programmes over extended timelines despite financial and administrative constraints¹⁶. The PFBR demonstrates that India's technological trajectory in the nuclear domain has remained internally driven, without reliance on external reactor designs, and the result is a strengthening of domestic capabilities in precision engineering, advanced metallurgy, and safety-critical systems whose applications extend well beyond the reactor programme itself, embedding nuclear development within a broader framework of national resilience¹⁷.

2. Three-Stage Nuclear Programme: Resource Optimisation Framework

Stage 1: Pressurised Heavy Water Reactors (PHWRs)

India's first-stage reactors were deliberately designed around the country's limited but usable natural uranium reserves, and this design choice carried with it a strategic consequence in that it avoided reliance on enriched uranium imports that remain tightly regulated in global markets. Pressurised Heavy Water Reactors employ heavy water as a moderator, enabling natural uranium to sustain fission without enrichment¹⁸. The national implications of this choice were significant; it allowed India to expand its nuclear capacity even during periods marked by technology denial regimes and restricted fuel access following 1974 and 1998, while also forming the backbone of India's nuclear electricity generation through the delivery of stable base-load power across multiple states¹⁹.

Yet their significance extends well beyond power generation. The spent fuel generated in these reactors contains plutonium, which is chemically separated through reprocessing at facilities such as Tarapur and Kalpakkam. In the Indian context, this material is not treated as waste; it is retained as a strategic asset that feeds directly into the second stage, ensuring continuity within the fuel cycle where the output of one stage becomes the input for the next. The result is a progressive reduction in external dependence and a strengthening of long-term fuel security²⁰.

Stage 2: Fast Breeder Reactors (FBRs)

The second stage marks a structural shift from consumption to multiplication of nuclear fuel. Fast Breeder Reactors utilise plutonium-based mixed oxide fuel and operate in a fast neutron spectrum, and this enables the conversion of non-fissile uranium-238 into fissile plutonium-239, allowing India to expand its usable nuclear fuel inventory without proportionate increases in mining or imports²¹. This capability directly addresses long-standing uranium supply constraints that historically limited nuclear expansion. The Prototype Fast Breeder Reactor at Kalpakkam represents the first full-scale demonstration of this principle under Indian conditions, and it establishes, at the same time, a technical pathway for integrating thorium into the fuel cycle by incorporating it within the reactor blanket to initiate the production of uranium-233, which is a critical input for the third stage²².

From a strategic standpoint, this stage reduces exposure to external supply disruptions and stabilises long-term energy planning, while also strengthening India's position within the domain of advanced nuclear technologies, where operational experience at this level remains limited to a small number of countries²³.

Stage 3: Thorium-Based Reactors

The third stage is structured around India's most abundant nuclear resource, thorium, with significant reserves located along the coasts of Andhra Pradesh, Tamil Nadu, Odisha, and Kerala. Thorium itself is not fissile, but when converted into uranium-233, it becomes an efficient and sustainable nuclear fuel, and it is around this conversion that the three-stage programme is designed to culminate, enabling reactors to operate primarily on domestically available material over extended periods²⁴.

The long-term implications are considerable and cannot be overstated. This stage has the potential to provide energy security over extended time horizons, reducing vulnerability to geopolitical pressures associated with uranium supply chains while aligning with India's climate objectives by offering a stable, low-carbon energy source capable of supporting industrial growth, urban expansion, and widespread electrification without the intermittency associated with renewable systems²⁵. Experimental work at Kalpakkam has already demonstrated elements of thorium utilisation, and future reactor designs, including advanced heavy water reactors, are intended to operationalise this stage. The strategic outcome is a closed, self-reliant nuclear fuel cycle rooted in domestic resources, one that is capable of sustaining India's long-term energy requirements on its own terms²⁶.

3. Technological Architecture of PFBR: Advanced Reactor Ecosystem

The technological architecture of the Prototype Fast Breeder Reactor (PFBR) constitutes a critical operational layer in India's transition toward a self-sustaining nuclear fuel cycle, and it addresses the central objective of developing indigenous capability across the entire reactor lifecycle while testing whether advanced nuclear systems can be designed, executed, and sustained under domestic conditions²⁷. Designed by the Indira Gandhi Centre for Atomic Research under the Department of Atomic Energy, the PFBR reflects sustained institutional continuity in reactor engineering, materials science, sodium coolant technology, and safety protocols suited to fast neutron environments. What this has enabled is a movement beyond earlier constraints imposed by technology denial regimes and the establishment of an integrated domestic ecosystem encompassing design, fabrication, and system integration, with effects that reach into nuclear-grade materials, specialised steels, and precision control systems, and with consequences for the country's wider industrial and strategic capability base that are examined in detail in the sections that follow²⁸.

At the centre of the PFBR's design lies the use of uranium-plutonium mixed oxide (MOX) fuel, and this operationalises a key principle, namely that spent fuel is not discarded but retained as a recoverable strategic resource. Plutonium extracted through reprocessing at facilities such as Tarapur and Kalpakkam is reintroduced into the reactor system, creating what can be described as a circular fuel economy that closes the gap between consumption and regeneration, improving overall resource efficiency and reinforcing the viability of a domestically managed fuel cycle²⁹.

The defining technological feature of the PFBR lies in its breeding capability, wherein the reactor, operating in a fast neutron spectrum, generates more fissile material than it consumes, and this directly addresses the question of scalability since the national fuel inventory expands with each operating cycle rather than depleting³⁰. The practical outcome is a higher energy yield from the same resource base, and this mitigates a structural limitation that has historically constrained nuclear expansion while providing a buffer against supply volatility, thereby strengthening long-term planning autonomy³¹.

The PFBR's design incorporates forward integration through the planned introduction of a thorium blanket, aligning current reactor operations with the longer-term objective of transitioning to a thorium-based fuel cycle. Through the conversion of thorium-232 into uranium-233, the reactor establishes a direct technological bridge to the third stage of the nuclear programme,

embedding present investments within a scalable national trajectory that seeks to extend the productive lifespan of domestic resources³². The closed fuel cycle model further consolidates the PFBR's systemic importance, since spent fuel is reprocessed and reintegrated, minimising waste while preserving valuable fissile material within the national system, and this reduces long-term storage burdens, enhances control over critical materials, and aligns with environmental objectives by improving resource utilisation³³.

4. National Energy System Positioning

India's nuclear power capacity, at approximately 8.78 GW with generation of about 56,681 million units in 2024–25, occupies a modest share within a coal-dominated electricity system, yet its significance lies less in scale and more in reliability, continuity, and high-capacity utilisation³⁴. This distinction is critical and must be understood on its own terms. Nuclear power performs a stabilising function within an energy mix increasingly shaped by renewable expansion; stations at Tarapur, Rawatbhata, Kakrapar, and Kudankulam consistently deliver uninterrupted base-load supply in contrast to the inherent variability of solar and wind generation, and where industrial corridors, urban centres, and critical infrastructure networks depend on continuity of power, even short disruptions translate into measurable economic and operational losses³⁵. The current contribution, at roughly 3.1 percent, is therefore better understood as stabilising rather than marginal, particularly within a grid that must balance rising shares of intermittent renewable capacity³⁶.

The projected expansion to 22.38 GW by 2031–32 reflects a deliberate policy shift in which nuclear energy is no longer peripheral but is being positioned as a structural component of India's future power mix. This expansion is driven by indigenous 700 MW pressurised heavy water reactors alongside large light water reactor projects developed through international collaboration, and it directly addresses the need for diversification and the reduction of overdependence on coal, a source that is already constrained by logistics, environmental pressures, and selective import reliance. Nuclear expansion, in this reading, represents a resilience-oriented intervention designed to prevent excessive concentration in any single energy source under conditions of stress³⁷.

Within the broader energy architecture, nuclear power is increasingly recognised as a dependable base-load source capable of sustaining long-term economic growth and electrification. It assumes particular importance in sectors where continuity is essential, including manufacturing, rail electrification, data infrastructure, and urban systems, since unlike renewable systems that depend on evolving storage solutions to manage intermittency, nuclear plants operate with predictable output over extended periods, and this allows planners to structure grid stability around assured generation³⁸. There are additional structural advantages that must not be overlooked, among which the relatively compact land footprint of nuclear installations is significant in a context of competing land-use demands, while proximity to demand centres can reduce transmission losses and improve overall efficiency³⁹.

From a climate policy perspective, nuclear energy contributes directly to India's decarbonisation pathway and its commitment to achieve net zero emissions by 2070. Its comparative advantage lies in the combination of continuity and low emissions; unlike renewable-heavy systems that often require fossil-based backup, nuclear power provides continuous generation without carbon output during operation, allowing for a reduction in coal dependence without compromising grid stability, and ensuring that increased electricity consumption from the electrification of transport, industry, and households does not result in proportionate growth in emissions⁴⁰.

5. Strategic Manufacturing and Supply Chain Ecosystem

The development of the Prototype Fast Breeder Reactor (PFBR) demonstrates a clear shift in India's nuclear programme from reliance on imported systems to an integrated model of indigenous capability spanning design, engineering, fuel cycle management, and execution, and the evidence, it is argued, is increasingly affirmative on the question of whether advanced nuclear technologies can be sustained under domestic conditions⁴¹. Reactor design and engineering, led by the Indira Gandhi Centre for Atomic Research and implemented by Bharatiya Nabhikiya Vidyut Nigam Limited, have ensured that critical competencies, including fast reactor physics, sodium coolant systems, materials performance under high neutron flux, and thermal hydraulics, remain within national control.

Parallel progress in reprocessing and mixed oxide fuel fabrication, supported by facilities linked to the Bhabha Atomic Research Centre, reinforces the closed fuel cycle, and the result is that both reactor technology and fissile material supply are domestically managed⁴².

The PFBR programme has also accelerated the emergence of a specialised nuclear-grade manufacturing ecosystem, and this is not incidental but a direct consequence of the demands imposed by high-precision, safety-critical engineering. The fabrication of reactor vessels, steam generators, control rod assemblies, and sodium handling systems requires materials and processes capable of withstanding extreme thermal and radiation conditions, and Indian public and private sector entities have responded by developing capabilities under stringent quality assurance regimes, with visible advances across metallurgy, forging, welding, and non-destructive testing⁴³. These gains are not confined to the nuclear domain; they extend into defence manufacturing, aerospace systems, and petrochemical infrastructure, strengthening the broader strategic industrial base in a manner that positions the nuclear programme as a driver of high-value manufacturing and links energy infrastructure with industrial competitiveness⁴⁴.

A layered supply chain has evolved alongside reactor development, one that includes large public sector enterprises as well as an extensive network of small and medium enterprises producing specialised components such as valves, pumps, instrumentation, and control systems. What this reflects is not merely scale but discipline, since the stringent requirements of nuclear safety and reliability have strengthened quality culture, certification processes, and long-term vendor capability within domestic industry. The capacity to manufacture, maintain, and upgrade critical components within the country reduces dependence on foreign suppliers, ensures continuity under conditions of external disruption, and contributes to the development of a highly skilled technical workforce trained in advanced engineering practices that are essential for sustaining long-term industrial capability⁴⁵.

Taken together, these developments indicate the consolidation of a self-reliant nuclear industrial base. India now possesses the capability to design, build, fuel, and maintain reactor systems largely through domestic expertise and resources, and this directly supports the objective of achieving strategic autonomy in energy infrastructure while addressing vulnerabilities associated with global supply chains and geopolitical constraints, and opening pathways for participation in emerging global nuclear markets, particularly in areas such as small modular reactors and fuel cycle services⁴⁶.

6. Policy, Legal, and Institutional Framework

The evolving policy, legal, and institutional architecture governing India's nuclear sector reflects a clear transition from incremental expansion to system-level scaling, and it directly engages the question of whether governance structures can keep pace with accelerated deployment without compromising safety or security⁴⁷. The Nuclear Energy Mission announced in the Union Budget 2025–26, with a target of 100 GW by 2047, signals a decisive repositioning in which nuclear energy is being recast as a central component of the national power mix rather than a marginal contributor. What this requires is more than capacity addition; standardisation of reactor designs, faster project execution, and coordinated development of fuel supply chains, waste management systems, and grid integration mechanisms all become essential, alongside broader economic implications including reduced dependence on fossil fuel imports, improved current account stability, and the assurance that rising electricity demand is met through reliable, low-carbon sources⁴⁸.

The allocation of Rs. 20,000 crore for the development of Small Modular Reactors represents a targeted intervention aimed at diversifying the nuclear portfolio and addressing constraints linked to capital intensity and long gestation periods. The practical logic is that modular construction allows phased deployment, reduces upfront investment, and enables siting closer to demand centres such as industrial clusters and remote regions, and this expands the functional scope of nuclear energy beyond electricity generation, creating opportunities for integration with industrial applications including hydrogen production, desalination, and process heat supply. Early investment in SMR technology also carries strategic value, positioning India within an emerging global market while strengthening domestic capability in modular manufacturing and advanced reactor design⁴⁹.

The enactment of the SHANTI Act, 2025 introduces a recalibrated legal framework designed to address the limitations of a predominantly state-driven nuclear sector. By permitting calibrated private participation under strict regulatory oversight, it engages the central question of how efficiency gains can be achieved without diluting national security safeguards. Private sector involvement in areas such as component manufacturing, project execution, and joint ventures expands access to capital, encourages technological innovation, and improves project management efficiency, while state control over safety, security, and fuel cycle operations remains intact, ensuring that sensitive aspects of the nuclear domain continue under sovereign oversight consistent with national security priorities and non-proliferation commitments⁵⁰.

India's civil nuclear cooperation agreements further illustrate a pragmatic alignment between domestic capability and international engagement. Collaborative projects such as Kudankulam demonstrate how external partnerships can accelerate capacity addition even as indigenous capabilities continue to mature, since these arrangements provide access to advanced reactor technologies, diversified fuel supply channels, and established safety practices, reducing project risk and enhancing operational reliability. India's consistent adherence to responsible nuclear conduct has sustained engagement with global suppliers despite its non-signatory status to the Nuclear Non-Proliferation Treaty, and this continuity has strengthened its credibility within international energy diplomacy⁵¹.

7. Emerging Technologies and Future Reactor Systems

The next phase of India's nuclear programme is increasingly shaped by the development of flexible and scalable reactor technologies, and the emphasis is on moving beyond conventional large-scale deployment and addressing the constraints of capital intensity, long gestation periods, and limited site flexibility. Advanced designs under development at the Bhabha Atomic Research Centre, including the BSMR-200 and SMR-55, reflect a shift toward compact, modular systems capable of deployment across varied geographies, with significant operational implications, since nuclear power can thereby be located closer to demand centers such as industrial corridors, mining regions, and remote areas where grid stability remains uneven⁵². Modular fabrication further alters the deployment model, since components are manufactured in controlled environments and assembled on site, reducing construction timelines while improving quality assurance⁵³.

These technological developments extend the functional scope of nuclear energy beyond electricity generation. The integration of high-temperature gas-cooled reactor designs introduce the capacity to deliver process heat suitable for industrial applications, particularly hydrogen production, creating a direct linkage between nuclear systems and sectors such as fertilisers, refining, and heavy industry where continuous high-temperature input is essential. The distinction from renewable-based pathways is important because nuclear-driven systems provide stable and predictable output, avoiding the intermittency that constrains renewable hydrogen production⁵⁴. In effect, nuclear energy evolves into a multi-dimensional platform supporting both power generation and industrial processes, and reinforcing its relevance within India's long-term decarbonisation and industrial strategy⁵⁵.

The target of deploying at least five small modular reactors by 2033 marks a shift from design ambition to operational execution. Realising this objective requires more than technological readiness, since regulatory approvals, site development, manufacturing capacity, and financing structures must all align within a coordinated framework. Early deployment carries implications beyond domestic energy supply; it positions India within a competitive global landscape where multiple regions are advancing SMR technologies, and timely execution would validate domestic capability while strengthening India's role in shaping emerging standards, supply chains, and export opportunities in the nuclear sector⁵⁶.

8. National Resilience and Security Dimension

Nuclear installations in India are classified as high-value critical infrastructure, reflecting their direct linkage to public safety, uninterrupted energy supply, and national credibility. This classification situates nuclear systems firmly within a broader resilience and security framework that must respond to evolving threat vectors, where disruptions, whether physical, cyber, or systemic, are not isolated events but carry the potential to trigger cascading effects across industrial, urban, and strategic domains⁵⁷.

Facilities at Kalpakkam, Tarapur, Kakrapar, and Kudankulam operate under layered security architectures involving the Central Industrial Security Force, specialised response units, and coordinated oversight between central and state agencies. These arrangements are reinforced through strict access control regimes, redundancy in safety systems, and integration with national disaster management and intelligence frameworks, embedding nuclear installations within a wider security grid rather than treating them as standalone assets⁵⁸.

A critical dimension within this framework is insider risk, since nuclear systems depend on highly specialised personnel, making internal vulnerabilities as significant as external threats. India's approach, implemented under the Department of Atomic Energy, incorporates stringent personnel reliability programmes that include background verification, continuous behavioural monitoring, and compartmentalised access to sensitive systems and materials⁵⁹. Alongside this, cybersecurity has assumed central importance; nuclear facilities deploy air-gapped control systems, dedicated monitoring frameworks, and layered digital safeguards designed to prevent unauthorised intrusion, reflecting a dual awareness that internal vulnerabilities must be managed with equal rigour as external threats, including espionage attempts and disruption by hostile actors. Protection extends beyond infrastructure to scientific personnel and research ecosystems, and this is informed by global precedents where nuclear expertise has been directly targeted⁶⁰.

The operationalisation of the PFBR adds a further layer to this resilience architecture. Its contribution is not limited to energy generation; by enabling fuel multiplication and advancing the transition toward thorium utilisation, it strengthens long-term energy autonomy and makes energy planning more resilient under conditions of external stress where conventional supply routes may be constrained⁶¹. At the same time, the technological depth associated with fast reactor systems expands national capabilities in reactor physics, materials science, and fuel cycle management, and even with a clear separation between civilian and strategic domains, this depth contributes to broader technological strength, carrying implicit value in deterrence and capacity projection.

The PFBR also demonstrates institutional resilience. Its⁶² execution reflects the ability to manage complex, long-duration infrastructure projects within India's scientific, administrative, and industrial framework, with wider implications for sustaining precision, safety, and coordination over extended timelines. These are capabilities essential not only for nuclear systems but for other high-risk infrastructure sectors, and as economic growth deepens dependence on uninterrupted power supply, the role of secure nuclear infrastructure becomes more pronounced across industrial, urban, and strategic domains⁶³.

9. Climate and Long-Term Strategic Objectives

India's commitment to achieving net zero emissions by 2070 necessitates a structural transformation of the power sector, and this directly engages the dual objective of aligning energy security with long-term decarbonisation while addressing how nuclear energy compares with other low-carbon pathways in sustaining growth without instability⁶⁴. The continued dominance of coal in electricity generation underscores the scale of change required, particularly as demand expands through industrialisation, urbanisation, and the electrification of transport and households. Within this context, nuclear energy offers a distinct pathway, one that combines low-carbon generation with operational reliability, enabling emissions reduction without compromising continuity of supply and distinguishing itself structurally from both fossil fuels, which emit carbon during operation, and intermittent renewable sources that deliver variable output⁶⁵.

The decarbonisation case for nuclear energy rests on a structural characteristic that distinguishes it from other low-carbon options, namely that it delivers continuous output without requiring fossil-based backup during periods of low renewable generation. As coal-fired capacity is retired or curtailed under environmental pressure, the replacement must offer not only lower emissions but comparable reliability, and nuclear plants operating at high-capacity factors meet that requirement in ways that current storage technologies cannot yet replicate at the scale India's grid demands. The emissions reduction achieved through nuclear expansion is therefore not incremental; it is structural, because it displaces coal from the base of the generation stack rather than supplementing it at the margins⁶⁶.

The long-term strategic significance of the thorium pathway further strengthens this alignment between climate objectives and energy sovereignty. India's substantial thorium reserves offer the possibility of a sustained domestic energy base, provided they are effectively harnessed through advanced reactor technologies capable of producing uranium-233, and it is around this capability that the long-term convergence of decarbonisation and fuel autonomy is structured⁶⁷. The three-stage nuclear programme is structured precisely for this transition, positioning thorium as a long-duration energy resource. Thorium-based systems are expected to generate comparatively lower volumes of long-lived radioactive waste, contributing to improved sustainability and waste management outcomes⁶⁸.

10. Systemic Significance

The preceding sections have examined the PFBR across distinct domains: reactor technology, fuel cycle architecture, energy positioning, manufacturing ecosystems, policy frameworks, emerging technologies, security, and climate alignment. What this section argues is that these domains do not operate independently; the PFBR's significance lies precisely in the fact that it functions as a point of convergence where these threads are drawn together into a single operational system, and it is this convergence, rather than any individual capability, that constitutes its systemic contribution⁶⁹.

Within the Bharat National Resilience Index (BNRI) framework, the relevant question is not what the PFBR produces in megawatts but what it enables as a platform. The reactor sustains a continuous domestic base for advancing fuel cycle technologies, reprocessing systems, and materials science, and this ensures that critical knowledge domains remain embedded within national institutions rather than dependent on external partnerships or imported expertise. The emphasis shifts accordingly, and energy infrastructure, in a BNRI-oriented interpretation, is to be evaluated by its ability to sustain national capability under conditions of systemic stress rather than merely by its contribution to installed capacity⁷⁰.

What distinguishes the PFBR from conventional power projects is the coupling it creates between domains that are typically governed in isolation. A disruption in fuel supply affects not only electricity output but the continuity of a manufacturing ecosystem built around nuclear-grade components; a cybersecurity breach at a reactor facility carries implications not only for energy but for the broader security architecture within which nuclear installations are embedded; a failure in institutional coordination delays not only project timelines but the progression of an entire fuel cycle strategy spanning multiple decades. It is this tight coupling, and the compound risks and compound strengths it generates, that defines the PFBR's systemic character⁷¹. The question for governance is whether institutional arrangements are adequate to manage a system of this complexity, and the evidence examined in this study suggests that they are not yet fully so⁷².

The cumulative trajectory of the three-stage programme, viewed through this lens, reflects something more than resource optimisation; it reflects a national capacity to sustain complex, long-duration technological programmes under conditions of constraint, and to convert those constraints, over time, into instruments of strategic depth. The PFBR is one node within this trajectory, but it is the node at which the programme's feasibility was tested and, with the achievement of criticality, confirmed⁷³. Whether this confirmation translates into systemic transformation will depend on the institutional, regulatory, and industrial conditions examined in the section that follows⁷⁴.

11. Critical Analysis and Way Forward

The PFBR marks a decisive technological achievement, yet its systemic implications remain contingent on unresolved structural constraints that extend beyond reactor physics into governance, financing, and industrial execution. The transition from demonstration to replication is not automatic; while first criticality establishes the feasibility of fuel multiplication, it does not, on its own, guarantee scalability under real-world conditions characterised by cost overruns, regulatory delays, and fragmented institutional coordination⁷⁵. India's nuclear expansion continues to confront the persistent burden of long gestation periods and capital intensity, which limit responsiveness in an energy landscape increasingly shaped by faster and cheaper renewable deployment.

Policy intent has shifted toward scale, yet execution capacity remains uneven, with supply chains, project management systems, and regulatory processes yet to converge into a streamlined delivery mechanism⁷⁶. The introduction of modular reactor concepts is often presented as a corrective, but their commercial viability, regulatory preparedness, and integration into existing grid systems remain insufficiently tested, and this creates a structural tension in which nuclear energy is expected to perform as a stabilising base-load source yet continues to operate within an institutional and economic framework that constrains its expansion.

The closed fuel cycle, frequently presented as a strategic strength, also introduces operational vulnerabilities that are often understated. Its effectiveness depends on seamless integration across reprocessing, fuel fabrication, and reactor operation, each of which carries technical, safety, and logistical complexities at scale, and disruptions within any segment can produce cascading effects across the system. The transition toward thorium, while central to long-term energy sovereignty, remains technologically incomplete and commercially distant; experimental validation does not equate to deployable infrastructure, and the pathway from pilot capability to industrial-scale thorium utilisation requires sustained investment, technological refinement, and regulatory clarity, none of which can be assumed to progress linearly⁷⁷. At the same time, governance reforms, including calibrated private participation, introduce their own contradictions, since efficiency gains are sought through market mechanisms, yet the sector's strategic sensitivity necessitates continued state control over safety, security, and fuel cycle operations. This hybrid model, while conceptually balanced, risks institutional friction unless supported by clear regulatory frameworks, predictable risk-sharing arrangements, and stronger coordination across agencies⁷⁸.

Security considerations further complicate this landscape. As nuclear infrastructure assumes a more central role within the national energy system, its exposure to evolving threat vectors intensifies. Cyber vulnerabilities, insider risks, and the potential for targeted disruption cannot be treated as peripheral concerns. While existing safeguards demonstrate awareness, the dynamic nature of these threats requires continuous adaptation, deeper integration of digital and physical security systems, and sustained investment in personnel reliability mechanisms⁷⁹. At the same time, nuclear energy must contend with a persistent legitimacy challenge in which public perception, cost transparency, and comparative competitiveness vis-à-vis renewables continue to shape its acceptance. The argument for reliability remains strong, but it is insufficient unless accompanied by demonstrable improvements in project delivery timelines, cost discipline, and institutional credibility.

The way forward requires a recalibration that is both structural and operational. Institutional alignment must be prioritised, with clearer delineation of responsibilities, faster decision-making, and integrated planning across energy, industrial, and security domains. Technological pathways must emphasise standardisation and modularity, not as conceptual solutions but as deployable systems that can be replicated at scale. The fuel cycle requires reinforcement through expanded reprocessing capacity, credible waste management strategies, and accelerated progress in thorium-based technologies. Regulatory frameworks must evolve toward greater transparency and predictability, ensuring that private participation enhances efficiency without diluting safety imperatives. At the same time, the functional scope of nuclear energy should be broadened; integrating it with hydrogen production, desalination, and industrial process heat can improve economic viability and align with decarbonisation objectives. International cooperation should be pursued selectively, with a focus on access to technology and safety practices, without compromising strategic autonomy.

In this context, the PFBR should not be misread as a culmination. It is an inflection point, one that exposes both the possibilities and the constraints of India's nuclear trajectory. Its true significance will be determined not by the achievement of criticality alone, but by the extent to which it catalyses systemic transformation across technology, governance, and industrial capability. The pathway ahead is neither linear nor assured; it requires sustained coherence between policy ambition and execution capacity, and without that coherence, the promise of a self-sustaining nuclear architecture risks remaining only partially realised.

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Chemical Warfare in the Syrian Civil War: Lessons for Strengthening Multilateral Frameworks

Abstract -

Chemical weapons have remained a paramount part of unconventional warfare for decades. Though these weapons were banned by the Chemical Weapons Convention which came into force in 1997, they have been observed to have played crucial roles in conflicts globally. The Organisation for Prohibition of Chemical Weapons is the apex body which ensures that the countries which have signed and ratified the treaty, abide by its clauses. Notwithstanding this, independent think tanks have repeatedly claimed that variegated agents outlawed by this accord have been used by both state and non-state actors in several wars globally. The most significant case remains the alleged usage of these weapons in the devastating civil war which had ravaged Syria over the past decade and a half. Most of these attacks have been attributed to the erstwhile Baathist regime led by Bashar al Assad. However, he has denied employing these measures. Numerous instances were also said to have been brought about by the terrorist organisation - the Islamic State. Analysing these examples reveals the fundamental issue of the proliferation of these weapons in spite of the CWC and their wanton usage by rogue non-state actors like ISIS. Therefore, this paper aims to study these incidents, comprehend the lacunae in multilateral frameworks which enabled them and suggest measures on remedying them. The paper relies upon credible secondary data sources like renowned think tanks, governments, multilateral bodies like the OPCW, etc. The methodology adopted is analytical, critical and interpretive driven by a thorough qualitative analysis of extant literature.

Introduction -

The Chemical Weapons Convention, a landmark accord which put in place a blanket ban on the development and usage of chemical weapons was opened for signatures on the 13th of January 1993 and was enforced from the 29th of April 1997 (Nuclear Threat Initiative, n.d.). All State parties were also required to destroy the stockpiles of such armament in their possession. Much before this agreement was even conceived, restrictions on such weapons had been established by certain humanitarian law documents of the 19th century, the 1925 Geneva Protocol and the Rome Statute which founded the ICC (Becker-Jakob, 2019). The Syrian Arab Republic was not a signatory to the CWC. This pointed to the existence of a covert weapons programme which had remained beyond the scrutiny of international bodies like the OPCW. Reports of their usage in 2012, barely a year after the outbreak of the Syrian civil war and the admission by the then Syrian foreign minister that his country possessed these arms, led to calls for Syria to be integrated into the CWC as a State Party to enable greater and more extensive examination of its weapons programme and prohibit its usage, especially against civilians (Becker-Jakob, 2019). Subsequently, attacks rose and most of them were attributed to the Assad regime including those at Ghouta and Khan Sheikhoun (Human Rights Watch, 2017). However the focus of this paper is not only on its usage by state actors but also by a non-state actor like ISIS which has utilised such weaponry zealously. The OPCW recognised ISIL as the perpetrator of the chemical attack in Marea in 2015 (Organisation for the Prohibition of Chemical Weapons, 2024).

It is, therefore, necessary to examine this series of attacks to internalise the predicaments facing the security architecture which outlaws' chemical weapons and the shortcomings which led to the ubiquitous usage of such weaponry in the Syrian civil war. This conflict is by no means the only one to have witnessed the ascendance of this sort of warfare, yet it is certainly the most well documented instance of chemical warfare in the modern era. It is also unique for being the most significant case depicting the employment of such tactics by a non-state terror actor like ISIL. After a thorough study, the drawbacks in nonproliferation frameworks like the CWC and its investigative mechanisms will be underlined which would be followed by measures suggested for the rectification of these lacunae. Though the Syrian civil war is definitely not the only episode of chemical warfare in recent history, it is certainly the most vastly researched and meticulously recorded one. Therefore, this occurrence has been cited to facilitate exhaustive analysis.

The paper will remain focused primarily on reviewing the empirical evidence, devoid of partisanship, and structuring a narrative which clearly demonstrates the failures of multilateral bodies like the OPCW and UNSC in preventing the proliferation and utilisation of chemical weapons in Syria alongside the suggestion of measures to ameliorate the same.

Background of the Syrian civil war -

Bashar al Assad, the son of Hafez al Assad, seized power after his father's demise in 2000 and promised an economic renaissance of the Levantine nation. However, his programme of rolling back certain tenets of Arab socialism did not transpire into success and the unemployment resulting from this economic turmoil translated into widespread discontent. The proverbial spark which ignited the fire was the self immolation of a Tunisian fruit seller named Mohammed Bouazizi in December 2010, which led to massive protests across West Asia (Lageman, 2020). Syria witnessed its own moment of reckoning when fifteen boys painted anti regime graffiti on a school wall at Deraa, which led to their arrest and torture (Council on Foreign Relations, 2019). These protests intensified in 2011 as opposition forces coalesced to form umbrella bodies like the Free Syrian Army and the Syrian National Council (Plofchan, 2014). The crackdown by regime forces instigated greater anger against it and eventually crystallised the opposition to the Assad government. The resistance transformed itself into a militancy with the formation of terror organisations like the Jabhat al Nusra in 2012 (Plofchan, 2014). The splintering of the opposition into numerous autonomous and often mutually opposed outfits ensured the continuance of a sanguinary civil war with multifarious stakeholders and contradictory interests. This is due, in large part, to the fissiparous tendencies of the Syrian populace, perpetually divided along the lines of ethnicity and sect. The meteoric rise of the Islamic State in Syria too is a symptom of this phenomenon as it consolidated its support amongst the Salafist sections of Syrian society.

The sectarian polarisation intensified with the intervention of foreign players into this conflict. Assad, an Alawite, was assisted by the Shia forces of Iran and Hezbollah, which considered the Alawites an offshoot of Shiaite Islam and hence regarded Assad as an ally. The Shia-Sunni schism was also starkly visible in the conflicts between the regime and Daesh as also other Sunni dominated outfits like the Hayat Tahrir al Sham. American aid to opposition forces like the Kurdish SDF coupled with Russian operations in support of the regime, internationalised this civil war (Mellen, 2019). Turkish anxieties over the establishment of a sovereign Kurdish entity on its borders prompted it and its proxies to undertake unilateral military action in order to stave off this emerging phenomenon (Phillips, 2026). The decimation of Daesh had been perceived as a success of multilateral efforts to ensure its downfall and the resultant situation was predicted to remain a stalemate. However, the lightning offensive launched by the HTS under the leadership of Abu Mohammed al Jolani in December 2024, ravaged the Assad regime and ousted Assad from power (Zelin, 2024). The subsequent developments have led to the evisceration of the Kurdish AANES and conflicts between the regime and Druze minorities (Aftandilian, 2026 ; Al Jazeera, 2025). The country has also witnessed increased Israeli military action in its south western region (Chouiref & Junaidi, 2026).

Thus, the situation in Syria is far from stable. The demise of the Assad regime has in no way led to the establishment of peace and sectarian conflict remains rife. As the Americans withdraw from Syria after over a decade of active involvement in the affairs of the nation, regional players are jostling for control over the region (Todman & Yacoubian, 2026). While Riyadh attempts to engage President al Sharaa, Turkish and Israeli security interests are bound to collide in the functioning of an HTS government. The purpose of recounting this was not to provide a thorough understanding of the civil war, which needs both exhaustive research and unhindered examination but to proffer a cursory understanding of the variegated state and non-state actors in the civil war, their conflicting interests and how these dynamics shaped the region for more than a decade. This overview, it is hoped, will help in comprehending the nitty-gritties of the instances of chemical warfare which would be delineated in further sections. The ruthlessness demonstrated in the actions of these stakeholders remains crucial to understanding the usage of chemical weaponry in the war. The inherent morality or the lack of it amongst these actors is a moot point. Their utilisation of such weaponry, in flagrant violation of established international norms and precedents, reveals the scant respect that such laws entail in matters of vital military interests. It also points to the employment of offensive realism by these players in the pursuits of their interests.

History of chemical weapons development in Syria -

The Syrian Arab Republic acceded to the Geneva Protocol (1925) in 1968, thereby agreeing to comply with its norms requiring the abdication of both first and retaliatory uses of any form of chemical or biological agent in warfare (Feickert et al, 2013). Since these assurances did not cover the production or acquisition of such weapons, the state is believed to have received its first tranche of chemical weapons from Egypt in the period 1972-73 in the lead up to the Yom Kippur war of 1973 (Nuclear Threat Initiative, 2008). Reports from well established American think tanks state that the Syrian government obtained either sarin and mustard or mustard only with other reportage pointing to the alleged discovery of certain chemical agents by Israeli forces in the aftermath of the Syrian defeat in the Yom Kippur war (Nuclear Threat Initiative, 2008).

The Republic had significant stockpiles of Sarin and had begun extensive research to develop the agent VX, while parallelly working towards the production of SCUD missiles meant to deliver these weapons in the forms of warheads or air dropped bombs (Carnegie Endowment for International Peace, 2003). Allegations were also made that the Syrian Baathist regime under the leadership of then President Hafez al Assad had employed cyanide gas in its military offensive on Hama in 1982, aimed at vanquishing a rebellion spearheaded by the Muslim Brotherhood (Nuclear Threat Initiative, 2008). A US intelligence report from 1983 categorised the nation as a key recipient of Soviet assistance in the chemical weapons domain, thereby corroborating a similar report released in the previous year (Bruhl, 2013). Syria had also allegedly procured equipment and precursor chemicals from West European companies (Feickert et al, 2013). As Syria made a foray into unconventional warfare, it remained heavily dependent upon its benefactors for the acquisition of such weaponry. Therefore, Syria did not achieve meaningful indigenous capabilities for manufacturing such armaments during these decades.

Analysts from the USA and Israel have alleged that the Centre for Scientific Studies and Research under the Syrian Ministry of Defence was involved in the research and development of chemical weapons and stated that CW production facilities were present in the areas around Damascus, Homs and Aleppo with chemical warheads being built with assistance from the Democratic People's Republic of Korea and technicians from West Europe (Diab, 1997). These observations are crucial in establishing the postulate that the Syrian programme was primarily a result of external assistance rather than indigenous innovation, at least in the formative years of this initiative. Defence department reports vindicated these claims and went on to further declare that Syria was years away from developing indigenous CW capabilities (Feickert et al, 2013). Through these years, it continued to receive assistance from the Soviets and when this flow of aid dried up, the Germans stepped in with their companies (Bruhl, 2013). While some companies remained ignorant of the final use of these materials, there is reason to believe that others deliberately overlooked conjecture surrounding this and proceeded to export tons of critical precursor dual - use chemicals like hydrogen fluoride and Sarin (Bruhl, 2013). A German magazine claimed that US officials had warned their German counterparts that firms from their country were involved in the establishment of a poison-gas factory near Aleppo (Diab, 1997). Apart from allegations of Russian support in the production of VX, which were vociferously denied by Moscow, Syria also allegedly procured critical materials from China and North Korea (Diab, 1997).

This covert CW programme was brought to the fore by a statement given by former CIA Director William Webster in front of a Senate Committee in 1989 (Nuclear Threat Initiative, 2008). Testing of these capabilities was carried out in 1992 (Nuclear Threat Initiative, 2008). The history of the development of the CW programme in Syria reveals that the assistance provided by state and non state actors was crucial in the regime's efforts to obtain and test these weapons. It also highlights a crucial void in the global CW arms control architecture which prevailed till the CWC was conceptualised and enforced. This void was a consequence of a loophole which persisted till the advent of the CWC and the subsequent outlawing of even the production, acquisition and stockpiling of chemical weapons. The Geneva Protocol only prohibited the use of these agents in warfare but was silent on the hoarding of these weapons by state actors. Ergo, every transaction which involved the sale or transfer of critical technology instrumental for the development of these weapons was completely legal, albeit covert in many cases. It also shows that the international community failed in deterring state actors like the Soviet Union and commercial entities like the aforementioned German companies from supplying such technology to the Syrian regime.

Instances of the usage of chemical weapons in the Syrian civil war -

As the civil war ignited in 2011, concerns around the CW programme heightened. A Foreign Ministry spokesperson for the regime confirmed this speculation in 2012 and declared that the regime did indeed possess a CW programme, prompting then US President Barack Obama to issue a 'red line' pertaining to the movement and usage of these weapons (Davenport & Kimball, 2023). The same year witnessed the first instance of the alleged usage of the chemical weapon Agent 15 by the regime in Homs, which was soon followed by two other alleged cases of the utilisation of chemical weapons in 2013 near Aleppo and Damascus (Davenport & Kimball, 2023). These two attacks were attributed to opposition forces by the Assad regime which proceeded to call for UN mandated investigations into these matters (Sen, 2018). Later that year, on August 21, Syria suffered the deadliest recorded chemical attack in history, resulting in the deaths of hundreds of civilians in the Damascus suburbs of Eastern and Western Ghouta (Human Rights Watch, 2013). The usage of the Syrian made 330mm wide surface to surface rockets and the Soviet manufactured 140mm wide surface to surface rockets in the delivery of the weapons grade nerve agent, most likely Sarin, to known opposition strongholds, points to the attack having been conducted by the Assad regime (Human Rights Watch, 2013). This massacre led to a rise in international scrutiny and opprobrium resulting in the Syrian government acceding to the Chemical Weapons Convention in October 2013 and making an initial declaration of its stockpile of weaponry which catalysed the formation of an OPCW-UN Joint Mission to deal with this issue (Organisation for the Prohibition of Chemical Weapons, n.d.). The Ghouta incident was a turning point in modern era discourse surrounding chemical warfare and the accompanying security challenges. It proved to be a turning point in ensuring increased international intervention and scrutiny of the Syrian civil war. The sheer scale and brutality of the Ghouta attack triggered widespread international condemnation and exposed the regime's CW programme to vituperative criticism from global actors including the UN and other multilateral bodies. Over 1144 individuals lost their lives, including 1119 civilians and 25 opposition combatants (Syrian Network for Human Rights, 2023). The Ghouta casualties amount to around 76 percent of the cumulative victims from the chemical attacks which are believed to have taken place in Syria till 2023 (Syrian Network for Human Rights, 2023).

The Eastern Ghouta attack was succeeded by a series of similar ones at Homs, Al-Ateiba, Khan al-Asl, Adra, Aleppo and Saraqeb (Priya, 2020). Data compiled by the Global Public Policy Institute suggest that there were nearly 336 chemical attacks documented in Syria till 2019, out of which an estimated 98 percent were carried out by regime forces while the rest were conducted by the Islamic State (Priya, 2020). Apart from repeated strikes on Aleppo and Ghouta, the regime allegedly carried out the largest coordinated CW attack since the Syrian accession to the CWC, in Khan Sheikhoun in 2017 through the means of an aircraft laden with Sarin (Human Rights Watch, 2018). Human Rights Watch also found evidence suggesting that the Islamic State had carried out 3 CW attacks using sulphur mustard and the opposition had carried out one assault involving chlorine (Human Rights Watch, 2018). The battle for Aleppo and the combat around Damascus also witnessed alleged chlorine attacks by Syrian regime forces (Human Rights Watch, 2017). These incessant CW offensives, testimonies by doctors and the OPCW finding trace amounts of Sarin and VX at a military facility in Syria, prompted the UNSC to pass Security Council Resolution 2235 in a bid to determine the parties responsible for these attacks (Davenport & Kimball, 2023). Notwithstanding the passage of this landmark resolution in 2015, the regime remained unfazed in leveraging its CW capabilities in military offensives targeting opposition strongholds. 2017 was a particularly brutal year with the regime allegedly carrying out Sarin attacks at Khan Sheikhoun in Idlib and Al Salaliyah and Jrouh in the Hama governorate (Priya, 2020). Military retaliation from the US in the aftermath of the Khan Sheikhoun attack also failed to debilitate Syrian capabilities significantly as the regime persisted in utilising its CW capabilities as seen in the repeated chlorine assaults on Douma, Damascus in the following year (Priya, 2020). The Douma attack marked the last major chemical attack carried out in Syria. The OPCW, in 2019, validated these claims while the Independent International Commission of Inquiry on the Syrian Arab Republic, established in 2011 by the UN Human Rights Council also concluded in 2018 that the government had employed one specific agent nearly four times that year (Davenport & Kimball, 2023). A report from 2019 asserted that nearly 91.5 percent of all chemical attacks in Syria since 2012 were chlorine bombs (Lombardo, 2019).

The third report of the OPCW-UN Joint Investigative Mechanism stands out as it named not only the regime for its attacks in Talmenes and Sarmin but also attributed the Marea sulphur mustard attack to the Islamic State (Davenport & Kimball, 2023). This attack, which took place on 1 September 2015, is believed to have been carried out by the Islamic State of Iraq and the Levant from territory controlled by the terrorist organisation, through the means of artillery guns loaded with 122 mm projectiles primed to disperse a liquid payload across several locations in Marea (Organisation for the Prohibition of Chemical Weapons, 2024). Daesh also reportedly executed mustard attacks in al Hasakah against the Kurdish YPG and against Assad's troops near Deir el Zour (Roul, 2017 ; Strack, 2017). Sulphur mustard was utilised by the terror outfit in attacks in Aleppo and Hama governorates (Roul, 2017). A 2016 analysis by IHS Markit pegged the number of chemical attacks by IS in Syria at 52 (Ynet, 2016). IS remains the sole non-state actor to have mastered the weaponisation of chemical agents and deployed them in active conflict in furtherance of its military objectives. Slain ISIS leader Abu Bakr al Baghdadi is believed to have personally sanctioned and encouraged the use of chemical weapons by members of his terrorist outfit (United Nations, 2023). This is plausible considering that the terror group was accused of carrying out mustard attacks against the Kurds in Kobani as early as 2014 by an Israeli think tank (Logan, 2014). Daesh began carrying out these assaults after the establishment of its 'Caliphate' in 2014 and the foundation of its CW production facility in Mosul and halted them only after the fall of Mosul in 2017 and the consequent loss of control over its facility in the Iraqi city (Strack, 2017). Reports state that the IS utilised sulphur-mustard, chlorine and other toxins delivered through artillery shells, missiles or improvised explosive devices with the terror outfit encouraging its members to develop such weaponry by using the Mosul University's chemical laboratories (Adkins, n.d.). These concerns were heightened when the IS took control of the Muthanna Chemical Weapons Complex in Iraq which had been a crucial cog in the chemical weapons programme of Saddam Hussein's Baathist regime (Logan, 2014). Though there were allegations that Daesh moved its facilities to Raqqa in Syria after the fall of Mosul, the frequency of its chemical offensives tapered off (Adkins, n.d.).

These quoted incidents highlight a few critical aspects of chemical warfare in Syria during the civil war. Firstly, it is apparent that the Syrian regime not only possessed a veritable arsenal of chemical agents but also utilised it in warfare even after the accession to the CWC. These actions, proven by multilateral institutions like the OPCW and the UN and bodies like the Joint Investigative Mechanism and the Fact Finding Mission, reveal that the Assad government was in clear violation of its commitments to both the Geneva Protocol and the CWC. It is also clear that the regime did not fully disclose the extent of its CW capabilities and chose to retain a significant portion of its weaponised arsenal and further deployed it in warfare with the goal of targeting opposition strongholds. However, as established above in the case of the 2013 Ghouta attack, most casualties were civilians with combatants constituting a minuscule amount of those affected. It is safe to conclude, therefore, that these attacks, apart from being blatantly in violation of international norms, did not yield any strategic dividend to the perpetrators. They only served to terrorise the population and worsen the festering discontent amongst the masses. These attacks also left the regime isolated from the global community and made it increasingly difficult for its international backers like Russia and Iran to defend their support to the Assad government. It can be argued that these CW assaults proved counter productive for they gave western powers, specifically the United States, a reason to intervene militarily in the civil war which resulted in the bolstering of forces opposed to Assad. The usage of CW capabilities by Daesh is another troubling aspect of this conflict. While the CWC is binding upon State Parties, it is silent on the acquisition, stockpiling and usage of chemical agents by non-state actors. The advent of the IS CW programme and the prolific utilisation of agents like sulphur-mustard exemplify the failure of the global chemical arms control frameworks. This facet of the chemical warfare in Syria sheds light on the lacunae inherent in preventing the proliferation of unconventional weaponry amongst terror outfits. That a proscribed nascent terrorist organisation like Daesh was able to not only produce these agents but also conduct sophisticated attacks against targets like the regime troops and YPG units should evoke disquiet globally. It points to the ease with which outlawed organisations can acquire deadly weapons and reiterates the need for the global community to strengthen multilateral enforcement mechanisms to avert such an eventuality.

Responses by multilateral institutions to this crisis -

The beginning of the civil war and reports surrounding the alleged instances of chemical warfare triggered reactions from state actors and multilateral bodies globally. This section delves into the actions undertaken by institutions, including the constitution of investigative mechanisms and their efficacy. The admission by the Syrian Foreign Ministry of the regime possessing chemical weapons and reports of their alleged usage in Homs in December 2012 and in Aleppo and Damascus in March 2013, led to heightened international scrutiny and prompted the regime to approach the UN to request an investigation into the March attacks (Davenport & Kimball, 2023). This was closely followed by requests from France and the United Kingdom, soliciting UN mandated investigations, culminating in the UN Secretary General announcing an investigation in conjunction with the WHO and the OPCW (Davenport & Kimball, 2023). While the Assad regime remained reluctant to allow widespread access to inspectors, the usage of chemical weapons in Ghouta in August 2013, widely attributed to the regime, and which resulted in large numbers of civilian deaths, forced the government to provide access to the site to UN inspectors (Sen, 2018). The Ghouta attack fundamentally transformed the landscape of the investigations. The UNSC convened an urgent meeting, the UNSG promised “a thorough, impartial and prompt investigation” into the attack and the OPCW Director General confirmed that OPCW experts had already reached the nation in conjunction with the UN inspections (Davenport & Kimball, 2023). While President Obama hinted at military strikes in the eventuality that diplomacy failed, Russian Foreign Minister Sergei Lavrov declared that the Russian Federation had reached an agreement with the regime about the handover of its CW programme (Sen, 2018). The USA too agreed with the plan calling for the declaration of chemical weapons by the regime which would lead to their destruction and the eventual accession of the Syrian Arab Republic to the Chemical Weapons Convention (Sen, 2018). The OPCW and the UN were also granted permission to investigate all CW sites in the nation with thorough inspections mandated (Sen, 2018).

This accord was subsequently approved by the OPCW Executive Council and the UN Security Council passed a resolution supporting it (Davenport & Kimball, 2023). After the accession of the Syrian Arab Republic to the CWC in October 2013 and the initial declaration by the regime of its chemical weapon stockpiles, an OPCW-UN Joint Mission was established resulting in the complete removal and substantial obliteration of declared CWs by June 2014 (Organisation for the Prohibition of Chemical Weapons, n.d.). The regime had declared 41 CW facilities at 23 sites containing just under 1300 metric tonnes of chemical warfare agents (Gade, 2014). Most of the chemical weapons were shipped out of the Latakia port and later transferred to US Navy vessels to be destroyed by hydrolysis (Davenport & Kimball, 2023). The OPCW constituted a Fact Finding Mission the same year as the mandate of the OPCW-UN Joint Mission came to an end (Organisation for the Prohibition of Chemical Weapons, n.d.). Before its mandate ended, the Joint Mission had undertaken the decimation of the equipment used for the production of chemical agents (Gade, 2014). One of the key accomplishments of the Fact Finding Mission was the report stating that chlorine had been used in attacks in Syria (Davenport & Kimball, 2023). Another major outcome of the FFM's reports was the first documented evidence of the use of chemical weapons by a non-state actor (Daesh) in the conflict (Davenport & Kimball, 2023). The UNSC passed UNSCR 2235 in 2015, leading to the formation of a UN-OPCW Joint Investigative Mechanism whose mandate was renewed by the UNSCR 2319 in the following year (Organisation for the Prohibition of Chemical Weapons, n.d.). 2016 also witnessed a declaration by the OPCW stating that the last of the declared Syrian chemical weapons material had been destroyed (Sen, 2018). Reports filed by the UN-OPCW JIM in 2016 are considered a watershed development in the response by multilateral mechanisms owing to the fact that they categorically attributed blame to the alleged perpetrators of the chemical attacks. This was in stark contrast to previous reports which had resulted from investigations aimed primarily at establishing the facts of the attacks and not investigating the perpetrators of these assaults. The OPCW Executive Council passed a resolution censuring the usage of chemical weapons as reported by the JIM (Davenport & Kimball, 2023).

Russia and China vetoed a UNSC Resolution in early 2017 which aimed to impose sanctions on the Assad government over its use of chemical weapons (Sen, 2018). A devastating chemical attack followed this development in Khan Sheikhoun in April 2017 leading to an emergency UNSC meeting and unilateral military strikes by the US armed forces (Davenport & Kimball, 2023). The UNSC attempted to pass a resolution condemning this attack and calling on the regime to provide full access to investigators which failed due to a veto by the Russian Federation (Davenport & Kimball, 2023).

The UNSC also remained unsuccessful in renewing and extending the mandate of the UN-OPCW JIM (Organisation for the Prohibition of Chemical Weapons, n.d.). Taking into account the expiration of the JIM, France spearheaded the creation of the International Partnership Against Impunity for the Use of Chemical Weapons to facilitate information sharing amongst partners and list individuals and entities sanctioned for the usage of chemical weapons (Davenport & Kimball, 2023). The deadlock in the UNSC continued with US sponsored resolutions being blocked by Russia and the latter's resolutions being vetoed by the former. Meanwhile, the OPCW Fact Finding Mission commenced its investigations into the reports of chemical weapons attacks which took place on April 7, 2018 in Douma (Davenport & Kimball, 2023). The OPCW followed this up by instituting, in its fourth special session of the Conference of State Parties, measures which ensured that the chemical attacks identified by the Fact Finding Mission were properly attributed to the actors who conducted them and that they were held accountable (Organisation for the Prohibition of Chemical Weapons, 2018).

The final report of the Fact Finding Mission revealed, with absolute certainty, that toxic agents had been used in the Douma 2018 attacks (Organisation for the Prohibition of Chemical Weapons, 2019). A separate body known as the Investigation and Identification Team was also formed in the period of 2018-2019 (Organisation for the Prohibition of Chemical Weapons, n.d.). Reports filed by this body culminated in the OPCW attributing multiple attacks in 2017 to the Assad regime and calling for the declaration of its CW facilities along with its stockpiles, especially those linked to the abovementioned attacks, in under 90 days (Organisation for the Prohibition of Chemical Weapons, 2020). Consequently, the OPCW convened the 25th Session of the Conference of State Parties in 2021 wherein it suspended certain rights and privileges enjoyed by the Syrian Arab Republic (Organisation for the Prohibition of Chemical Weapons, n.d.). CWC State Parties further agreed to impose, on Syria, export control measures pertaining to certain chemicals and technologies in 2023 (Organisation for the Prohibition of Chemical Weapons, n.d.). The collapse of the Assad regime in December 2024, paved the way towards renewed dialogue between the Syrian authorities and the OPCW with the latter recommending a 9 point action plan to normalise ties (Organisation for the Prohibition of Chemical Weapons, n.d.). The ascendance of the HTS regime under President Ahmed al Sharaa has transformed the ties between the OPCW and the Syrian Arab Republic. The meeting held between the Director General of the body and President Sharaa reaffirmed this transformation (Mimran & Shamay, 2025). UN officials reported to the Security Council that their inspectors have discovered chemical weapons and facilities previously undeclared by the Assad regime (United Nations, 2026). The Sharaa regime has expressed its willingness to participate in the complete dismantling of the CW programme and the elimination of the remnants of the Assad era chemical weapons (Kimball, 2026).

The multilateral bodies constituted by the UN and OPCW were fairly successful in their mandate. They irrefutably established the facts pertaining to the chemical attacks and attributed blame to the perpetrators. Their reports were instrumental in ensuring that the UNSC and the international community were seized of the facts and applied measures to ensure compliance. The possible lacunae in these institutions have been deliberated upon in the following section.

Frailties in multilateral infrastructure -

It is necessary now to examine the shortcomings in multilateral frameworks which enabled the unprecedented rise of chemical warfare in Syria. The paramount reason remains the vast chasm in the timing of the emergence of the CWC as opposed to the NPT. The latter was contrived in 1968 and enforced in 1970 while the former was opened for signatures in 1993 and only came into force in 1997. Although the existence of the Geneva Protocol is widely considered as having delayed the need for the creation of the CWC, an important distinction in the clauses of both treaties remains the wellspring of the extensive Syrian chemical weapons programme. As stated above, the Geneva Protocol only banned the deployment of these chemical agents in warfare while remaining silent on the development and production of them by signatories. The Syrian regime exploited this loophole and persisted in its CW programme while maintaining plausible deniability. Therefore, it was able to develop and stockpile large amounts of Sarin, chlorine and VX without facing any meaningful international censure. While it maintained a stipulated level of secrecy about its operations, the regime was confident that it could justify itself legally if its clandestine actions were brought to light. It was evident that the simultaneous development of both the chemical agents as well as SCUD missile variants capable of delivering them constituted a single, well-defined push towards the attainment of a cutting edge militarised chemical weapons programme.

A universal mandate to accede to the CWC would have perhaps, it is believed, ensured that the regime refrained from acquiring these agents in the first place. Another issue pertaining to the CWC needs to be highlighted. If it is argued that the regime would have been deterred by this accession, it is necessary to establish that this effect occurred after the eventual accession in 2013. That is, as stated above, not possible. While the scale of the attacks in terms of casualties had declined in the aftermath of the regime becoming a member of the CWC, the sheer frequency of the attacks actually rose. This is testimony to the fact that the regime gradually became far more brazen in its CW offensives, in face of increasing opposition from the global community.

It would suffice to say that lacunae in several multilateral frameworks and bodies have resulted in the persistence of chemical attacks. One of the primary reasons for this was the inability to carry out independent verification of Syria's chemical arsenal till the state itself agreed to it in 2013 (Davenport & Kimball, 2023). State sovereignty rightfully dictates that the host nation must provide its assent before any external investigation is conducted. Yet, this also meant that the Syrian regime had amassed significant CW capabilities by the time the UN and the OPCW intervened. Another point which merits discussion is that the initial investigations focused only on establishing the facts of the attacks without attributing them to any state or non-state actor. The mandate of the Fact Finding Mission was limited to collating evidence underlining that the attacks had occurred and that toxic agents had been utilised. Apportioning blame was beyond the scope of the Fact Finding Mission. Thus, international pressure did not reach an apogee till the Joint Investigative Mechanism, tasked with filing reports holding actors responsible, became operational. As it is evident that diplomatic pressure and outrage across the globe played a role in the Assad regime desisting from conducting major CW attacks after the 2018 Douma offensive, perhaps a more prompt approach towards attributing these attacks to the perpetrators might have prevented the assaults which had occurred previously. Furthermore, the OPCW itself was able to credibly state that only the arsenal revealed to it had been successfully eviscerated and could not independently declare that the country or the regime had been rid of these weapons. This was owing to the fact that the Assad government had kept its operations clandestine and had not completely revealed the extent of its CW arsenal. Since there was no way by which an autonomous body like the Joint Investigative Mechanism could verify the regime's claims, undertaking action against the government became exceedingly difficult. Thus, despite the destruction of nearly 1300 tons of declared CWs, the regime persisted in its alleged chemical warfare owing to its clandestine production and incomplete declarations (McMahon and Murray, 2018). It is also important to keep in mind that the OPCW is merely an investigative body with few enforcement mechanisms of its own. It needs to be supported by an institution like the UNSC which can ensure compliance through legitimate, multilateral coercive measures. However, the UNSC was riven by factionalism and the use of the veto by the Syrian regime's allies like Russia and China further impeded progress in the direction of the dismantling of the Syrian CW programme. Russia and China had consistently vetoed UNSC resolutions advocating the imposition of sanctions on the entities allegedly responsible for the usage of chemical weapons in the Syrian conflict (Melling and Dennett, 2017). Russia, in particular, also nixed action on four UNSC resolutions seeking investigations into the chemical warfare observed in the Syrian civil war (RTÉ, 2018). The deadlock in the UNSC meant that while unilateral sanctions could still be imposed by member states, legitimate multilateral sanctions through established channels had been effectively shelved.

The dearth of legitimate coercive mechanisms to back the OPCW led investigations proved to be a major pitfall. A similarly disquieting shortcoming was the inability of international bodies to prevent ISIL from acquiring chemical weapons capabilities. One of the reasons behind this was the failure of the global community in fulfilling the objective of total and absolute chemical disarmament. It must be reiterated that Daesh developed its facility from the remnants of the programmes of the Baathist regimes of Iraq and Syria. While it is understood that the sweeping military victories of the terror outfit in its early years could not be prevented, the timely decimation of these facilities could have avoided their misuse by the IS. Similarly, sanctioning lethal dual use chemical agents, forestalling their stockpiling and obstructing the development of delivery systems for these agents remain steps which should have been considered to tackle the unprecedented threat posed by the ISIS CW programme. Maintaining a proactive approach in dealing with the peril of a rogue non state terror actor gaining these weapons is paramount.

Since nearly every state actor, including those with conflicting interests, were opposed to the menace brought about by the IS, a stronger multilateral response should have entailed the realisation that the terror group had made rapid progress towards achieving a functional CW programme and had weaponised it successfully against its opponents on the battlefield.

Measures to remedy these drawbacks -

Before suggesting palliative steps, it would be useful to analyse what led to the relative lull in CW attacks post the 2018 Douma assault. One factor could be the rising diplomatic pressure from states across the world. Another plausible reason might be the imposition of economic sanctions on individuals and financial institutions as stipulated under the Caesar Act (Priya, 2020). An oft-quoted reason is also the 2020 OPCW report which unequivocally held the regime responsible for the use of chlorine and Sarin in attacks on Ltamenah in 2017 (Priya, 2020). One of the major conundrums faced by the international community was the deterioration in the perception of the OPCW. While it had traditionally been perceived as an unbiased stakeholder merely focused on standard arms control measures, the central role played by it in a theatre of conflict as volatile as Syria, has opened it up to allegations of geopolitical partisanship and eroded its standing globally. Whether these allegations carry merit is a moot point. It is, nonetheless, necessary to restore credibility to this institution and ensure that it does not get tainted by geopolitical oneupmanship. Russian and Chinese support to the regime's alleged chemical warfare in the UNSC was another cause for concern. This would only be remedied by resorting to reformed multilateralism and contriving paths to work around the unilateral, arbitrary and binding powers of the veto. However, knowing that all of the P5 nations have vested interests in perpetuating the veto, reform in this direction is well-nigh impossible. Reinforcing the taboo around chemical weapons is also necessary as the globe witnesses a rise in their usage in conflicts. That they are relatively easier to acquire also makes verification and compliance significantly more challenging while making their proliferation and clandestine stockpiling much easier. Therefore, multilateral export control regimes like the Australia Group might prove to be useful measures for ensuring compliance (Chor, 2025). Developing independent mechanisms to monitor the trade of dual use chemicals is another method to prevent the development of CW capacities. Inventing effective methods to tackle chemical warfare would also serve to discourage their deployment in conflict zones. A disparity in compliance from different actors reveals the lack of credible enforcement mechanisms with the OPCW which is considered primarily as a body engaging in compliance, verification, authorisation and destruction of chemical weapon stockpiles.

While the OPCW took action against Syria, which was a member state, for alleged violations of the treaty, it remained powerless when a non-state terror actor like the IS conducted similar attacks albeit at a smaller scale (Organisation for the Prohibition of Chemical Weapons, 2021). Ensuring compliance from non state actors will remain a hurdle for which the international community must contrive a solution. Promptness in instituting mechanisms like the Joint Investigative Mechanism (JIM) and the Investigation and Identification Team (IIT) upon the advent of a crisis will be of paramount importance in the future. The release of information pertaining to alleged chemical attacks, which would aid bodies like the International, Impartial, and Independent Mechanism and the Independent International Commission of Inquiry on the Syrian Arab Republic, must be streamlined by the OPCW (Ward, 2021). An increase in multilateral economic coercive measures like sanctions and asset freezes through the UNSC and UNGA as well as strict action against State parties violating the OPCW are steps which must be undertaken to target the perpetrators of these attacks (Ward, 2021). A rise in funding coupled with the appointment of skilled technocrats would inevitably result in the better functioning of the OPCW (Ward, 2021). Expanding the support base for multilateral UN instituted investigation bodies, especially in the developing world, must be prioritised to ensure international accountability. Agreements like the 2013 accord, which called for the "destruction of the Syrian Arab Republic's chemical weapons program in the soonest and safest manner", must be promoted. This is especially so as the landmark accord was signed after intense negotiations between the Syrian Arab Republic and the Russian Federation with the final agreement being inked with American approval (Kallenborn and Zilinskas, 2013). Unanimous resolutions like the UNSCR 2118, which endorsed this framework must be promoted devoid of narrow partisanship for the CWC as well as the larger cause of chemical weapons elimination remains ever susceptible to geopolitical flux (Kallenborn and Zilinskas, 2013).

A major challenge faced by the OPCW inspectors was not unlike the one often faced by IAEA personnel. Owing to them belonging to a multilateral body supervising state actions, allegations of violations of state sovereignty and of officials serving interests inimical to those of the nations they were deployed in, were rampant. This was also fuelled by the fact that the countries most vociferously supportive of the inspections like the USA were also geopolitically opposed to the alleged perpetrators of the majority of these attacks, viz. officials of the Bashar al Assad regime. Their political posturing and support to the rebels tainted the image of the OPCW investigations and lent heft to the allegations of the ostensible partisanship of the organisation. This could have been averted if these states would have discriminated between their national interests and international responsibilities and avoided conflating the two.

Threats of unilateral military action in response to alleged chemical attacks instead of a stance which would have prioritised OPCW referral further reinforced regime anxieties over the intentions of the OPCW inspectors. Such pronouncements of military interventions further deepened the distrust in the OPCW and bolstered the regime's belief that stonewalling the examination undertaken by the technical arbiter was the only way to safeguard regime stability. Accusations of bias helped the regime justify its lack of cooperation with the inspectors thereby leading to a diplomatic stalemate. Prioritising negotiations and international arbitration over unilateral coercive actions must be the way forward for all stakeholders who wish to resolve such transgressions. Ensuring the security of these officials, from all actors, would also be of paramount importance since inspectors have come under attack from armed groups in the country (Tasch, 2014). Greater surveillance, intelligence sharing and the creation of mobile destruction facilities are other recommendations provided by analysts (Kallenborn and Zilinskas, 2013). Smoothing out of bureaucratic hurdles, red tape and access denial remain key issues. They have repeatedly resulted in delays in the investigations, prompting furious volleys of accusations and counter accusations (Middle East Eye, 2018). Once again, one witnesses institutional investigations being sacrificed at the altar of geopolitical polarisation.

Proper verification of stockpiles necessitates the creation of viable long term monitoring and inspection mechanisms. A proposal to examine dual use facilities, estimate their production and tally it with the usage of such chemicals must be adopted. Operationalisation of the 'Challenge Investigation' mechanism of the OPCW can be considered as well to ensure absolute compliance with its norms. This consideration must, however, be tempered with legitimate concerns around state sovereignty. Better utilisation of existing provisions in the CWC and established mechanisms of the OPCW would yield the desired results (Becker-Jakob, 2019). Reinforcing the taboo against the use of chemical weapons and bolstering the prosecution of perpetrators through legitimate international mechanisms are effective methods to maintain the status quo regarding the well-founded illegality of weaponising lethal chemical agents.

Conclusion -

This paper has focused on instances of the usage of chemical weapons in Syria while delving into the history of the development of the Syrian CW arsenal and the civil war which ravaged the nation for more than a decade. It has aimed to examine the major CW offensives of the civil war, the involvement of both state and non-state actors in perpetrating them and the response of multilateral bodies. The shortcomings evinced by these institutions have been highlighted along with a section showcasing the measures which are necessary to remedy them. With the change in regime which occurred in 2024, a thorough decimation of the remnants of the chemical weapons programme is underway. It is hoped that the global community will work to bolster the architecture necessary to eradicate the scourge of chemical weapons by ensuring absolute compliance to the CWC by its signatories.

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Missile Diplomacy: India's Soviet turn in the 1971 India-Pakistan War

Abstract

Independent India's defence trajectory (submarines, T72 tanks, MiG) underwent a drastic geopolitical transition in the 1960s and early 1970s, thereby striking a switch from its longstanding dependence on British naval platforms to venturing into a strategic partnership with the then USSR – the Soviet Union (now Russia). New Delhi therefore decided to seek refuge from then technologically advanced USSR to curb the emerging border threats – particularly from Pakistan. The materialisation of their newly developing relationship was finalised through the acquisition of Soviet naval platforms –notably the Osa-I class missile boats which changed the course of Indian Navy's history in the 1971 India Pakistan War.

The landmark event in this realignment of relations between partner nations was the Indo-Soviet Treaty of Peace, Friendship, and Cooperation signed in August 1971. Inked at a crucial juncture in geopolitics, when war with Pakistan seemed inevitable, this friendship treaty provided India the assurance she needed against potential external intervention. This not only developed diplomatic relations between the two countries but also marked the foundation for reshaping India's defence partnership.

The Russian support and offensive use of the missile boats in the 1971 India Pakistan War proved the world the success of the treaty. Despite fluctuations in the post-Cold War era, it continues to serve as the backbone of bilateral ties—particularly in naval defence—where sustained cooperation, technology transfer, reflect the depth and resilience of the partnership.

Key Words: India, Indian Navy, 1971 India-Pakistan War, Soviet Union,

“We cannot afford to be weak at sea, and history has shown that whatever power controls the Indian Ocean has, in the first instance, India's seaborne trade at her mercy, and in the second, India's very independence itself.” - Prime Minister Pandit Jawaharlal Nehru¹.

Introduction:

India, with its vast coastline and strategic location in the Indian Ocean (IO), has always been conscious of the need for a strong navy. Since its Independence, India has always been crippled by various issues attempting to cause harm to her territorial integrity. This has therefore resulted in her necessitating the need for strategic recalibrations to make her presence felt in the global politics. India's political leadership since Independence have stressed on her maintaining a non-aligned stance to preserve India's strategic Independence and to steer away from any power nexus prevalent in international politics. Despite this after gaining Independence, the colonial mindset did not leave the Indian soil. Dependency on British military hardware, institutional practices were inherited as colonial legacy and were followed diligently. The newly established Royal Indian Navy (RIN) in 1947 post-Independence in her teething years therefore found herself fixated in these age-old British military traditions consequently holding herself back in the race for capacity enhancements. Strengthening her fleet strength with older ships from the British, the Indian Navy (IN) over the years, especially in the decades of 1960's and 1970's, witnessed the ups and downs in the geopolitical environment like never before.

Looked upon as the Cinderella of the Armed Forces until the 1971 War, the IN turned the course of India's Maritime military history after its contribution in this extremely short, yet very effective 14 – days war in December 1971. The lessons and setbacks that the Navy faced in the various wars in the preceding years thereby helped her improvise on defence preparedness and ultimately resulted in her performing way beyond everyone's expectations in the 1971 war. The IN before the 1971 war witnessed a history shift in her defence trajectory – a tangent shift partnering with the Soviet Union rather than relying on the Western powers – primarily the British to acquire naval platforms and hardware. The 1971 War was therefore a turning point in the history of the IN – especially when the Soviet acquired missile boats outperformed everyone and took the world by a surprise, ultimately altering the Balance of Power (BoP) in the Indian Ocean Region (IOR).

How did this happen?... Factors such as meticulous planning, exemplary execution, out of the box thinking, unconventional leadership, interoperability between the armed forces, capacity and capability enhancements, and many others, albeit with some glitches, broadened the horizons of many strategists, researchers, observers and analysts from the military domain to study this war not only at the national level but also globally. (Kesnur, 2021).

India's newfound inclination towards at Soviet during the 1960's was the result of the emergence of China as an important contender in the IOR. Pakistan's, close ties with China, drew the attention of America. America therefore saw Pakistan as its ally and welcomed Pakistan with open arms in various military organisations like Southeast Asia Treaty Organisation (SEATO) and Central Treaty Organisation (CENTO) (Kundi, 2009). America to secure its interests in the region, sponsored Pakistan with financial and military aid to modernise its capabilities in its fight against India and the resultant being the 1965 Indi-Pakistan War. With Pakistan-China and America triad in the background, the rise of China and the 1962 India China War brought various security challenges. India's embarrassing defeat (Hindi-Chini Bhai Bhai) brought to the forefront a wide spectrum of deficiencies in India's military preparedness and stressed for the need for India to strengthen its military capabilities. The defence forces realised their shortcomings: infrastructure, repair facilities, and logistical support, which hindered their operational effectiveness. While at the same time it also underlined India's flaws for overtly relying on the Western powers for her capacity modernisation. Despite this, India continued to rely heavily on the British defence equipment (naval assets like destroyers, frigates, aircraft carriers) and training as previously mentioned due to structural continuity inherited from the colonial era. It was long before India realised that the promises made by United Kingdom with reference to the modernisation (the IN and her fleet) were never meant to be fulfilled.

At such a period of time, Soviet's strategic move of stepping forward to provide India with the technical assistance, military equipment proved to be blessing in disguise. Soviet without imposing any restrictive political conditions, gave Indian the assurance it needed. India looked up to Soviet as a viable alternative partner in comparison to the Western powers, whose technology and equipment were relatively cheap yet effective and efficient (Srivastava, 2017). This India-Russia partnership was a win-win not just for India but also Russia, for India procured the technology it longed for and Russia could spread its own influence whilst countering the growing presence of America and China in the region (Srivastava, 2017).

By the late 1960's the political environment between East and West Pakistan had heated up. Neither was demand for greater autonomy nor was the election result acceptable to the west ultimately resulting in widespread riots, civil unrest and repression in the Eastern province (Kesnur, 2021)². There was a massive influx of refugees in India and catering for their basic needs: food, clothing shelter became a difficult task. India also tapped the doors of the United Nations (UN) to create conditions for the safe transit of the refugees, but the international community did not pay any heed to it. In this context, India and Soviet Union inked a Treaty of Peace, Friendship and Co-operation in August 1971. Though not being considered as a formal military alliance, the treaty outlined fundamental principles of mutual relations such as respect for each other's sovereignty and interests, good neighbourliness and peaceful co-existence (Press Information Bureau, 2017). For India this treaty provided the diplomatic assurance when the world view towards her was uncertain.

The induction of the missile boats enhanced operational capabilities of the IN before and during the wartime. The procurement led to the crew being trained extensively at Vladivostok, somewhere in the Far-Eastern side of Siberian wastelands of Russia (Jerath, 2013). The benefits of the training were evident when the missile boats struck the targets precisely and inflicted major damage to the adversary. The tactical and strategic advantages gained as a result of the missile boats gave the Navy an upper hand to stress on the importance of technological innovation in shaping the outcome of modern warfare. The Navy after the war turned towards modernisation of the fleet and integrated Soviet technologies more deeply into its operational framework. In doing do, India and her Navy gained recognition as a regional maritime power whilst emphasising the strategic foundations of its alliance with Soviet Union.

Objectives:

The paper aims to examine the reasons for India's tilt towards the Soviet in the decade of late 1960's – early 1970's with special focus on the naval modernisation during the aforementioned decades, the consequences of India's tilt towards the USSR and the role of the Osa Class missile boats in forming the offensive naval strategy and their evolved partnerships. Through this paper, the readers will get deeper insights into the geopolitics during the decades of 1960's-70's and India's diplomatic efforts and defence budget allocation. It will provide the readers a comprehensive understanding of diplomacy, asset (technology) procurement, and naval strategy through the role played by the Soviet in the evolution of the navy's security policy.

Literature Review:

The existing literature on the evolution of the IN, the 1971 India–Pakistan War, and India–Russia strategic relations comprise official naval histories, memoirs of senior naval officers, government publications, and scholarly articles. Foundational works such as *Under Two Ensigns*, *Blueprint to Bluewater*, and *Transition to Triumph* trace the organisational and operational development of the Indian Navy, while *25 Missile Boat Squadron*, *The Man Who Bombed Karachi*, and *War in the Indian Ocean* provide first-hand accounts of the Navy's wartime operations and the significance of Indo-Soviet defence cooperation during the 1971 War. Scholarly articles further examine the operational lessons of the conflict.

While these studies provide valuable insights into the IN's development and India-Russian relations, they largely examine the two themes independently. Limited literature explores how sustained India–Russia defence cooperation, particularly in naval modernisation, technology transfer, and strategic collaboration, shaped the IN's post-1971 evolution. This study seeks to address this gap by analysing the contribution of India-Russian strategic cooperation to the transformation of the IN into a modern maritime force.

Findings and Discussions:

The genesis of the IN can be traced back to the RIN. The RIN was formed during British rule in India in 1934. The primary objective of the RIN was to protect British shipping interests in the IO and maintain law and order on the Indian coast. During World War II, the RIN played a significant role in escorting convoys, minesweeping, and providing naval gunfire support (Marshall, 2012). However, the Indian sailors in the RIN felt discriminated against and were unhappy with their pay and working conditions. This led to the RIN Mutiny in February 1946, which was a significant event in India's struggle for independence.

“At the stroke of the Midnight Hour...” on 15th August 1947 two independent nations namely India and Pakistan were created and so were the military assets split between the two countries. The then existing RIN split into RIN and the Pakistan Navy. Though the country gained independence from the colonial rule, it still followed the British customs and traditions – the Prefix ‘Royal’ from the ‘RIN’ was dropped on 26 January 1950 after India became a Republic (Singh, 1986).

<u>Type of Vessel and its</u> <u>Name</u>	<u>Number</u> <u>of</u> <u>Vessels</u>
<u>Survey Vessel</u> HMIS Investigator	01
<u>Trawlers</u> HMIS Nashik HMIS Cochin HMIS Calcutta HMIS Amritsar	04

<u>Motor Minesweepers</u> MMS 13 MMS 132 MMS 151 MMS154	04
<u>Motor Launch</u> ML 420	01
<u>Harbour Defence Motor Launch</u> HDML 1110 HDML 1112 HDML 1117 HDML 1118	04
<u>Sloops</u> HMIS Sutlej HMIS Kistna HMIS Jumna HMIS Cauvery	04
<u>Frigates</u> HMIS Tir HMIS Kukri	
<u>Corvettes</u> HMIS Assam	01
<u>Minesweepers</u> HMIS Orissa HMIS Deccan HMIS Bihar HMIS Kumaon HMIS Rohilkhand HMIS Bengal HMIS Khyber HMIS Carnatic HMIS Rajputana HMIS Konkan HMIS Bombay HMIS Madras	12
Total Strength of the Fleet	33 Vessels

Table 1: Indian Navy's Fleet strength as on 15 August 1947.

Source: Compiled by the author with reference from *Under Two Ensigns: The Indian Navy 1945-1950* by Rear Admiral Satyindra Singh, (Retd.), Oxford & IBH Publishing Co., New Delhi, India.

Immediately after independence in 1947, the Navy despite limited resources saw action in “Exercise Peace”³ – Annexation of Junagadh (Singh, 1986). India was asked to resolve its territorial border disputes with the neighbouring countries either bi-laterally or in the British Commonwealth or the UN (Hiranadani, 2005). The defence forces considering the security threats (internal and external) thought it was appropriate to come up with a military policy that would go hand in hand with India's economic growth and development. Accordingly, the first 10-year plan drafted in 1947 tasked the Navy with safeguarding the Indian shipping, ensuring that supplies could reach and leave by sea in all circumstances, preventing an enemy landing on Indian shores, and supporting the army in seaborne operations (Marshall, 2012). The limited capacities and capabilities coupled with budget restraints curtailed Navy's freedom primarily to patrolling and defending duties of navigable inland water and coastal water, ports, and harbours (Marshall, 2012). The Navy's limited ‘Charter of Duties’ resulted in it being recognised as a brown water⁴ navy which was against the wishes of the visionaries in the policy framework as they envisaged for a greater role for the Navy. The British Admiralty through the talks with the then CNS had realised that the Indian Ministry of Defence (MoD) envisaged the IN to be proactive capable of carrying out major operations of naval warfare. In September 1948, a 69 ship Navy was proposed (Hiranandani, 2000). The Naval Plans Paper 1/47 which specified roadmap for the modernisation and expansion of the IN, proposed that the Navy in the next 10 years would comprise two light fleet carriers, three cruisers, eight destroyers, four submarines and other smaller vessels (Sarangi, 2020). However, the geopolitical environment caused alterations in this Plan of Action (PoA) and consequently the Navy had to settle down for less.

By 1950 the two major contestants of the Cold War, United States of America (USA) and USSR began inviting the newly independent nations (India and Pakistan) to form a part of their alliance. While India determined to stay non-aligned, Pakistan joined USA and became a party to CENTO and SEATO military alliances (Hiranadani, 2005). As party to such affiliations, Pakistan received huge economic aid from USA to counter the spread of Communism. Moreover, the bond between Pakistan and USA was solidifying intensively with signing of multiple defence assistance agreements, transfer of naval assets (Sarangi, 2020). Knowing Pakistan and their ulterior motives very well, it was clear that all of strengthening of naval power would be used well against India. The increased number of naval assets with Pakistan therefore compelled the NHQ to further strengthen its naval repository. Russia even though conceived India was more “Imperialist” because of its reliance on the West proposed to assist India in her Naval development (Hiranandani, 2000). However, IN's reliance on the British armoury made it difficult for her to choose between the two and didn't wish to risk shifting to a new supplier (Hiranandani, 2000). Moreover, dealing with the Anti-Russian mindset was a more tough task to deal than convincing the bureaucrats to look at new approaches and shift towards Russia.

India even though a peninsular country, has always had a continental mindset. Most of the threats that India faced since Independence even though primarily not continental, have been perceived from a continental mindset. This is the reason why from her (India's) Independence in 1947 up to the early 2000's the Navy has always been allocated less than 15% of the total budget share (Marshall, 2012). This justifies the navy being recognised as a ‘Cinderella Service’ despite being geographically advantaged. Despite Navy's big action in the liberation of Goa in 1961, priority has always been given to the Indian Army (IA) and Indian Air Force (IAF) to cope with China (Hiranadani, 2005). The wartime statement reiterates the fact that the Navy's support is for the outcomes on land. Hence the focus and investment to development in the Navy has always been in relation to India's continental problems.

The 1962 Sino-India War was purely a land operation in which the IN was absent. Britain at this juncture not only withdrew the remnants of her naval forces from the East of Suez but was also reluctant to remain India's traditional supplier of naval hardware. The leaders of Britain believed IN should primarily rely on coastal defence. The rise of communism and the Russia's efforts to spread its influence in the IO resulted the Royal Navy (RN) being selective on the transfer of submarines to India. On the other hand, it was still positive towards India procuring of anti-submarine warfare (ASW) frigates (Sarangi, 2020).

The twofold reason given for refusal of transfer of assets: a) RN was being downsized and couldn't spare any vessels (from Indian demands) to supply to India, b) budget restrictions resulting in Britain's inability to process India's immediate naval requirements. Consequently, those which were offered were at higher costs and hence the Indian Government also refused to accept the deal.

Sr No.	Name of the Ship	Year of Commissioning
1.	INS Delhi (HMIS Delhi)	1948.
2.	INS Magar (HMS Avenger)	1949
3.	INS Rajput (HMS Rotherham)	1949
4.	INS Rana (HMS Raider)	1949
5.	INS Ranjit (HMS Redoubt)	1949
6.	INS Godavari	1953
7.	INS Ganga	1953
8.	INS Gomati	1953
9.	INS Bassein	1954
10.	INS Bimlipatnam	1954
11.	INS Karwar	1956
12.	INS Kakinada	1956
13.	INS Cannanore	1956
14.	INS Cuddalore	1956
15.	INS Mysore	1957
16.	INS Kuthar	1959
17.	INS Kirpan	1959
18.	INS Khukri	1958
19.	INS Brahmaputra	1958
20.	INS Beas	1958
21.	INS Betwa	1960
22.	INS Trishul	1959
23.	INS Talwar	1958
24.	INS Vikrant	1961

Table 2: Ships supplied by Britain
Source: Author

The Indian Naval budget was, for once, increased to 5.94 percent and having observed the British attitude to India's request for assistance to develop her Navy, India looked up to the then Soviet Union for submarines, gas turbine propulsion, missiles and landing craft. The IN learning its bittersweet lessons for its overreliance on the West decided to be positive and open to the offers from Soviet in 1965 to supply India with the ships and Submarines (Hiranadani, 2005). However, a change to a Russian system meant many unsaid implications: a complete makeover in training, maintenance, logistic, technical, operational and tactical procedures and systems (Hiranandani, 2000).

However, the geopolitical environment became highly volatile and India had to go for a War with Pakistan in 1965. During the 1965 hostilities, Pakistan Navy (PN) vessels masqueraded as merchantmen bombarded Dwarka on September 07, 1965. The IN proposed a retaliatory strike but could not be due to the political orders that restricted their capabilities. As a result, the IN's Fleet was deployed on the east coast until Pakistan launched a major offensive on 01 September 1965, post which the ships sailed from Visakhapatnam for Bombay.

Though the formal alliance between the two countries was marked post the 1965 War, an important milestone in their relationship was way back in 1950's when Russia used its veto for the Kashmir issue and stood in solidarity with India. The beginning of Russian import therefore ended the traditional dependence on the RN for naval hardware as well as for guidance and assistance. Though delayed, the Russian ships ordered in 1965, gradually arrived in India by 1968. On one hand, the Russian technology was more advanced as compared to technology in the British supplied vessels while on the other, the Russian vessels were better suited for Russian needs – the temperatures, the sea state, ship capacity etc (Hiranadani, 2005). Efforts were made to modify and customise the Indian Naval order as per the Indian needs and climatic conditions, but as the vessels were already under construction, the Russians convinced the Indian delegations that their vessels would sustain the tropical conditions and any feedback from the Indian would be taken into consideration for the next order as it would help improve the design. To accommodate the growing order and the number of Russian ships, India's naval base at Vishakhapatnam was modernised with the help of the USSR (Srivastava, 2017).

Sr No.	Name of the Ship	Year of Commissioning
1.	INS Kalvari (the first submarine of the IN)	1967
2.	INS Khanderi	1968
3.	INS Karanj	1969
4.	INS Kursura	1969
5.	INS Kamorta	1968
6.	INS Kavaratti	1969
7.	INS Kiltan	1969
8.	INS Kadmatt	1968
9.	INS Katchall	1969
10.	INS Amba	1968
11.	INS Nipat	1971
12.	INS Nirghat	1971
13.	INS Veer	1971
14.	INS Vidyut	1971
15.	INS Nirbhik	1971
16.	INS Vinash	1971
17.	INS Vijeta	1971
18.	INS Nashak	1971

19.	INS Pamban	1967
20.	INS Puri	1967
21.	INS Pulicat	1967

Table 3: Ships supplied by Russia (Source: Author)

After well sought discussions, the deal to acquire the missile boats received a green go-ahead. Primarily suited for coastal defence, the missile boats would prevent any hit and scoot by Pakistan on Bombay as done by them 1965 War. The lethality of the missile boats through the sinking of the Israeli frigate by Egypt in the 6-day Arab Israeli War changed naval warfare: prolonged gun battles between opposing warships (Hiranandani, 2000). Orders were placed and “The Indian Navy had entered the age of the missiles!” (Jerath, 2013). Designated as the 25 Missile Boat Squadron, the crew was deployed to Russia to complete their training formalities. New innovative techniques were thought of to facilitate their transport to India and conserve their machinery; the missile boats were lightened and loaded on heavy lift merchant ships. Modifications to the missile boats which the Russians were unable to accommodate were achieved the Indian dockyards (Ahluwalia, 2016).

By 1971 the geopolitical environment was tense with internal tensions building up within East and West Pakistan. Pakistan’s friendly relations with China were boon to America to help develop links with China. In appreciation of this support, USA adopted a strongly pro-Pakistan and anti-India position during the latter half of 1971. In response to this shift in US policy, India sought to balance the situation by signing the Treaty of Friendship with the Soviet Union in August 1971, an agreement that had been under negotiation since 1969. Russia vetoed in the UN Security Council (UNSC) to liberate Bangladesh and this was the second time that Russia used its veto to support India.

By 1971, the constant clashes between India and Pakistan, the available intelligence, and the operational assessment by the operation staff at the NHQ made it evident that the hostilities were imminent and the possibility of a pre-emptive attack by Pakistan was very high. Hence, the orders for the attacks on Karachi harbour were given to the ships in sealed envelopes on 1st December. The Western Fleet (WF) was deployed with a motive to pose an open threat to Karachi. This would consequently result not only in restricting the Pakistani Fleet to Karachi but also causing the Pakistani Navy to focus their attention to the IN’s WF operating from Karachi, thereby allowing the missile boats to plunge their pre-decided attacks from the Saurashtra Coast. Three missile boat attacks were initially planned and were codenamed as Operation Trident (night 4/5 Dec), Operation Python (initially planned for 6/7 Dec night but were executed on the night of 8/9 Dec) and Operation Triumph (was postponed and later cancelled) (Nanda, 2015). As per the operational plans, the missile boats were to be escorted by the frigates as they were equipped with enhanced radars and command and control facilities to the vicinity of Karachi under the cover of darkness so that the lethal missiles could be launched at the ships in the harbor and on port installations. The withdrawal of the missile boats had to be quick as they would fall within the coverage of the shore-based radar in Karachi and were also shadowed under the threat of an air attack during the day.

The first missile attack, Operation Trident, was successfully carried out on the night of 4/5 December by the missile boats INS Nipat, INS Nirghat and INS Veer, escorted by the frigates INS Kiltan and INS Katchall. It inflicted damage on the Oil Tanks at Keamari as they were set ablaze and even sunk the Pakistani Naval destroyer Khaibar, coastal minesweeper Muhafiz and the Liberian registered ship MV Venus Challenger. The success of the IN in Operation Trident is why the Navy Day is celebrated on 04 Dec 1971.

The second missile boat attacks were carried out on the night of 8/9 December by the missile boat INS Vinash, escorted by the frigate Trishul. For the second time the Oil Tanks at Keamari were set on fire. The attack caused the Panamian vessel Gulf Star to sink and damaged the Pakistani Navy’s Oiler Dacca and the British ship SS Harmattan. The damage inflicted was so high that Pakistani Navy promptly recalled all the ships into the safety of the inner harbor and even ordered the reduction of their war outfits of ammunition.

The deployment of the missile boats in such an offensive role brought out new warfare tactics and helped IN achieve incredible results. The IN through her innovative and diligent thinking: towing of missile boats and releasing them just before the battle, attacks to be carried out in the cover of the darkness set an example by breaking stereotypes and assigned unconventional roles to the small yet lethal missile boats (Ranjit, 1987).

Conclusion:

The partnership between the two countries established prior to the 1971 India-Pakistan War has over the years set a benchmark for establishing (strategic) partnerships and defence policies with other like-minded countries considering the current geopolitical realm. It is not merely a “marriage of convenience”; rather, it is a relationship founded on years of friendship and cooperation. India and Russia may not have directly related objectives in the region, but they have two fundamental commonalities: firstly, the need to balance against the US or China taking centre stage in the region, and, secondly, the desire to evolve a multipolar world (Srivastava, 2017). Despite facing challenges and geopolitical upheavals: the fall of the Soviet, Oil Geopolitics, Russia -Ukraine War; their partnership has always stood firm and indicating growing scope for building and further evolving their bilateral relation for shared interests. As important defence partners, both the countries continue to influence each other’s strategic partnership. In terms of naval co-operation between the two, Russia’s enduring support to India through leasing naval assets, Transfer of Technology (ToT), procurement of hardware, signing various MOUs in areas of maritime co-operation, engagement in joint exercises all point towards the enhanced levels of co-operation achieved between the two countries.

The evolution of India–Russia relations over the last five decades serves as a compelling testament to how strategic foresight, cultivated through sustained political confidence and defence cooperation during the formative decades of the 1960s and 1970s, can develop into a robust and enduring partnership capable of adapting to changing geopolitical dynamics while preserving its strategic relevance.

End Notes:

1. The statement was remarked by Pandit Jawaharlal Nehru on 28 March 1958, when he was onboard INS Mysore (Rai C. R., 2024).
2. According to the excerpt on pages 182 and 183, General Tikka Khan, the head of the armed forces of Pakistan had himself acknowledged that the West Pakistani troops had killed as many as 30,000 people in East Pakistan.
3. Three columns of army troops were landed at Jaffrabad, Mangrol and Porbandar by the naval taskforce which comprised of HMIS Kistna, Jumna, Konkan, Cauvery, Rohilkhand and Motor Launches. Exercise Peace has been regarded as the 1st ever successful amphibious landing operation conducted by the IN post-Independence.
4. A navy that primarily operates in inland waters like riverine areas or areas hugging the coastline is termed as a brown water navy.

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State-Sponsored Terrorism: Mechanisms, Case Studies, and Global Implications

Abstract

This paper examines how states deliberately employ terrorist organisations as instruments of foreign and domestic policy, distinguishing between active sponsorship, passive enabling, and varying degrees of commitment ranging from strong to antagonistic support. It first situates state-sponsored terrorism within broader debates about the definition of terrorism, emphasizing how definitional ambiguity and plausible deniability enable states to frame proxies as autonomous actors while reaping strategic benefits. Drawing on theories of asymmetrical warfare, realism, and constructivism, the study argues that sponsoring terrorism functions as a cost-effective “weapon of the weak,” allowing states to erode stronger adversaries’ will and capacity without incurring the political and material costs of conventional war. Through contemporary case studies of Iran and Pakistan, it analyses how proxy networks such as Hezbollah, the Taliban, Lashkar-e-Taiba, and Jaish-e-Mohammed are cultivated, funded, and integrated into state strategy, including the financial and organisational infrastructures that sustain them. The paper further explores the phenomenon of blowback, showing how long-term reliance on jihadist proxies in arenas like Kashmir and Afghanistan has generated severe internal instability, sectarian violence, and enduring security liabilities for sponsor states themselves. It concludes that understanding the mechanisms, motivations, and unintended consequences of state-sponsored terrorism is essential for designing nuanced policy responses that move beyond treating all sponsors as uniform and instead target the specific configurations of support that make proxy violence such a resilient feature of global politics.

Keywords: State-Sponsored Terrorism, Proxy Warfare, Asymmetric Conflict, Non-State Actors, Pakistan

Introduction

States and terrorist groups have long had a deadly relationship. During the 1970s and 1980s, almost every important terrorist group had some ties to at least one supportive government. Iran backed the Lebanese Hezbollah, the Palestine Liberation Organization (PLO) (as well as its rivals) drew on support from a host of Arab states. At times, these connections were far-flung and seemingly bizarre. Libya, for example, helped arm the Provisional Irish Republican Army (PIRA), and Damascus had links to the Japanese Red Army (JRA). The Soviet Union and several Eastern European states backed Palestinian and Western European terrorist groups, among others.

With the end of the Cold War, one of the major sources of state sponsorship, the communist government in the Soviet Union and its puppet regimes in Eastern Europe ended. The severing of the link between the US-Soviet competition and terrorism decreased the strategic importance of fighting terrorism in the eyes of many observers, as did the decline or collapse of many Marxist groups whose credibility fell along with the Soviet regime. While the importance of terrorism grew again in the 1990s and skyrocketed after al-Qaeda's devastating September 11, 2001 attacks, the focus on state sponsorship continued to decline. Indeed, in the wake of the September 11 attacks, policymakers made much of al-Qada's non-state nature and dismissed a focus on states as unimportant or "old thinking."

Such a dismissal, however, suggests a superficial understanding of terrorism in general and of al-Qaeda in particular. The Lebanese Hezbollah, HAMAS, and the Kashmiri Hizb-ul-Mujahedin are only a few of the many successful terrorist groups active today that maintain close links to states and work with them in a variety of ways to advance their goals. Even al-Qaeda itself relied heavily on states, first working with the Islamist regime in Sudan and then in 1996 becoming closely intertwined with the Taliban's Afghanistan. Investigations of the September 11 attacks suggest that an operation of such scale and lethality would have been far more difficult for al-Qaeda to pull off had it lacked a haven in Afghanistan.

Policymakers have recognized this convergence between states and terrorists in their rhetoric at least. In his historic speech to Congress in the wake of the September 11, 2001 attacks, President Bush declared, "Every nation, in every region, now has a decision to make. Either you are with us, or you are with the terrorists."

From this day forward, any nation that continues to harbor or support terrorism will be regarded by the United States as a hostile regime." This logic was used to justify the 2001 invasion of Afghanistan. Moreover, President Bush's linkage of terrorist groups and their sponsors established what many called "the Bush Doctrine."

States sponsor terrorists as their proxies for a variety of reasons. The most important is often strategic interest: terrorists offer another means for states to influence their neighbors, topple a hostile adversary regime, counter US hegemony, or achieve other aims of state. Pakistani-backed radical groups have undermined the governance of Kashmir and tied down hundreds of thousands of Indian Army forces.

Defining State Sponsored terrorism

Defining terrorism is not a straightforward matter. There is no single internationally accepted definition of what constitutes terrorism, and the terrorism literature abounds with competing definitions and typologies.

The primary challenge in analyzing state sponsored terrorism lies in the persistent lack of a universally accepted definition. Academic literature and government sources contain at least 250 distinct definitions of "terrorism," many of which are shaped by ideological or political biases. This definitional ambiguity is strategically leveraged by states, which often possess the power to frame the actions of adversaries as "terrorist" while categorizing their own use of force, or that of their allies, as "counter-terrorism" or "legitimate self-defense". In the context of international law, the term typically refers to the intentional use of violence against civilian or military targets by private groups that possess covert state support, intended to achieve political objectives outside of acknowledged war zones. A lack of a definition, however, creates more problems than it solves. Labeling an act as terrorism quickly becomes meaningless. Depending on the speaker, terrorism becomes a synonym for crime, for peaceful political activity, for state repression, and for other phenomena - both desirable and horrid - that are quite different in purpose, nature, and impact. Similarly, by lumping all state actions with regard to terrorism into one category, we lose the opportunity to recognize different motivations and, more importantly, to craft more effective solutions that require a nuanced understanding.

State-sponsored terrorism refers to the covert or overt support of terrorist groups by a state, providing them with resources, intelligence, or protection to carry out acts of violence against another state or group (Collins 2014). This form of terrorism is often used as a strategic tool, allowing states to achieve geopolitical objectives without direct involvement or accountability. Proxy war, by contrast, involves indirect engagement in conflict, where states utilize non-state actors, militias, or other third-party groups to fight on their behalf.

This form of terrorism can be divided in several classifications and sub-categories, spanning from a state's direct domination of terrorist-related activities to its incapacity to obstruct terrorist groups operating from within its territories. In other words, there are active and passive forms of state-sponsored terrorism. This type of terrorism in its active type is the intentional action taken by a certain regime to harbor terrorist groups, either in the form of weapons' supply, financial support or provision of safe haven or other logistic support. In some rare cases, states go as far as coordinating the operations of terrorist cells in the event that such behavior serves the state's national and strategic interests. On the other hand, passive state-sponsored terrorism emerges when the deliberate negligence, regardless of the reasons, whether a) incapacity or b) tolerance or c) lack of concern, of a certain regime leads to terrorist groups active within the territory of a given state, which results in an increased operational capacity by such terrorist groups. (Byman, 2007)

At times, the greatest contribution a state can make to a terrorist's cause is by not acting. A border not policed, a blind eye turned to fundraising, or even the toleration of recruitment all help terrorists build their organisations, conduct operations and survive.

Passive support has the following characteristics: i) the regime in question itself does not provide assistance but knowingly allows other actors in the country to aid a terrorist group; ii) the regime has the capacity to stop this assistance or has chosen not to develop this capacity; and iii) passive support is given by political parties, wealthy merchants or other actors in society that have no formal affiliation with the government.

Such passivity in the face of terrorism can be deadly. In conducting the 11 September 2001 attacks, al-Qaeda recruited and raised money in Germany with relatively little interference, enjoyed financial support from many Saudis unobstructed by the government in Riyadh, and planned operations in Malaysia. None of these governments are active sponsors of al-Qaeda but their inaction proved vital to al-Qaeda's success.

Daniel Byman (2007) defines state sponsorship of terrorism as "a government's intentional assistance to a terrorist group to help it use violence to bolster its political activities, or sustain the organization."

Historically, state-sponsored terrorism has been a recurring feature in global geopolitics, particularly during times of heightened tension or conflict between states. A notable example is the Cold War, where both the United States and the Soviet Union supported insurgent groups and militant organizations as part of their broader strategy of global influence (Pfaff 2024). Iran's long-standing support for Hezbollah, Pakistan's involvement with militant groups in Kashmir, and the US backing of anti-Soviet fighters in Afghanistan during the 1980s exemplify how states have effectively used terrorism as a proxy tool to exert influence and destabilize opponents (Al-Aloosy 2023; Behera 2001; Hartman 2002; Khan and Zhaoying 2020). These actions allowed states to pursue aggressive policies while maintaining plausible deniability and avoiding direct-military confrontation.

The question of intention, however, is complex. Leaders of Iran and the Taliban's Afghanistan, for example, at times openly boasted of their support for terrorist groups. Other government leaders are less enthusiastic about their regimes' ties to terrorists and often try to hide the level of support. Posing yet another wrinkle when examining intentions, the citizens of some states, such as Saudi Arabia, often support terrorist groups with little government interference. In such cases, the governments may have knowingly turned a blind eye to radical activities, but this is a far cry from open support

There are other several types of state

Strong supporters. These backers are both highly committed to the terrorist group and are able to offer it significant resources. Iran's support for the Lebanese Hizbollah exemplifies this category.

Weak supporters. In this category fall regimes that support the terrorist group but have few resources to do so. The Taliban's backing for al-Qaeda would be an example of a weak supporter.

Lukewarm supporters. A regime may favor terrorists or their cause in a general sense but do little to advance it directly. Iran, for example, maintains ties to a number of radical Shia groups in the Persian Gulf, but after the 1996 Khobar Towers bombing has done little to advance their cause.

Antagonistic supporters. Some states support a terrorist group but seek to control it or weaken its cause. Syria's often hostile relationship with several Palestinian groups, including Yasir Arafat's Fatah, typifies such an ambivalent relationship.

Why do states support terrorism?

Most governments shun terrorists both for their brutality and for the illegitimate nature of their tactics. Terrorism, after all, is murder. Moreover, terrorist groups often enjoy little support among the publics they purport to represent. Nor are terrorists promising horses to back, as they often have little chance of prevailing, particularly at the beginning of their struggles. Supporting a terrorist group also often carries a heavy price, as the group's opponents may seek to punish a sponsor. Not surprisingly, many states turn to diplomacy, economic pressure, or even conventional war before embracing terrorism. Yet despite being such unsavory and unpromising partners for states, many terrorist groups regularly receive state support. This support is forthcoming because the terrorist group can serve the strategic interests of foreign states, gain their leaders' sympathy for ideological reasons, or play a role in bolstering leaders' domestic positions.

Understanding motivations is vital both for predicting when a state might support a terrorist group and for determining how to end this backing. Regimes seeking to spread their ideology, for example, are in general far less amenable to standard forms of coercion or inducement, and such measures may even make them more likely to support terrorists. Regimes that are trying to gain a strategic advantage over their neighbors, in contrast, may be more willing to end their support if the costs become too high.

Key theoretical approaches such as asymmetrical warfare, realism, and constructivism offer distinct perspectives on why and how states resort to supporting non-state actors for violent means in pursuit of their geopolitical objectives. Asymmetrical Warfare theory is heavily influenced by the works of authors such as Andrew Mack in his essay, "Why Big Nations Lose Small Wars: The Politics of Asymmetric Conflict", and Ivan Arreguín-Toft in "How the Weak Win Wars: A Theory of Asymmetric Conflict" (Arreguín-Toft 2001; Mack 1975). These works explore how weaker non-state actors or smaller states can effectively combat stronger adversaries using unconventional tactics, such as terrorism. In the context of proxy wars, states often back terrorist groups because they offer a cost-effective means to wage warfare, targeting vulnerable areas of stronger adversaries. As Arreguín-Toft argues, asymmetrical warfare forces the more powerful state into prolonged conflicts that wear down their resources and political will, making terrorism a particularly useful tool in such engagements (Arreguín-Toft 2001).

Terrorism itself is often considered a "weapon of the weak." As Bruce Hoffman notes, many terrorists argue that the "bomb-in-the-rubbish-bin" is simply a "poor man's air force." This rationale, while of dubious moral force, does have a strategic logic. Many states lack the instruments of national power that Americans, and citizens of other advanced industrial countries, take for granted and thus have few means of achieving their ends. Moreover, using terrorist proxies rather than government agents allows a degree of deniability, which in turn reduces the chances of retaliation from more powerful states that possess stronger economies and militaries.

However, many state leaders do not support terrorists, considering it an illegitimate instrument of statecraft, despite having strategic or domestic incentives to do so. Terrorism and war crimes have many similarities, the most important of which is the deliberate targeting of non-combatants. States that employ terrorists are in essence knowingly supporting the commission of war crimes (albeit by a non-state actor). While states have committed, commit, and will commit war crimes, many shy away from doing so or at least try to limit such acts to highly unusual circumstances. This may be because of the morality of the leaders themselves, the difficulties of maintaining public support for a cause if it involves innocent suffering, the inevitable decline in international backing that comes with war crimes, or all three. States with robust media may be particularly loath to go down this road, as covert use of terrorists is far more likely to be revealed, thus negating the advantages of deniability.

The idea of plausible deniability enables states to advance interests while evading international condemnation and military retaliation. By maintaining organizational separation between the sponsoring state and the terrorist group, governments can claim they merely host autonomous actors rather than actively directing violence.

The strategic value of proxy warfare lies in Liddell Hart's "indirect approach"—eroding an enemy's resistance through attrition rather than decisive confrontation. States perceiving conventional military inferiority leverage proxies to impose cumulative costs on adversaries, creating stalemate conditions that alter strategic perceptions. The elongation of conflict through proxy support drains resources and political will from target states, even if ultimate military victory remains elusive.

Financially, state sponsorship proves cost-effective compared to conventional military operations. Training, arming, and sustaining non-state actors requires a fraction of resources needed for direct military engagement while enabling states to maintain influence over regions where open intervention would provoke international resistance or prove politically infeasible. States resort to terrorism sponsorship for rational strategic calculations rooted in cost-benefit analysis. Cost reduction and risk management constitute primary motivations: proxies absorb combat casualties and military expenditures, shielding sponsor states from domestic political blowback and military losses. A state can achieve geopolitical objectives, destabilization of rival regimes, territorial control, regional influence expansion without the massive investment and public exposure required for direct military intervention.

Contemporary Case Studies

Iran:

Iran exemplifies the sophisticated, sustained model of state-sponsored terrorism in contemporary geopolitics. Designated a state sponsor of terrorism continuously since 1984, Iran has developed a comprehensive proxy network spanning Lebanon, Syria, Iraq, Yemen, and Palestine. This network serves Iran's twin strategic objectives: a) in the absence of conventional military parity with regional rivals it becomes easier to adopt a different model b) furthering ideological goals that are rooted in the 1979 Islamic Revolution. Hezbollah stands as Iran's primary beneficiary. Iranian financial support exceeded \$700 million annually as of 2018, according to the U.S. Treasury Department estimates, though this figure declined subsequent to U.S. sanctions and oil price collapses. Beyond funding, Iran's Islamic Revolutionary Guard Corps (IRGC) provided intensive military training, explosives instruction, and direct operational integration. Iran expanded its proxy network significantly following interventions in Syria and Iraq. By 2013, Iranian-aligned militia groups (IAMGs) received advanced weaponry, artillery, rockets, and drones, with Syria serving as the crucial transit corridor for weapons shipments to Hezbollah. One of the most studied examples is Iran's support of Hezbollah, which began in the 1980s and continues today. This relationship is grounded in both strategic and ideological motives. From a realist perspective, Iran's support for Hezbollah serves as a strategic tool to counterbalance Israel's influence in the region (Khan and Zhaoying 2020; Mens 2024; Nilsson 2020). By financing, arming, and training Hezbollah, Iran enhances its geopolitical reach in Lebanon without engaging in direct military confrontation

Pakistan:

The Soviet-Afghan War of 1979 was the point when Pakistan's Inter-Services Intelligence (ISI), backed by U.S. funding, systematically cultivated jihadi infrastructure that evolved into today's sophisticated terror network. Pakistan's Inter-Services Intelligence (ISI) agency has maintained continuous support for the Taliban since the movement's inception in 1994, exemplifying how proxy relationships can produce blowback when strategic priorities diverge. The ISI provided foundational training, funding, and military equipment to Taliban forces fighting the Soviet-backed Afghan government and, later, Soviet forces themselves during the 1979-1989 occupation. Even following 9/11 and Pakistan's nominal alignment with U.S. counterterrorism efforts, the ISI sustained Taliban operations through covert channels. A key outfit is the Lashkar-e-Taiba (LeT). The LeT emerged in the 1990s as Pakistan's premier proxy organisation against India; it operates under Hafiz Muhammad Saeed, a designated terrorist operating in Pakistan despite international sanctions sanctuary in Pakistani border regions and training camps. The group's operational sophistication is demonstrated through attacks such as the 2008 Mumbai attacks where 166 people were killed; the 2006 Mumbai train bombings (209 killed) and more.

Then there is the Jaish-e-Mohammed (JeM). Established in 2000 by Masood Azhar following his 'release' during the IC-814 hijacking, the JeM represents Pakistan's suicide terrorism capability. JeM's operational history includes the 2001 Indian Parliament attack, and the 2019 Pulwama suicide bombing where 40 security personnel were killed. The group pioneered fidayeen (suicide) attacks in Kashmir and have demonstrated sophisticated capabilities with respect to vehicle-borne Improvised Explosive Devices (IED) and military installation infiltration.

The most damning evidence comes from Pakistan itself — former President Pervez Musharraf openly admitted to training terrorists for Kashmir operations, while former Prime Minister Nawaz Sharif confirmed state support for terrorist groups. Recently, the current Pakistani minister for foreign affairs said that they have been doing the “dirty work” for Western powers for a long time. A similar statement was also recently made by Bilawal Bhutto.

The funds sustaining this infrastructure operate through sophisticated mechanisms designed for plausible deniability. Religious charities serve as the primary collection points, with 40+ identified front organisations raising \$150-200 million annually. Other sources include state funding through classified budget allocations (estimated \$100-125 million annually); money laundering operations through hawala networks, with major hubs in Dubai, Karachi, and Peshawar; narcotics trafficking along the Afghanistan-Pakistan-India corridor generating an estimated \$75 million annually; and cryptocurrency, with inputs indicating \$15+ million moved through crypto channels in 2023

Blowback of state sponsored terrorism

The risk of proxy defection escalates when sponsorship ends or diminishes. Mujahideen fighters trained and armed by the U.S. and Pakistan against Soviet forces in Afghanistan during the 1980s included figures like Osama bin Laden who later directed violence against both former sponsors. The organizational and technical capacity developed through state sponsorship persists regardless of state intent, creating generational security liabilities.

Since the outbreak of violence in Kashmir that has claimed perhaps 60,000 lives, Pakistan has worked with a range of militant organisations – most of them Islamist ones – active against Indian rule there. These organisations have regularly split, merged and changed names, but among the most important are Jaish-e-Mohammad, Harkat-ul-Ansar/Harkat-ul-Mujahedin, Lashkar e-Taiba and Hizbul Mujahideen. With the support of the government, these jihadist groups raise money and recruit militants to fight in Kashmir and have access to training and weapons for their volunteers. Equally important, they have worked with Islamist political movements in Pakistan.

By supporting the jihadist cause, Pakistan has weakened its own stability. Many Islamists, including those not linked to violence, do not separate domestic Pakistani politics from their actions in Afghanistan and Kashmir. The result has been tremendous sectarian violence. Many of the Islamist activists also want a new regime in Islamabad. As one member of Lashkar-e-Taiba commented, 'We won't stop – even if India gave us Kashmir ... We want to see a Taliban-style regime here.' And several groups are good to their word. Even before the post-11 September crackdown, in 1999, one Sunni group, Lashkar-e-Jhangvi, tried to assassinate Prime Minister Muhammad Nawaz Sharif. Musharraf also suffered repeated assassination attempts after 11 September. The 11 September attacks made supporting al-Qaeda, even indirectly, far riskier for the Musharraf government. Angering Washington might have moved the United States permanently into India's camp and risked destroying Pakistan's wobbly economy. Siding with the United States halted the tilt toward India and provided a sorely needed financial infusion. Pakistan's military in particular benefited. The United States pledged \$3bn to Musharraf's government in security and development aid and waived many sanctions that had been imposed due to Pakistan's nuclear programme.

Conclusion

State-sponsored terrorism remains a powerful tool that many governments quietly use to pursue their interests while avoiding open war. By funding, training, arming, or sheltering terrorist groups, states can weaken their enemies, influence neighbouring regions, and project power without putting their own soldiers directly on the battlefield. This "indirect" method fits especially well within asymmetric warfare, where weaker states or those facing military disadvantages look for cheaper and more flexible ways to challenge stronger opponents. However, the article shows that this strategy is not only morally problematic but also extremely risky for the sponsoring states themselves. The cases of Iran and Pakistan demonstrate how long-term reliance on proxies such as Hezbollah, the Taliban, Lashkar-e-Taiba, and Jaish-e-Mohammed can produce serious unintended consequences. These groups often gain their own autonomy, develop independent agendas, and contribute to regional instability, sectarian violence, and even direct threats to the sponsor's internal security and political order. For the international system, state-sponsored terrorism blurs the boundaries between war and peace and makes it harder to assign responsibility for violence. Because support can be both active and passive, and because states hide behind plausible deniability, it becomes difficult to hold them accountable under international law or through traditional diplomacy. Any effective response must therefore move beyond simple blame and instead focus on understanding why states choose this strategy, how their support is organised, and how those networks can be disrupted. The key takeaway here is that state-sponsored terrorism is not an accident or side-effect, but a deliberate and rational instrument of foreign policy that shapes regional politics and creates long-term security problems that are hard to reverse.

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US-Israel and Iran War Paving for an ‘Advantage China’ Trajectory in West Asia

Abstract

The Gulf represents a typical sub-region where the national security of all the states of the region are interdependent. Threat travels from one state to another faster and disrupts peace and stability in a short span of time. The conflict underway is the telling evidence. Apart from the regional powers and their aspirations, the region is marked by presence and interests of major global powers making regional security an inexorably complex. Managing security is, therefore, dependent on managing the interests of both regional and global powers. For almost a decade now US, the pre-eminent power in the region was pursuing to create an American order in the region with security alliance of Israel and its Arab allies with Abraham Accords and its expansion as well as bringing Israel to the CENTCOM from EUCOM. The strategic intent behind is to shift its focus to the Indo-Pacific and deal with rise of China and the impending challenge which is apparent from its references of China in its latest National Security Strategy. The Iran war is a clear disruption of the US strategy and pursuits in the region and its China strategy. Rather, the war has spurred the Chinese power and credibility in West Asia without actual military engagement and security costs. With the war, the US is adrift from its position of primacy and paving for an ‘Advantage China’ trajectory in the Gulf, Wider West Asia and the emerging multi-polar World.

Keywords: Iran War, Geopolitics, Abraham Accord, Hormuz Strait, West Asia, Multipolar World,

Chinese Position and Diplomatic Pursuits

The Five-Point Peace Initiative by China along with Pakistan (FMPRC 2026 March 31) is the important point to begin with to understand the Chinese position in the conflict. These are Immediate Cessation of hostilities, Start of Peace Talks as soon as possible, Security of nonmilitary targets, Security of Shipping Lanes and Primacy of the United Nations Charter and pointed out that the E3’s attempt to invoke the “snapback” mechanism is legally and procedurally flawed. In the backdrop of the renewed conflict, China therefore urged the members of Security Council to focus on multilateral diplomacy and peaceful solution of the Iran nuclear issue. (UNChina 2026 March 13) The US and Israel attack, without authorization from the Security Council and while negotiations between Iran and the US were underway, is in clear violation of the purposes and principles of the UN Charter. The fundamental reason for the disruption of navigation in the Strait of Hormuz is the illegal military actions taken by the US and Israel against Iran. China strongly calls on the US and Israel to immediately cease their illegal military actions (UNChina 2026 April 7). At the heart of the Hormuz Strait crisis is the illegal military actions launched by the US and Israel against Iran despite ceasefire arrangement, and imposed targeted blockades by the United States (UNChina 2026 April 27) The Chinese UN ambassador Fu Cong emphasised the centrality of the Palestine issue for peace and security in the region. He made three points in a very emphatically that “Gaza is not a permanent battlefield”. “Settlement activities are unacceptable” and “the two-state solution is non-negotiable”, with “the early establishment of a fully sovereign and independent state of Palestine based on the 1967 borders with East Jerusalem as its capital”. (UNChina 2026 April 28) A very strong position compared to the complete watered-down position of the United States on the issue and evokes favourable sentiments in the region.

Chinese Principled Stand on War, Gulf States and Strait of Hormuz

Wang Yi reiterated China’s principled position that a comprehensive ceasefire is of utmost urgency. China supports Iran in safeguarding its national sovereignty and security, and appreciates Iran’s willingness to seek a political solution through diplomatic channels. Regarding the Strait of Hormuz, the international community shares a common concern about restoring normal and safe passage through the strait, and China hopes that the parties involved will promptly respond to the strong call from the international community. On nuclear issue, China appreciates Iran’s commitment not to develop nuclear weapons and, at the same time, believes that Iran has a legitimate right to the peaceful use of nuclear energy. China advocates those countries in the Gulf and Middle East should take their destiny into their own hands, encourages Iran and more Gulf countries to engage in dialogue to achieve good-neighborliness and friendship, and supports the establishment of a regional peace and security framework by regional countries that ensures joint participation, safeguards common interests, and achieves common development. (FMPRC 2026 May 6)

President Xi Jinping: Four Propositions

President Xi Jinping made four propositions on safeguarding and promoting peace and stability in the Middle East. (FMPRC 2026 May 14) First, commitment to the principle of peaceful co-existence. The Gulf states as close neighbors must build a common, comprehensive, cooperative and sustainable security architecture of the Middle East and the Gulf region for peaceful co-existence. Second, the principle of national sovereignty must not be violated. The sovereignty, security and territorial integrity of the Gulf states should be respected. Third, commitment to the principle of international rule of law. It is important to firmly uphold the international system with the U.N. at its core, the basic norms governing international relations underpinned by purposes and principles of the U.N. Charter. Fourth, commitment to a balanced approach to development and security as security is a prerequisite for development. China stands ready to share with the Gulf countries the opportunities through Chinese modernization for regional development and security. These four principles demonstrate how China, as a responsible major country, has moved beyond the zero-sum game mindset and with Eastern wisdom and pragmatic action, offered a viable pathway out of geopolitical deadlock.

Iran 'Five Point Proposal' are having congruence with the Chinese position. These includes- Ending the war on all fronts in West Asia, including the Israeli war on Lebanon and guarantees of non-aggression, war reparations and compensation for damages, lifting the US naval blockade on Iranian shipping, releasing Iranian assets frozen abroad, and Recognition of Iranian sovereignty over Hormuz. (Tehran Times 2026 May 11) The US Response and its Five-Point Proposal which includes- No compensation for war costs or damages, Iran must hand over its highly enriched uranium stockpile to the US, Only one Iranian nuclear facility will be allowed to continue operating, No more than 25% of Iran's frozen assets will be released and A ceasefire must be implemented as a precondition for negotiations. The US response remains untenable as far as the Iranian position is concerned and the resumption of the war is on the horizon. Israel's position and strategy remains resumption of war in contrast with the Chinese and US Gulf allies. In his interview to the CBS News, Prime Minister Netanyahu said that "I think it (the war on Iran) accomplished a great deal, but it's not over," He further added, "There is still nuclear material, enriched uranium that has to be taken out of Iran." Pressed on how the US and Israel would remove the nuclear material, "You go in, and you take it out." (CBS 2026 May 10) Trump also has repeatedly threatened to resume the war with Iran if Tehran does not meet his demands.

Unprecedented Shift in the US Domestic Scene over Israel, Iran and the US War Policy

Forty Senators voted to block weapons to Israel. This vote indicates a significant shift in US Senate and perception in which 40 Senators voted Yeas, 59 Nays and one Not Voting on "A joint resolution providing for congressional disapproval of the proposed foreign military sale to the Government of Israel of certain defense articles and services." (Senate 2026 April 15) It represents growing perception of US complicity in Israel policy and actions, a strong message against the US-Israel war on Iran and their opposition to US policy and complicity in Israel policies in Palestine, Lebanon. It suggests that finally, the US Senate is catching up with changing sentiments among Americans particularly the younger generation and the democrats who increasingly want Israel to be accountable for its actions to have credible standing in the region.

Joaquin Castro- Member of Congress, 30 Democrats letter to Secretary Mrco Rubio

A policy of official ambiguity about the nuclear capabilities of one party to this conflict makes coherent nonproliferation policy in the Middle East impossible, for Iran, for Saudi Arabia, and for every other state in the region making decisions based on their perceptions of the capabilities of their neighbors. (Joaquin Castro 2026 May 4) We cannot develop coherent nonproliferation policy for the Middle East, including with respect to Iran's civil nuclear program and Saudi Arabia's civil nuclear ambitions, while maintaining a policy of official silence about the nuclear weapons capabilities of one party central to the ongoing conflict in which the United States is a direct participant. We ask that you hold Israel to the same standard of transparency that the United States expects from any other country that may be pursuing or retaining nuclear weapons capability.

Shifts in the Security Perception among the Regional States, including Israel

There US Gulf allies are concerned that the war would leave a dangerously wounded and hawkish Iran, a grave situation with impending scenario the US draw-down. Saudi Arabia is working on a non-aggression pact of the Middle East States and Iran on the model of 1975 Helsinki Accord by the US, its European countries and Soviet Union and its allies to address security concerns and to ensure necessary cooperation between the rival groups for economic development. The idea has the support of many European countries as a possible pathway to assuage Iran's security concern and guarantee. (Financial Times 2026 May 14) This growing perception increasingly doubts US stature as a credible security provider in the region which, in turn, automatically spurs China as a credible power. In his interview with CBS News, Netanyahu expressed that in the wake of growing political scrutiny and shifting public opinion about Israel "I want to draw down to zero the American financial support, the financial component of the military cooperation that we have. Because we receive- \$3.8 billion a year. And I think its time that we weaned ourselves from the remaining--military support." Regarding the timetable for the same he further added that "let's start now and do it over the next decade, over the next ten years, but I want to start now." (CBS News 2026 May 10)

Europe, NATO and US strategy in the War on Iran

Britain and France convened an international Summit of Strait of Hormuz. As per the joint statement, an independent and a strictly defensive international would be established "to protect merchant vessels, reassure commercial shipping operators, and conduct mine clearance operations as soon as conditions permits following a sustainable ceasefire agreement". (Joint Statement 2026 April 17) This is known as "Franco-British Initiative" and is in a complete divergence with the US strategy on Hormuz. The France has made it clear that, war on Iran is not their war. Recently, the French Foreign Minister, M. Jean-Noel Barrot, in a telephonic conversation with his US counterpart, Marco Rubio, has emphasised that France prioritize diplomatic solution to ensure that Iran never acquires nuclear weapons. He stressed the French willingness to take part in efforts for "guaranteeing freedom of navigation in the Strait of Hormuz when conditions allow, in the Franco-British initiative". (France Diplomatie 2026 March 5)

Trump-Xi Summit: Change in Global Power Equation

President Xi referred the 'Taiwan Question' as the most important issue of China-US relations and its stability. "Otherwise, the two countries will have clashes and even conflicts, putting the entire relationship in great jeopardy. Taiwan independence and cross-Strait peace are as irreconcilable as fire and water. Safeguarding peace and stability across the Taiwan Strait is the biggest common denominator between China and the US. The US side must exercise extra caution in handling the Taiwan question." (FMPRC 2026 May 14) Such a bold geopolitical messaging is surely a geopolitical hint to Iran's stand on the Strait of Hormuz. The US Secretary of States said that the Iran war was a "huge source of instability" and "threatens to destabilise Asia more than any other part of the world because it's heavily reliant on the straits for energy". He further added "It's in [China's] interest to resolve this. We hope to convince them to play a more active role in getting Iran to walk away from what they're doing now and trying to do now in the Persian Gulf," (FoxNews 2026 May 14) While Trump also said he did not think he needed Xi's help with Iran and that the US would "win it one way or the other, peacefully or otherwise". (IndiaToday 2026 May 14) The subsequent Putin's visit demonstrated a warm celebration of their Strategic Partnership with photo exhibition "China-Russia Everlasting Friendship: A Model of Major-Country Relations" at the Great Hall of the People Republic in Beijing where the two leaders recalled with pleasure the moments of cooperation and friendly exchange between the countries and "marks that the "friendship is in line with the prevailing trend of history and of the times. It is unbreakable, and continue to steadily advance forward and write new, splendid chapters." They emphasised it as a new era of progress in "China-Russia good neighbourliness and friendly cooperation." (FMPRC 2026 May 20)

The Peace proposals and counter proposals along with threats of resuming the war with more force and their postponement have drastically diminished the credibility of the United States as a global power. The combination of ceasefire, naval blockade and the US peace proposals mixed with imprudent threats are making the US policy and strategy focus-less and unreliable. These puts the limits of US power on display and gives way to the rise of Chinese as a power with credibility in the conflict and West Asia.

The United is not able to accept the evolving Multipolar world and necessity to accommodate others unlike its unipolar moments as well as share the power and responsibility for ensuring global peace and prosperity. The Iran war is slowly turning into an inextricable quagmire and ‘Suez Moment’ for the US power and empire. The outcomes of recent Xi-Trump Summit is perceptible indicator and pointing to the geopolitical trajectory.

In Brief

A careful assessment makes it perceptible that the War has emboldened Iran. China and Russia hardening their strategic posture against US and facilitate Iranian war efforts in every sphere possible. Despite being the mediator in the Iran-US negotiations, Pakistan seems to be in secret talk and agreement with Iran as the reports of Iranian planes parked in Nur Khan base during the active phase of the war. Regional Arab allies do not trust the US security guarantees (GCC and Egypt and Turkey) given the scale and volume of damage caused by Iranian missiles and inability of the US security umbrella to ensure their security. Even Israel is trying to be independent of the US financial aid of 3.8 billion for autonomous pursuit of its strategic goals. There is a perceptible divide in the Trump administration and Pentagon assessment of Iran’s remaining capabilities is discouraging and challenging for United States. Military Commanders are talking about depleting ammunition and the state of fund and fatigue of soldiers and war machines. The International Summit on ‘Strait of Hormuz’ and the subsequent ‘Franco-British Initiative’ indicates yawning strategic divergence between US and its NATO allies. The ‘China-Russia Everlasting Friendship: A Model of Major-Country Relations’ during President visit to China immediately after Xi-Trump Summit points to the fact that US is not willing to accept the geopolitical reality of a multi-polar world and need for a multi-lateral approach as the need of the hours. With the war, the US is adrift from its position of primacy and paving for an ‘Advantage China’ trajectory in the Gulf, Wider West Asia and the World large.

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Why Transport Infrastructure is Exigent for the Strategic Robustness of Northeast India

Abstract

The North Eastern Region (NER) of India, comprising eight states and accounting for nearly 8 per cent of the country's geographical area, occupies one of the most consequential locations on the Indian subcontinent. Approximately 99 per cent of the region's external boundary is shared with five sovereign states China, Myanmar, Bangladesh, Bhutan and Nepal while only the narrow Siliguri Corridor, barely 22 kilometres at its slimmest point, tethers it to the rest of the Indian Union. This geopolitical configuration renders transport infrastructure not merely an instrument of economic development but a determinant of national strategic robustness. The present paper argues that the modernisation of road, rail, air and inland water transport networks in the Northeast is exigent in three interlocking senses: first, as a counterweight to China's accelerated military and dual-use infrastructure across the Tibet Autonomous Region; second, as a bulwark against the cascading vulnerabilities exposed by political volatility in Bangladesh and the protracted civil conflict in Myanmar; and third, as the structural precondition for translating the Act East Policy into operational reality. Drawing upon official policy documents, ministerial data, and recent strategic commentary, the study establishes that despite an unprecedented capital outlay over Rs. 1.07 lakh crore on national highways alone between 2014 and 2024, with the Sela Tunnel, the Bairabi-Sairang railway, and the proposed underwater Brahmaputra tunnel as flagship deliverables the asymmetry vis-a-vis China remains material. The paper concludes that strategic robustness for the Northeast requires a paradigm shift from project-centric construction to an integrated, redundancy-oriented connectivity doctrine that fuses civilian logistics with military deterrence and diplomatic statecraft.

Keywords: Northeast India; Strategic Robustness; Transport Infrastructure; Siliguri Corridor; Act East Policy; Border Connectivity; Sela Tunnel; Kaladan Project; Strategic Asymmetry; Integrated National Security.

1. Introduction

Geography, in the Northeast of India, is destiny refracted through the prism of partition. The region comprising Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim lies suspended on the eastern flank of the Indian Union, fastened to the mainland by the Siliguri Corridor, a sliver of land in West Bengal whose narrowest stretch is roughly 22 kilometres. Every truck, train, soldier and tonne of food grain that moves between Kolkata and Kohima must traverse this slender artery. The remaining ninety-nine per cent of the Northeast's frontier is foreign, abutting China to the north, Myanmar to the east and south-east, Bangladesh to the south and south-west, Bhutan to the north-west, and Nepal to the west of the corridor itself.

It is in this geographical asymmetry that the central premise of the present paper takes root. "Strategic robustness" is understood here, in the spirit of the Forum for Integrated National Security's Integrated National Security (INS) framework, as the composite capacity of a region to absorb shocks, military, political, economic, or environmental, without forfeiting governmental authority, civilian welfare, or operational continuity. For a landlocked region whose lifeline is geographically pinched and politically encircled, the principal vector of robustness is connectivity. Without all-weather roads, redundant rail lines, dependable airfields and navigable waterways, the Northeast cannot be defended in war, governed in peace, developed in prosperity, or projected as a gateway to Southeast Asia. Transport infrastructure, in short, is not an enabler of strategy in the Northeast; it is strategy in its most material form.

The present paper advances this argument in seven analytic moves. Section 2 sketches the historical and geographical determinism that produced the present infrastructural fragility. Section 3 maps the contemporary geostrategic environment, with particular attention to the convergence of Chinese assertiveness, Bangladeshi political flux and Myanmar's civil war. Section 4 examines the Siliguri Corridor as the locus classicus of Indian strategic vulnerability. Section 5 surveys the current state of transport infrastructure across road, rail, air and inland water modes. Section 6 develops the strategic case for accelerated infrastructure deployment, juxtaposing Indian projects with China's build-up in the Tibetan Autonomous Region. Section 7 examines cross-border connectivity initiatives

that extend the Northeast's strategic reach. Section 8 identifies persisting challenges and offers policy recommendations consonant with the INS approach. The conclusion synthesises these threads into a coherent doctrine of connectivity-led strategic robustness.

2. The Geographic Inheritance and Historical Neglect

The strategic predicament of contemporary Northeast India is, in significant measure, an artefact of the 1947 partition. Until the cartographic surgery of that year, the Bengal-Assam axis flowed seamlessly through the Brahmaputra-Padma deltaic system; the cities of Chittagong and Calcutta served as natural maritime outlets for the produce of the Brahmaputra Valley. The creation of East Pakistan severed this organic connectivity, transforming what had been a maritime and riverine periphery into a geopolitically encircled hinterland accessible only through the Siliguri Corridor itself, a residue of the Radcliffe boundary's somewhat hurried determinations. The resulting geographic configuration produced a landlocked outpost whose economic centre of gravity was abruptly dislocated from its natural ports.

For nearly four decades following independence, the developmental imagination of the Indian state treated the Northeast principally through the lens of internal security rather than economic integration. Insurgencies in Nagaland, Mizoram, Manipur, Assam, and Tripura, together with the looming unresolved boundary with China, generated a policy reflex that privileged garrison logic over connectivity logic (Baruah, 2020). Roads were built where the army needed them; railways were abandoned where the colonial era had left them. Meghalaya, to take only the starkest illustration, was added to the Indian railway map only in November 2014, 67 years after independence. Mizoram's capital received its first passenger train in 2025. The cumulative effect of this slow tempo was an infrastructure deficit that, by the early twenty-first century, had become not merely an economic liability but a strategic one.

Three structural features of this inheritance bear directly on the present analysis. First, the absence of redundant land routes meant that any single point of failure on the Siliguri Corridor, landslide, flood, blockade, or hostile action could sever the Northeast from the rest of India. Second, the underdeveloped cross-border arteries through Bangladesh, Myanmar, and Bhutan denied the region the maritime and transit options that geography would otherwise have made available. Third, the asymmetry between the Indian and Chinese sides of the Line of Actual Control widened steadily as Beijing extended the Qinghai-Tibet railway to Lhasa in 2006 and to Shigatse in 2014, and undertook an ambitious airfield and dual-use highway programme through the Tibet Autonomous Region. By the time the 2017 Doklam standoff and the 2020 Galwan clash exposed the strategic costs of this inheritance, the corrective imperative had become unambiguous.

3. The Contemporary Geostrategic Environment

The strategic case for accelerated infrastructure investment in the Northeast cannot be assessed in abstraction from the regional security environment that has crystallised since 2020. Three concurrent developments Chinese assertiveness along the eastern Line of Actual Control, the post-August 2024 political reorientation of Bangladesh, and the protracted civil conflict in Myanmar have together transformed the Northeast from a peripheral concern into a frontline theatre of Indian grand strategy.

3.1 China and the Eastern Sector

Beijing's claim to Arunachal Pradesh as "Zangnan" or South Tibet is neither rhetorical nor recent, but its operational manifestations have intensified materially. The 2022 Tawang skirmish, persistent Chinese activity around Doklam and the trijunction with Bhutan, the construction of "xiaokang" or model border villages opposite Arunachal, and the steady extension of road and rail infrastructure across Tibet have constructed what former Eastern Army Commander Lieutenant General Rana Pratap Kalita has termed a "persistent attempt" to alter the strategic equilibrium (Kalita, 2024). Chinese infrastructure across the Tibet Autonomous Region, comprising not only the Lhasa-Shigatse-Xigaze railway but an expanding network of dual-use highways, helipads, and airfields, permits the rapid mobilisation of mechanised forces to forward areas. The asymmetry this creates is not lost on Indian planners: the geography that obliges Indian forces to ascend the Brahmaputra valley before deploying to forward posts in Arunachal is mirrored on the Chinese side by a plateau crossed by all-weather roads and rail, a pattern of border-region railway development that scholars have read as an instrument of Sino-Indian geopolitical competition (Chellaney, 2025; Roy, Shrivastva, & Ashok, 2023).

3.2 Bangladesh: The Post-Hasina Recalibration

The fall of the Awami League government in August 2024 and the installation of an interim administration headed by Muhammad Yunus has produced a recalibration of Dhaka's foreign-policy posture, with discernible openings to China and, by extension, to Pakistan. Strategic concerns in New Delhi have crystallised around the reported Chinese involvement in the Teesta River Comprehensive Management and Restoration Project, the proposed revival of the World War II-era Lalmonirhat airbase, located approximately 135 kilometres from the Siliguri Corridor, and the broader pattern of Chinese economic investment in northern Bangladesh. The Lalmonirhat dossier is particularly consequential: the prospect of Chinese surveillance, reconnaissance or, in extremis, dual-use military aviation operating from a base lying twenty kilometres from the Indo-Bangladesh border that forms the southern alignment of the Siliguri Corridor introduces an aerial dimension to a chokepoint that was previously vulnerable principally on land (Singh, 2025).

3.3 Myanmar: The Eastern Approaches

The civil war that has consumed Myanmar since the February 2021 coup has rendered uncertain the operational future of the Kaladan Multi-Modal Transit Transport Project and the India-Myanmar-Thailand Trilateral Highway, both of which traverse Chin and Sagaing regions in active conflict zones. The Arakan Army's territorial gains in Rakhine, including stretches of the Kaladan corridor, have constrained Indian engineering operations and raised questions about the viability of Sittwe port as a reliable maritime entrepot for Mizoram-bound cargo. The eastern flank of the Northeast is, therefore, characterised, at present, by a "connectivity recession" along precisely the corridors that the Act East Policy envisaged as substitutes for the overburdened Siliguri route.

Taken together, these three vectors a militarily ascendant China, a politically reorienting Bangladesh, and a fragmenting Myanmar describe a strategic environment in which the Northeast can no longer rely on a single chokepoint, a single foreign partner, or a single mode of transport. Infrastructure, in this context, is the medium through which strategic optionality is purchased.

4. The Siliguri Corridor as the Locus Classicus of Vulnerability

No assessment of the Northeast's strategic robustness can proceed without a forensic account of the Siliguri Corridor. Approximately twenty to twenty-two kilometres at its narrowest, the corridor is the sole terrestrial conduit through which the daily commerce of the Northeast must pass. Estimates from senior Indian Army commanders place the daily traffic on the corridor at approximately one million vehicles, transporting around 2,400 metric tonnes of goods and generating roughly Rs. 142 crore in revenue (Das, 2023). The corridor carries the principal broad-gauge railway lines linking the Northeast to the rest of India, the National Highway 27 corridor, and an array of petroleum, gas and telecommunication trunks.

The vulnerabilities are simultaneously geographical, political and tactical. Geographically, the corridor is hemmed in by Nepal to the west, Bhutan to the north, Bangladesh to the south, and the Chinese-controlled Chumbi Valley, which slopes down from the Doklam plateau, to the north-east. A military advance of less than 130 kilometres from the Chumbi Valley, in the configuration China contemplated in 1962 and again in 2017, could conceivably interdict the corridor. Politically, the corridor is exposed to perturbations in Nepalese and Bangladeshi politics; an unfriendly government in either capital can complicate the operating environment without firing a shot. Tactically, the corridor is susceptible to seasonal disruption from monsoon flooding, landslides and, in 2023, the catastrophic glacial lake outburst floods in Sikkim that severed road and rail links for extended periods.

The Indian response, particularly since the post-2024 reorientation of Bangladesh, has shifted from cautious dispersal to active fortification. Rafale squadrons, BrahMos missile systems, and integrated air-defence assets have been forward-deployed; the Eastern Command has conducted joint live-fire exercises in the vicinity of the corridor (The Federal, 2025; The Diplomat, 2026). More relevant to the present analysis, however, is the parallel programme of infrastructure densification: the proposed 35.76-kilometre underground railway line between Dumdangi and Bagdogra, the upgradation of the Bagdogra civil enclave at a sanctioned cost of Rs. 1,549 crore, and the planned road-cum-rail underwater tunnel beneath the Brahmaputra at Gohpur-Numaligarh, a 33.7-kilometre four-lane access-controlled project, of which a 15.79-kilometre twin-tube section will run under the river.

These projects share a common architectural logic: to render the corridor's traffic less observable, less interdictable, and less dependent on any single mode or alignment.

5. The Present State of Transport Infrastructure

An accurate assessment of strategic robustness requires an empirical account of what has been built, what is under construction, and what remains aspirational. The decade between 2014 and 2024 has witnessed a step-change in the tempo of infrastructure deployment across the Northeast, even if the cumulative gap with the Chinese side of the Line of Actual Control has not yet closed.

5.1 Roads and Highways

Approximately 10,000 kilometres of National Highways have been constructed across the eight northeastern states between 2014 and 2024, at an aggregate cost exceeding Rs. 1.07 lakh crore (Government of India, 2025). As of mid-2025, the cumulative national highway length in the region had reached approximately 16,207 kilometres. The Bharatmala Pariyojana, with a total mandate of 34,800 kilometres and an estimated national outlay of Rs. 5.35 lakh crore, includes a substantial Northeast component dedicated to economic corridors, border roads, and feeder routes. The Ministry of Road Transport and Highways allocated Rs. 19,388 crore for the Northeast in financial year 2024-25 alone, with state-wise completed stretches that include 1,012 kilometres in Assam, 819 kilometres in Manipur, 737 kilometres in Mizoram, 487 kilometres in Nagaland, 471 kilometres in Arunachal Pradesh, and 346 kilometres in Tripura (Ministry of Road Transport and Highways, 2025). The Mawlyngkhung-Panchgram four-lane greenfield corridor between Shillong and Silchar, approved in April 2025, is illustrative of the new generation of access-controlled, all-weather infrastructure that the region is now receiving.

Strategic road projects merit particular attention. The Sela Tunnel, inaugurated in March 2024 at an altitude of approximately 13,000 feet on the Balipara-Chariduar-Tawang road in Arunachal Pradesh, is the world's longest bi-lane tunnel at that elevation. Constructed by the Border Roads Organisation at a cost of approximately Rs. 825 crore, the tunnel reduces the Tezpur-Tawang journey by an hour, removes the seasonal interdiction caused by Sela Pass snowfall, and crucially conceals troop movements from Chinese surveillance from across the Line of Actual Control (Observer Research Foundation, 2024). The tunnel formed part of a broader BRO programme that completed 330 infrastructure projects at an aggregate cost of approximately one billion United States dollars (Border Roads Organisation, 2024), with subsequent projects including the Smaldar Tunnel north-west of Tawang, the Shinkun La tunnel between Himachal Pradesh and Ladakh, and the alternate Sela Lake-Chabrela-Jang route operationalised in December 2025.

5.2 Railways

Railway expansion in the Northeast has progressed at an unprecedented pace, although from a low base marked by pronounced regional differentiation in railway infrastructure development across the northeastern states (Roy, Hore, Mitra, & Chaberek, 2022). The Indian Railways' allocation for the Northeast has increased approximately fivefold to Rs. 62,477 crore, with Rs. 10,440 crore for the current fiscal year. Eighteen ongoing projects, with an aggregate sanction of approximately Rs. 74,000 crore, are adding 1,368 kilometres of rail tracks across thirteen new lines together with gauge conversion and doubling works (Ministry of Development of North Eastern Region, 2024). The Bairabi-Sairang line, commissioned in 2025, connected Aizawl to the fourth Northeast capital by rail, after Guwahati, Itanagar (via the Naharlagun-Itanagar extension), and Agartala. Rail extensions to Kohima, Imphal and Gangtok are under various stages of execution. The Bogibeel road-cum-rail bridge across the Brahmaputra and the under-construction Dhubri-Phulbari Bridge projected to become India's longest river bridge demonstrate the move toward heavy-engineering, multi-modal river crossings that reduce dependence on a single span or alignment.

5.3 Civil Aviation

The expansion of the airfield network has been particularly consequential for a region whose monsoon climate periodically incapacitates surface transport. Ten new greenfield airports, including the Hollongi airport serving Itanagar, the Pakyong airport in Sikkim, and the Tezu airport in Arunachal Pradesh, have been added during the past decade. Under the Regional Connectivity Scheme (UDAN), ninety routes have been operationalised across twelve airports and helipads in the Northeast

materially improving last-mile connectivity to remote districts (Government of India, 2025). The Emergency Landing Facility inaugurated at Dibrugarh in February 2026—a 4.2-kilometre stretch of national highway upgraded to serve as a dispersal landing strip for the Indian Air Force—signals a deliberate fusion of civilian aviation infrastructure with military redundancy planning, the first such facility in the Northeast.

5.4 Inland Water Transport

The reactivation of the Brahmaputra (National Waterway 2) and the Barak (National Waterway 16) has restored a transport mode that was natural to the region's geography but had atrophied through neglect. Roll-on roll-off ferry services on the Brahmaputra have provided a cost-effective alternative to road haulage for bulk cargo. The Indo-Bangladesh Protocol on Inland Water Transit and Trade has expanded from eight to ten designated routes, and the Multi-Modal Logistics Park near Jogighopa, with an investment of approximately Rs. 693.97 crore, integrates road, rail, river and air modes at a single nodal point. The strategic logic of the inland waterway is not principally about speed; it is about optionality. A waterway provides a fall-back when roads are flooded and rail lines are interrupted, and it does so at lower cost and lower carbon intensity.

6. The Strategic Case: Six Imperatives for Robustness

The transformation of transport infrastructure into a substantive guarantor of strategic robustness rests on six interlocking imperatives. Each is examined in turn.

6.1 Military Mobility and Operational Tempo

Modern conventional warfare is decided, in significant measure, by the relative tempo at which contending forces can mass at the point of contact. The Sela Tunnel exemplifies the manner in which a single piece of infrastructure can compress decision-cycles. By rendering the Tezpur-Tawang axis all-weather and by concealing forward troop movements, the tunnel materially augments the Indian Army's ability to reinforce IV Corps' Tawang sector. Comparable considerations animate the proposed underwater Brahmaputra tunnel, the underground Siliguri rail line, and the all-weather highways that the Border Roads Organisation has been advancing through the eastern Himalayas. The reduction in mobilisation time from days to hours—and from a single observable axis to multiple concealed ones alters the cost-benefit calculus for a potential adversary.

6.2 Counter-Insurgency and Internal Security

The Northeast's history of insurgency has repeatedly demonstrated that the absence of state presence in remote terrain is a generative condition for armed mobilisation. Roads, railways and airfields are not neutral conduits; they are the physical projection of legitimate authority. The improvement of connectivity has empirically correlated with the contraction of insurgent operational space across Mizoram, Tripura, Assam and parts of Nagaland and Manipur. Where development reaches, recruitment recedes. Investment in infrastructure should therefore be understood not merely as economic policy but as the long-term denial of operational space to non-state armed groups—a logic the Forum for Integrated National Security has consistently emphasised in its advocacy of the integrated security approach.

6.3 Disaster Resilience and Humanitarian Reach

The Northeast lies in seismic Zone V, the highest hazard category in the Indian seismic classification, and is annually subjected to extreme monsoon precipitation. The 2023 Sikkim glacial lake outburst flood, recurrent landslides on the National Highway 6 (formerly NH-44) Silchar approach, and seasonal interdiction of multiple alignments demonstrate the strategic significance of redundant routing, and underline the case for systematically incorporating climate-change resilience into the design and management of the region's railway infrastructure (Roy, Debnath, Vulevic, & Mitra, 2023). Robust transport networks are the mechanism through which the state delivers relief, evacuates populations and restores services in the wake of disaster. A single washed-out highway is a humanitarian crisis; a network of alternatives is a manageable inconvenience.

6.4 Economic Integration and the Cost of Logistics

Infrastructure deficits translate directly into elevated logistics costs, which in turn render Northeastern goods uncompetitive in mainland Indian markets (World Bank, 2023). Erratic monsoons and poor road conditions periodically interdict the movement of perishables, generating consignment

rejections and price escalation. The CII's recent regional analysis has identified the absence of integrated cold chains, warehousing facilities and seamless port connectivity as material constraints (Confederation of Indian Industry, 2025; Taneja, Joshi, Acharya, & Vashisht, 2021). Passenger-level evidence from Tripura likewise indicates that the socio-economic structure of users conditions the perception of railway infrastructure and services, a reminder that connectivity investment translates into civilian mobility gains only when matched by dependable service quality (Roy, Mazzulla, Hore, & Mitra, 2023). The reduction of logistics costs through multi-modal integration, the explicit ambition of the PM Gati Shakti National Master Plan and the Uttar Poorva Transformative Industrialisation Scheme (UNNATI 2024), is therefore not a parallel concern to strategic robustness but a constituent of it. A region that is economically integrated with its mainland is harder to coerce, isolate and destabilise.

6.5 Diplomatic Leverage and Regional Statecraft

Connectivity infrastructure is, in the contemporary international system, an instrument of statecraft. China's Belt and Road Initiative has established this proposition with disquieting clarity. India's response, expressed through the BBIN Motor Vehicles Agreement, the Trilateral Highway, the Kaladan project, and the maritime connectivity initiatives anchored at Sittwe and now potentially at Chittagong, depends on the credibility of the domestic infrastructure that feeds into these external projects. A poorly maintained national highway from Imphal to Moreh undermines the diplomatic value of the India-Myanmar-Thailand Trilateral Highway. A disrupted Brahmaputra waterway weakens the bargaining position with Dhaka over the Indo-Bangladesh Protocol routes. Domestic infrastructure quality, in this respect, conditions external diplomatic leverage.

6.6 Demographic Stabilisation and Border Population

Empty borders are insecure borders. The Government of India's Vibrant Villages Programme, which seeks to repopulate, upgrade, or establish approximately 500 villages along the Line of Actual Control from Ladakh to Arunachal Pradesh, recognises the demographic dimension of strategic robustness. Without all-weather roads and dependable services, however, the programme is liable to remain on paper. Each kilometre of black-topped road extended to a forward village is, in an important sense, a kilometre of disputed ground rendered governed. China's parallel programme of "xiaokang" model villages opposite Arunachal lends additional urgency to the Indian effort.

7. Extending the Periphery: Cross-Border Connectivity

Strategic robustness does not terminate at the international boundary. Cross-border connectivity initiatives extend the strategic depth of the Northeast and convert geographic adjacency from a vulnerability into an asset (Nath & Saikia, 2025). Three flagship corridors merit detailed treatment.

7.1 The Kaladan Multi-Modal Transit Transport Project

Conceived in 2008 as a riposte to the geographic stranglehold of the Siliguri Corridor, the Kaladan project links the Syama Prasad Mookerjee Port at Kolkata, by sea, to Sittwe in Myanmar's Rakhine State; from Sittwe, by inland waterway up the Kaladan River, to Paletwa in Chin State; and from Paletwa, by road, across the Indo-Myanmar border at Zorinpui-Zochachhuah and onward to Aizawl. The headline distance reduction is consequential: the Kolkata-to-Mizoram route via Kaladan is approximately 950 kilometres, compared with approximately 1,880 kilometres via the Siliguri Corridor. The project's strategic value is twofold. First, it provides an alternative axis of supply that does not pass through Indian territory, subject to chokepoint vulnerability. Second, it extends Indian connectivity into the Bay of Bengal littoral, complementing the Sagarmala programme. Sittwe port has been operationally inaugurated; the inland waterway and the Sittwe-Paletwa segment are functional; the road component from Paletwa to Zorinpui has been delayed by the Myanmar civil conflict, with the official Indian and Mizoram government estimates pointing to a 2027 horizon for full operationalisation.

7.2 The India-Myanmar-Thailand Trilateral Highway

The Trilateral Highway, projected to run approximately 1,360 kilometres from Moreh in Manipur, through Mandalay and Yangon, to Mae Sot in Thailand, is the principal land bridge connecting the Northeast to the ASEAN economic space. Proposed extensions to Cambodia, Laos and Vietnam under the East-West Economic Corridor would, when realised, transform the Northeast from a landlocked outpost into the western terminus of a continental Southeast Asian highway system.

Operational delays, principally arising from the security environment in Myanmar's Sagaing Region, have slowed completion (Padmanabhan & Krishnankutty, 2024), but the strategic logic remains unaltered: the Trilateral Highway is the spatial expression of the Act East Policy (Ministry of External Affairs, 2024).

7.3 The BBIN Motor Vehicles Agreement and Sub-Regional Integration

The Bangladesh-Bhutan-India-Nepal (BBIN) Motor Vehicles Agreement, signed in 2015, envisaged a sub-regional motor vehicle regime that would permit the seamless movement of cargo and passenger vehicles across the four economies. Bhutan's subsequent demurrals and the post-2024 recalibration in Bangladesh have together constrained the agreement's operationalisation. Nonetheless, the framework retains strategic salience: the Tetulia Corridor through northern Bangladesh, the rail and road links to Cox's Bazar and Chittagong, and the proposed Sittwe-redundant alignment through Belonia-Parshuram together provide candidate routes for partial Siliguri-bypass solutions. The Kolkata-Cox's Bazar-South Tripura rail link, contemplated as a strategic redundancy, would shorten transit time materially while exposing it to the political weather of Dhaka a trade-off that argues for diversified corridors rather than dependence on any single foreign partner.

8. The Asymmetry with China: A Comparative Audit

An honest assessment of where the Northeast stands requires an honest comparison with the infrastructure that Beijing has built, and continues to build, on the opposite side of the Line of Actual Control. The Qinghai-Tibet railway reached Lhasa in 2006 and Shigatse in 2014; an extension towards the China-Nepal border at Gyirong-Rasuwa is in the planning stages. Highway G318 and the parallel G219 corridor provide multi-axis road access to forward areas; airfields at Lhasa Gonggar, Shigatse Peace, Nyingchi Mainling, Ngari Gunsa and Hotan have been progressively upgraded to dual-use specifications (Kewalramani, 2024). The Mi La tunnel, at an altitude of 15,590 feet in occupied Tibet, until recently held the world record for the highest road tunnel—a record that India's under-construction Shinkun La tunnel at 15,800 feet is poised to displace.

The asymmetry, however, is not solely a matter of altitudinal records. China's strategic doctrine treats infrastructure as the vehicle of effective sovereignty: a road that carries a brigade in seventy-two hours is a road that consolidates territorial control irrespective of the legal status of the boundary (Gokhale, 2022). India's response, encapsulated in the India-China Border Roads programme (which had under construction or completed approximately seventy-three roads of approximately four thousand kilometres in Phase I, with subsequent phases adding a further hundred-plus alignments), is necessarily a programme of catch-up. The Border Roads Organisation completed three hundred and thirty infrastructure projects at an aggregate cost of approximately one billion United States dollars during the financial year preceding the Sela Tunnel inauguration; a comparable annual tempo is now considered the new normal. Yet the gap, particularly in railway penetration of forward areas, in the density of helipads and advanced landing grounds, and in the extent of fibre-optic and electrical-grid connectivity to border villages, has not yet been closed (Roy, Shrivastva, & Ashok, 2023). Closing it is, in the formal sense, the central infrastructural priority of the present decade.

9. Persisting Challenges and Implementation Constraints

The infrastructure programme, however, is not without its frictions. A candid identification of the principal constraints is essential to any strategic prescription. Terrain and climate constitute the first-order obstacle. The Northeast lies across some of the most seismically active and meteorologically extreme topography in Asia. Annual rainfall in Mawsynram and Cherrapunji exceeds 11,000 millimetres; landslides during the monsoon are routine; alignments that perform in Punjab fail in Arunachal. Construction windows are short, often limited to four to five months a year in higher altitudes, a physio-environmental determinism that demonstrably shapes the infrastructural development of railway stations across such terrain (Roy & Mitra, 2023).

Land acquisition and forest clearance constitute the second-order constraint. The Inner Line Permit regime, the Sixth Schedule of the Constitution governing tribal land in Meghalaya and parts of Assam, Tripura and Mizoram, and the customary land tenure systems prevalent across the region together produce a complex matrix of acquisition processes. Forest and wildlife clearances, particularly in biodiversity-rich corridors, frequently delay projects by multiple years.

The inter-departmental Empowered Committee headed by the Ministry of Defence has been constituted precisely to expedite these clearances for strategic projects, with mixed but improving results.

Insurgency and inter-ethnic conflict, while attenuated relative to earlier decades, continue to impose security overheads on construction. The 2023 Manipur violence interrupted multiple projects, and intermittent disturbances in parts of Nagaland, Manipur and Karbi Anglong have raised the per-kilometre costs of road-building above national norms.

Cost overruns and time slippage are endemic. The original Kaladan project completion target was 2014; subsequent revisions extended this to 2020, then 2023, then 2025, and currently 2027. The pattern is not unique to Kaladan: it reflects the cumulative weight of the constraints described above. Realistic timelines, transparent reporting and penalty-and-incentive structures are the only sustainable correctives.

Finally, ecological and social costs deserve frank acknowledgement. Hydropower-induced changes in the Brahmaputra's flow, dredging in the Kaladan River mouth, displacement associated with right-of-way acquisition, and the impact of new roads on wildlife corridors have been documented in successive environmental impact assessments. Strategic robustness cannot be purchased at the price of ecological collapse; the argument for infrastructure must therefore include the argument for green engineering, including elevated alignments, wildlife underpasses, and progressive procurement standards.

10. Towards an Integrated Connectivity Doctrine: Policy Recommendations

The argument advanced in the preceding sections supports a set of policy prescriptions that align with the Forum for Integrated National Security's vision of an integrated, rather than compartmentalised, approach to national security. Six recommendations follow.

First, redundancy must be elevated to a doctrinal principle. No single corridor, mode, or foreign transit partner should constitute the sole pathway for any class of strategic cargo. The Siliguri Corridor, the Kaladan, the Tetulia, the Brahmaputra waterway and the trans-Bhutan road option should be conceived as a network rather than a hierarchy. The under-construction underwater Brahmaputra tunnel and the Dumdangi-Bagdogra underground rail line are exemplary in this regard.

Second, civil-military fusion in design specifications must be normalised. Highways serving forward areas should be designed to military load classification standards from inception; airfields should be specified for dispersal use as a matter of routine; railway alignments through strategic terrain should accommodate military rolling stock. The Dibrugarh Emergency Landing Facility is a useful template; it should be replicated at Imphal, Tezu, Pasighat and other suitable alignments.

Third, indigenous engineering and construction capacity must be expanded. The Border Roads Organisation, the National Highways and Infrastructure Development Corporation Limited, RITES and IRCON have demonstrated the ability to deliver in difficult terrain; the binding constraint is now scale rather than capability. Procurement reform that consolidates project bundles, extends contractor performance horizons, and links payment to milestone delivery would compress timelines materially.

Fourth, diplomatic statecraft must be aligned with the connectivity portfolio. The Kaladan project's value depends on a workable equilibrium with whichever authority controls Rakhine and Chin; the Trilateral Highway's value depends on the Sagaing security environment; the Tetulia option's value depends on a stable understanding with Dhaka. The Ministry of External Affairs, the Ministry of Defence, the Ministry of Road Transport and Highways, and the Ministry of Development of North Eastern Region must operate within a single strategic conversation rather than as parallel agencies.

Fifth, the Vibrant Villages Programme must be funded and implemented in tandem with road and digital connectivity. Settlements without services are not settlements; villages without roads are not anchored to the state. The recent indigenous monorail system deployed at 16,000 feet in Arunachal Pradesh, capable of transporting 300 kilograms in a single run, illustrates the kind of innovation that addresses the last tactical mile problem.

Sixth, transparent monitoring and parliamentary oversight should be institutionalised. The PAIMANA portal, which monitors 1,941 infrastructure projects worth Rs. 41.50 lakh crore; the Gati Shakti National Master Plan, with its 1,614 integrated data layers; and the assessment of 208 major projects worth Rs. 15.39 lakh crore demonstrate that the data infrastructure exists.

What is needed is a dedicated standing parliamentary committee on Northeast infrastructure that can scrutinise progress, surface implementation bottlenecks, and hold ministries to account in real time.

11. Conclusion

This paper argues that Northeast India's connectivity is vital for strategic security, especially given regional geopolitics. The region's transport infrastructure, including projects like the Sela Tunnel and Brahmaputra tunnel, addresses past neglect but still lags behind China's Tibetan infrastructure and faces constraints with Bangladesh and Myanmar. Achieving strategic robustness requires a doctrine emphasizing redundancy, civil-military fusion, indigenous capacity, diplomatic alignment, and oversight. Moving from isolated security thinking to integrated strategies can turn Northeast from a vulnerability into an asset, connecting it to ASEAN economies and creating resilient networks. The success of this transformation depends on prioritizing transport infrastructure as a core national strategy, leaving no room for ambiguity.

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India–South Korea Cooperation in Energy Transition

Abstract

The transition of energy from fossil fuel-based systems to low-carbon global energy systems has enhanced the need for strategic bilateral partnerships. It mixes technological capability with resource security and addresses the challenge of decarbonising economies. In this changing scenario, the India–South Korea partnership has become an important centre of cooperation, especially in the areas of green hydrogen, renewable energy, and critical mineral supply chains. India's growing renewable energy base, huge domestic market, and cost benefits go well with South Korea's technological know-how, financial power, and industrial abilities. This article looks closely at India–South Korea joint efforts in clean energy, focusing on hydrogen cooperation, renewable energy scaling, critical mineral security, industrial decarbonisation, and the new areas that include energy finance and innovation ecosystems. Besides, the article discusses the political and economic consequences of this partnership under the Indo-Pacific framework, especially in terms of supply chain resilience, strategic autonomy, and energy diplomacy. Finally, it points out major structural and policy issues such as regulatory hurdles, the patronage of high technological costs, and escalating global rivalry for resources and proposes measures to enhance collaboration.

Keywords: India–South Korea relations, clean energy transition, green hydrogen, critical minerals, energy security, Indo-Pacific, industrial decarbonisation

Introduction

The shift to sustainable energy systems is one of the key developments influencing the current world order. Climate change, energy insecurity, and rapidly evolving technologies have jointly led to a realignment of countries' priorities at the national and international levels. When countries are aiming at decarbonising their economies and simultaneously continuing growth, the role of strategic partnerships becomes stronger.

On the one hand, India and South Korea are different in terms of their development paths. On the other hand, they both perceive these challenges in a similar way. India, as a rapidly growing economy, must balance the increased energy demand with its climate commitments. India's long-term target of achieving net-zero emissions by 2070 implies not only a significant expansion of renewable energy but also availability of technology, capital, and stable supply chains (Government of India, 2023). South Korea is a highly developed technological society, but it is a resource-scarce country. Its large dependence on energy and raw material imports has driven South Korea to focus on innovation, diversification, and cooperation at the international level (IEA, 2025).

This relationship is exactly the kind of complementarity that can sustain a long-lasting partnership. India–South Korea cooperation in clean energy has become a significant part of bilateral ties, indicating both economic benefits and strategic choices. Such a cooperation also holds an immense significance in global energy governance, especially for the Indo-Pacific region.

India and South Korea, traditionally considered middle powers, are playing a greater role in the setting of rules and cooperation frameworks. Their participation in clean energy is therefore a reflection of their economic pragmatism as well as a deliberate move to help shape the new global sustainability frameworks.

Strategic Convergence in Energy and Climate Objectives

India's and South Korea's energy policies complement each other to a great extent, which comes from common needs for economic growth, energy security, and sustainability. India's interest is increasing in the use of renewable energy, promoting green energy manufacturing and developing the green hydrogen sector. Besides its reliance on solar and wind energy, India is stepping up its focus on the electrical grid, electric cars and storage solutions to reduce dependency on fossil fuels (Government of India, 2023).

South Korea is eager to lead in the development of new technologies and conduct a radical overhaul of industries. This is in line with its plans for the Hydrogen Economy Roadmap and the related carbon neutrality objectives (Government of Korea, 2024). As part of this, the country is working on its fuel cells and hydrogen infrastructure, but at the same time, it wants to find external sources of clean energy.

In this context, India-South Korea collaboration can be strategically important. While India has the ability and the natural resources, South Korea, on the other hand, has the technological expertise and the financial strength. Besides, the two countries are equally wary of the possibility of supply chains being dominated by a few countries as well as the geopolitical risks that come with this, especially when it comes to critical minerals and advanced technologies (IEA, 2023). This shared vision has reinforced the rationale for deeper cooperation.

Policy dialogues and institutional mechanisms between India and South Korea have quite often been integrating sustainability issues into overall economic development plans. This change towards climate and energy cooperation is an important part of the international relations framework and an indication of transformation from a mere transactional engagement to a long-term strategic alignment of two countries.

Green Hydrogen and Ammonia: Building Long-Term Energy Interdependence

Green hydrogen is one of the most potential areas of collaboration between India and South Korea. Hydrogen, as a clean energy carrier, can help to decarbonise the industries that are very difficult to electrify, such as aviation, shipping, heavy industry, etc.

India's comparative advantage in green hydrogen lies in its low production cost due to its huge renewable energy resources. By increasing the production of green hydrogen, India intends to become a major exporter of hydrogen and its derivatives, e.g., green ammonia. South Korea is planning to import hydrogen by building the necessary import infrastructure as well as downstream applications such as fuel cells and industrial usage (IEA, 2025) since it does not have enough domestic energy resources.

A series of long-term contracts for green ammonia supply reveals that India-South Korea are becoming increasingly interdependent (Reuters, 2026). These contracts are not mere trade transactions; they are strategic arrangements that will act as the bedrock for future energy systems, indicating a shift from traditional fossil fuel trade toward green energy exchanges.

Besides, creating hydrogen value chains involves India and South Korea jointly leading to the development of comprehensive hydrogen ecosystems by investing in hydrogen production, transportation, storage, and use. This can leverage economies of scale as well as technological innovations at national levels.

Such alignment can help hydrogen technology and standardise regulatory norms globally in the future, allowing more seamless international trade. This will make both nations major players in the global hydrogen market.

Renewable Energy, Storage, and Digital Energy Systems

Hydrogen is a solution for the longer term; however, renewables still form the bedrock of the clean energy transition. India has considerably ramped up its solar and wind power capacities, thus entering the top renewable energy markets globally. Nevertheless, connecting renewables to the grid involves overcoming the issues of intermittency and attaining stability.

South Korea's expertise in energy storage and digital technologies is effectively addressing these issues. Sophisticated battery systems and smart grids, as well as energy management tools, can improve the sustainability and efficiency of the renewable energy supply (Economic Times Energy, 2025).

Collaboration in these areas can take various forms such as joint ventures, technology transfer, and research partnerships. For example, South Korean companies can financially assist India's energy storage sector, whereas Indian companies can supply scale and cost benefits. Similarly, partnership in smart grid technology will be helpful for energy conservation and lowering transmission losses.

Digitalisation is gradually becoming a major source of sustainability and innovation in energy systems. Data analytics, artificial intelligence, and the Internet of Things can be used to channel energy consumption and boost system performance.

The collaboration is progressively concentrated on urban energy systems, aligning with India's Smart Cities Mission and South Korea's decentralised energy and smart grid technologies. This partnership is aimed at making urban life more energy efficient and environmentally friendly.

Critical Minerals and the Geopolitics of Energy Transition

Energy transition largely relies on the availability of critical minerals, which are crucial for manufacturing clean energy technologies. However, the global distribution of these minerals is concentrated, resulting in geopolitical vulnerabilities. India and South Korea depend on imports of critical minerals like lithium, cobalt, and rare earth elements, which makes them susceptible to supply disruptions and price volatility, especially during geopolitical tensions (IEA, 2023).

In order to deal with these issues, both countries are emphasising diversifying their supply chains. To achieve that, they are not only investing in mining projects in third countries but also working towards domestic processing capabilities and encouraging recycling and a circular economy (Ministry of External Affairs, 2024).

In this regard, the concept of “friend-shoring” has been widely promoted, focusing on the partnership of trusted allies to secure critical resources. Through India-South Korea collaboration in this field, it is possible to upgrade supply chain resilience and lessen the dependency on dominant suppliers.

Also, collaboration in mineral processing and value addition can enable both countries to move up the value chain and decrease dependency on external processing hubs. It would strengthen economic resilience and also generate new industrial possibilities at a national level.

Industrial Decarbonisation and Technology Transfer

Industrial decarbonisation is one of the most difficult phases of the energy transition because it targets energy-intensive sectors such as steel, cement, and chemicals. Addressing this issue requires new technology and its implementation on a large scale.

South Korea has been at the frontline of developing industrial emissions reduction technologies, such as hydrogen-powered steel production and energy-efficient manufacturing processes (YNA, 2025). These developments can significantly lower the heavy industrial carbon emissions.

On the other hand, India's growing industrial sector represents a perfect setting for the implementation and expansion of such technologies. Bilateral cooperation may support technology transfer, joint research, and human resources development, thereby aiding India's industrial sector in going low-carbon. By embracing cleaner technologies, companies can tap into new markets and comply with changing environmental regulations.

Moreover, jointly initiated pilot projects and demo plants by Indian and South Korean companies can be the key to speeding up the commercialisation of these technologies. Such initiatives would settle doubts and attract investments and lead to the development of scalable models for industrial diffusion in other developing economies.

Energy Finance, Innovation, and Private Sector Role

The role of financial and innovation ecosystems in the India-South Korea relationship has been rarely highlighted. Transitioning to a clean energy economy requires a lot of capital, and raising funds is a key component of achieving this transition.

Financial entities and business organisations in South Korea have a great chance to invest in India's clean energy sector. The fast-growing startup scene in India holds potential for innovation in digital energy systems, energy storage and hydrogen technologies.

Facilitating partnerships between startups, academic and research institutions, and private companies can promote tech development and lead to product launches. These will lower prices and boost the large-scale adaptability of clean energy solutions at a lower cost.

Green financial products such as green bonds and blended finance methods can effectively boost bilateral collaboration. Integrating financial systems and regulatory norms will ease capital movements and reduce the investment risks associated with large-scale clean energy infrastructure projects.

Geopolitical and Indo-Pacific Implications

The India-South Korea clean energy partnership possesses significant geopolitical implications, especially in the Indo-Pacific area. Since both countries are looking forward to gaining self-sufficiency in single-source supply chains, their partnership is an initiative towards a more balanced and resilient regional order.

The two countries may take a lead in shaping global energy governance by encouraging transparency, sustainability, and cooperation. In addition, this kind of collaboration is suitable for economic development and technological cooperation in the Indo-Pacific. At the same time, it reveals the increasing role of energy diplomacy as a foreign policy instrument.

This can be perceived as an example of middle-power cooperation. It depicts how countries can cooperate without the involvement of major powers. They strengthen their strategic autonomy and simultaneously support the multilateral methods of climate and energy governance.

Challenges and Structural Constraints

Structural hurdles obstruct deeper ties between countries. Trade restrictions, inconsistent standards, and tangled logistics slow down the movement of goods and services. Green hydrogen remains expensive to roll out, stalling innovation in clean energy sectors.

Supply chains are confronted with volatility as a result of increasing demand for key minerals. Policy aspirations often do not adequately consider realities, especially in the case of building large infrastructures. Slow approvals and fragmented regulations make investment decisions more difficult and render cooperation, even for the long term, more vulnerable.

Way Forward

Policy synchronisation and stronger institutional ties are essential to carry forward the bilateral cooperation. Coordination across ministries and inclusion of private groups can help keep momentum going over time.

Bilateral teams focusing on hydrogen rules, key minerals, and digital energy might offer clearer direction. Joint efforts in research and physical upgrades can encourage growth in new industries.

Strategic intent reaches the field more effectively with consistent dialogue exchanges that keep plans focused and help translate vision into action on the ground.

Conclusion

The India-South Korea clean energy partnership is a strategic move towards the challenges of energy transition and climate change. By complimenting each other's strengths, the two nations can create resilient and eco-friendly energy systems.

In the dynamic global energy scenario, such a collaboration will become instrumental in determining the direction of climate action and economic growth. Hence, the India-South Korea collaboration can be considered a benchmark for successful international cooperation in the quest for sustainability and resilience.

The partnership's achievements will, in the end, hinge on its capability to turn plans into actual results. If India and South Korea manage to execute it properly, not only will it reshape their bilateral connections, but it can also make a substantial input to worldwide endeavours for a low-carbon and sustainable future.

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Ending Illegal Migration from Neighbouring Countries to India – Case Study of Assam

Abstract:

Illegal migration into India from neighbouring countries, particularly Bangladesh, presents multidimensional challenge impacting national security, socio-economic stability, and demographic composition. This paper examines drivers of such migration and critiques India's institutional response across legislative, administrative, and judicial domains. Special attention is given to Assam, state historically burdened by demographic shifts due to large-scale influxes of undocumented migrants. The study examines legislative interventions like IMDT Act, Section 6A of Citizenship Act, introduced under Assam Accord, highlighting their limited efficacy due to administrative lapses, political inertia, and legal ambiguities. The research underscores need for coordinated border management strategy leveraging technology, community participation, and diplomatic engagement for effective deportation and deterrence. It also advocates for judicial streamlining, centralized immigration databases, and humane detention practices. The paper explores socio-political consequences, including strain on welfare resources, risks of radicalization, and erosion of indigenous cultural identity in Assam. Concluding with call for pragmatic, legally sound and humane policy reforms, the study offers roadmap for balancing India's constitutional obligations with imperative to preserve national sovereignty and internal harmony.

Keywords: Illegal migrants, Assam, Citizenship Act, IMDT Act, foreigners, Assam Accord

Introduction

Illegal migration from neighbouring countries to India represents a multifaceted challenge that continues to test India's governance structures, security apparatus, and socio-economic resilience. Given India's geopolitical position, sharing extensive and porous borders with countries such as Bangladesh, Nepal, Pakistan, Myanmar and Bhutan, inflow of undocumented migrants has escalated in recent decades. This trend is propelled by variety of factors including poverty, political instability, ethnic and religious persecution, and environmental vulnerabilities in these neighbouring nations. While India has historically maintained a tradition of humanitarianism and openness, current scale and nature of illegal migration necessitate a comprehensive and coordinated policy response to protect national interests while preserving human dignity.

At heart of any sustainable solution lies imperative to strengthen border management systems. India's vast and difficult terrain borders remain vulnerable. Modernization of border infrastructure is urgently needed. Deployment of advanced technologies such as biometric entry-exit systems, electronic fencing, drones, radars, and thermal imaging can enhance real-time surveillance and reduce unauthorized crossings. A holistic border management approach would include integrating intelligence inputs and leveraging community participation, where local residents serve as vital eyes and ears, reporting suspicious activities and supporting enforcement. Investment in capacity building and training for border personnel is essential, equipping them to handle complex situations with both vigilance and empathy.

The judiciary plays indispensable role in shaping and enforcing immigration laws. Cases of illegal migration often become entangled in protracted legal battles where migrants seek to delay deportation through petitions and appeals. Courts must balance protection of individual rights with enforcement of national laws. Expedited hearings and clear judicial pronouncements are essential to discourage frivolous claims and to support government efforts in identifying and deporting illegal entrants. Judiciary's role in distinguishing between genuine refugees, who may require protection under international law, and economic migrants is vital to maintaining integrity of India's asylum policies. Judicial activism should complement executive actions, reinforcing legal environment that deters illegal entry and stay.

The responsibility of identifying and deporting illegal migrants rests primarily with executive branch. Government has faced significant challenges in streamlining this process due to fragmented data systems and diplomatic hurdles.

A centralized and digitized repository that integrates data from immigration checkpoints, police records and border patrol units is essential for accurate and timely identification of illegal migrants. Establishing specialized immigration enforcement units at central and state levels can enhance operational efficiency. Diplomatic engagement with neighbouring countries must be intensified to facilitate smooth and timely repatriation. Political sensitivities in source countries often delay deportation, necessitating robust bilateral agreements and confidence-building measures. In managing migrants awaiting deportation, humane detention facilities that adhere to international human rights standards must be established to ensure dignity and avoid adverse humanitarian implications.

Ramifications of unchecked illegal migration extend beyond administrative inconvenience; they have serious security and economic consequences. From security standpoint, illegal migrants can inadvertently or deliberately facilitate cross-border criminal activities such as drug trafficking, smuggling, and even infiltration by extremist groups. This risk is acute in border states facing insurgencies or communal tensions. Economically, influx of undocumented migrants places pressure on limited public resources, including healthcare, education, housing, and employment. Migrants often work in informal sectors under precarious conditions, which may depress wages and exacerbate unemployment among local populations. These dynamics contribute to social tension and undermine efforts toward inclusive development. Demographic shifts resulting from illegal migration can disrupt social cohesion and challenge implementation of welfare programs designed for citizen populations. Another sensitive but critical aspect of India's immigration policy concerns visa regime for Pakistani nationals, particularly those seeking visas on humanitarian grounds relating to divided families. While humanitarian concerns warrant empathy, evidence suggests that this visa category is increasingly exploited for unauthorized stays or illegal migration. Such misuse poses risks to national security. A comprehensive reassessment of this policy is required to introduce stringent verification mechanisms such as biometric authentication, time-bound visa validity, and mandatory exit procedures. Enhanced digitization of visa issuance and tracking systems would promote transparency and reduce abuse. Recalibrating this policy is imperative to safeguard national interests while accommodating genuine humanitarian cases.

Case Study of Illegal Migration in Assam

Changes in citizenship laws manifests politics of placemaking, marking out ethno-spaces and setting in motion of a process whereby citizen's association with descent is affirmed (Roy, 2014). One of most intense frontlines in India's battle against illegal immigration and democratic change is Assam, largest state in Northeast. Since independence, Assam has been hotspot of illegal migration from Bangladesh. There exists sufficient public database to suggest that approximately 40% of illegal migrants from Bangladesh have settled down in Assam.

While various steps have been taken by Government of India at various points of time over last several decades to stem migration, problem however continues to persist. At turn of last century, Assam's Muslim population stood at 12.4 percent. By time of first post-independence census in 1951, this figure had nearly doubled to 24.7 percent. As per 2011 Census, Muslim population in Assam further increased to 34.2 percent and is now estimated to have reached approximately 40 percent. Several districts—including Barpeta, Bongaigaon, Darrang, Goalpara, Hailakandi, Karimganj, Morigaon, Nagaon, Hojai, and South Salmara—report Muslim populations exceeding 50 percent (Majumder, 2024: 288).

Prior to independence, Assam was a Governor's Province. With partition of India, Pakistan emerged as two separate regions: West Pakistan and East Pakistan. A substantial wave of illegal migration from East Pakistan into Assam followed. Indian government enacted Immigrants (Expulsion from Assam) Act, 1950, to protect interests of indigenous Assamese communities (Tandon, 2022: 287–288). The legislation's statement of objects and reasons explicitly recognized disruptive impact of mass influxes from East Bengal on Assam's economy and internal security. Following this, 1951 Census saw preparation of first National Register of Citizens (NRC) for Assam, under direction of Ministry of Home Affairs. Despite creation of Bangladesh in 1971, illegal migration into Assam continued unabated. This demographic transformation was neither organic nor incidental; it was driven primarily by persistent and large-scale infiltration, particularly through riverine and porous border regions along Brahmaputra—from Dhubri to Darrang.

Over time, migrants dispersed into cities, towns, and rural areas, including tribal belts such as Bodoland, and autonomous councils of Tiwa, Mising, Karbi Anglong, and North Cachar Hills. Political motives—especially creation of loyal vote banks—combined with administrative corruption, civic apathy, and weak enforcement, contributed to systematic and sustained demographic shift. This transformation lies at heart of Assam’s contemporary political dynamics. The anti-immigrant Assam Movement of 1970s and 1980s revolved around “three Ds”: detection, detention, and deportation of illegal immigrants. Intensity of public unrest eventually led to signing of Assam Accord on August 15, 1985. The Accord, a tripartite agreement among Central Government, Assam Government, Assam Students’ Union (AASU), and All Assam Gana Sangram Parishad, aimed to safeguard cultural, economic, and political rights of indigenous Assamese (Majumder, 2024: 288).

In pursuit of these objectives, Illegal Migrants (Determination by Tribunal) Act, 1983 (IMDT Act), was enacted. Intended to expedite identification and deportation of illegal migrants in Assam, Act proved ineffective. Key flaw was burden of proof being placed on government, making enforcement cumbersome and administratively burdensome. The failure of Act led to its eventual invalidation by Supreme Court of India. Between 1980 and 1985, Assam witnessed widespread and often volatile agitations centered on migrant issue—culminating in Assam Accord, which is foundational document in Assam’s demographic and political discourse. If IMDT Act and 1983 state assembly election manifested tensions in processes of nationalisation of space, 1985 accord between Indian government and leaders of Assam movement and 1986 amendment in Citizenship Act of 1955, which inserted category of citizenship addressed exclusively to Assam, saw emergence of negotiated consensus (Roy, 2014). In 1971, in course of liberation war in Bangladesh, several lakhs of Hindu and Muslim refugees fled to Assam. In joint declaration on 8th February 1972, Prime Ministers of two countries assured ‘the continuance of all assistance to Bangladesh in the unprecedented task of resettling the refugees and displaced persons in Bangladesh’ (Baruah, 1999: 119). While not all refugees returned to Bangladesh, more migrants continued to cross border into Assam, presence of large number of ‘foreigners’ instilled a sense of unease at change of demography, language and access to resources, primarily land and employment, around which powerful popular movement wove itself (Roy, 2014). The Citizenship Act, 1955 amended in 1986, added Article 6A, which made way for a sixth category of citizenship along with the birth, descent, registration, naturalisation and by incorporation of foreign territory into India. The amended Act laid down that (1) all persons of Indian origin who came to Assam before 1st January 1966 from a specified territory (meaning territories included in Bangladesh) and had been ordinarily resident of Assam are considered as citizens of India from the date unless they choose not to be, (2) (a) person of Indian origin from the specified territories who came to India on or after 1st January 1966 but before 25th March 1971 and have been resident in Assam since and (b) have been detected in accordance with the provisions of the Foreigners Act, 1946 and Foreigners (Tribunals) Orders, 1964 (c) upon registration, will be considered as citizens of India, from date of expiry of period of ten years from date of detection as a foreigner. In interim period, they will enjoy all facilities, including Indian passports, but will not have right to vote. IMDT Act, was scrapped in 2005 by Supreme Court, removing what was largely seen in Assam as anomalous and unfair exception. In its judgment delivered on 12th July 2005, almost five years after petition seeking its repeal was made by Sarbananda Sonowal, a former President of AASU, former Member of Legislative Assembly (MLA) from Asom Gana Parishad (AGP) and Member of Parliament (MP), three judge Supreme Court bench declared certain provisions of IMDT Act as unconstitutional. While grounds on which Supreme Court declared the Act unconstitutional were specifically questions of legal procedure, general principles which were articulated in the process have ramifications for way in which terms of citizenship get defined and interpreted. While declaring IMDT Act unconstitutional, court described migration not only as ‘illegal’ entry into foreign territory, but as an act of aggression, arguing within a discursive framework that makes bounded notion of citizenship, with policing of boundaries and determination of citizenship construed as significant manifestation of state sovereignty. Assam movement, as campaign of 1980s came to be called, had at its core issue of outsiders in Assam, in particular, government’s policy of admission and enfranchisement of ‘foreigners’ of ‘illegal aliens’ from East Pakistan and later Bangladesh (Roy, 2014).

Assam Accord

The objective of 'Assam Accord' was to take appropriate steps towards arresting and containing illegal migration of foreigners into state of Assam. The Assam Accord provided the following:

- a) The cut-off date for detection and deletion of foreigners was fixed at 1.1.1966. Persons who came to Assam prior to 1.1.1966 were outside Assam Accord and were to be regularised.
- b) Persons who came to Assam between 1.1.1966 and 24.3.1971 were to be detected in accordance with Foreigners Act and Foreigners Tribunal Order. The names of such 'detected' persons would be deleted from electoral rolls and they would be required to get themselves registered with relevant registration offices. After period of 10 years from date of detection, names of such persons would be restored to electoral rolls.
- c) Essentially all illegal migrants who had come to Assam 25.3.1971 onwards would be expelled from India. All persons who were expelled earlier but have since re-entered Assam shall be expelled again.
- d) Provisions were made for adequate constitutional, legislative and administrative safeguards to protect, preserve and promote cultural, social, linguistic identity and heritage of Assamese people.
- e) Provisions in Assam Accord included securement of India's international border(s) with Bangladesh taking appropriate steps such as erection of physical barriers such as walls, wire fencing etc. at appropriate places, increased patrolling by security forces along international border, increasing number of check posts to prevent future infiltration. All necessary steps were to be undertaken to prevent infiltration, including construction of roads to facilitate patrolling, intensification of riverine patrolling etc.
- f) Enforcement of law restricting foreigners acquiring immovable property in Assam.
- g) Joint efforts of all stakeholders towards development and growth of Assam.

Introduction of Section 6A to Citizenship Act

Execution of Assam Accord was followed up by introduction of Section 6A in 1985, via Citizenship Amendment Act, 1985. Objective of introduction of Section 6A was to give effect to certain parts of Assam Accord, more particularly relating to detection and determination of foreigners and grant of citizenship. Statement of objects and reasons of this amendment indicated that its purpose was to give effect to Assam Accord and to grant deemed citizenship to all persons of Indian origin who came to Assam before 1.1.1966 including persons whose names were included in electoral rolls used for purpose of general election of 1967 and who have been ordinarily resident in Assam ever since and also to grant deemed citizenship, through registration, to those persons of Indian origin who came to Assam on or after 1.1.1966 but before 25.3.1971 from Bangladesh and have been ordinarily residents in Assam ever since.

Features of Section 6A of Citizenship Act

Region Specific Nature: Section 6A was specific to state of Assam for purpose of specifically addressing illegal migration from Bangladesh. (Tandon, 2022: 300)

Deemed Citizenship: All persons of Indian origin (from undivided India) who came from Bangladesh to Assam before 1.1.1966 and had since resided in Assam, were conferred 'deemed' Indian citizenship. 1.1.1966 was cut-off date for 'deemed Indian citizenship'. (Tandon, 2022: 300)

Registration: Persons who came to Assam between 1.1.1966 and 25.3.1971 and had resided in Assam since, were required to get themselves registered with appropriate registration authority. Further, such persons were to be disenfranchised for a period of 10 years. A core requirement for being eligible for registration was that person should have come to Assam after 1.1.1966 but before 25.3.1971 and resided continuously in Assam since then (Anil Barman v. Union of India, W.P.No. 266/2019 (10.6.2019, Guwahati High Court). Hence 'ordinary residence' in Assam was a condition precedent (Ashma Khatun v. Union of India, W.P. (C) No. 8592/2018 (30.1.2019, Guwahati High Court). Registration was mandatory requirement and could be either voluntary or pursuant to an order of Foreigners Tribunal (under provisions of Foreigners Act and Foreigners Tribunal Order) declaring concerned person to be foreigner (Declaration Order) (Tandon, 2022: 301).

Time Period for Registration: Registration was required to be made within following prescribed timelines: An application for registration was required to be made in prescribed form by registrant with registering authority. R. 19 (1) of Citizenship Rules, within period of 30 days from date of receipt of Declaration Order of Foreigners Tribunal. The period of 30 days could be extended by registering authority, for reasons recorded in writing, to maximum of 60 days (R.19(2) of Citizenship Rules) (Tandon, 2022: 301).

Extension of Time for Registration: During course of registration exercise, it came to attention of government that numerous persons who had been declared as foreigners by Foreigners Tribunal did not apply for registration in timely manner. Applications of large number of people were rejected for being belated. In some cases, post a Declaration Order, instead of obtaining a registration, these persons had managed to get their names included in electoral rolls. Such aspects came to light once 'quit India' notices were issued by authorities to such persons (Md. Samsul Haqu v. Member, Foreigner's Tribunal, W.P. (C) No. 464/2009 (7.9.2009, Guwahati High Court). The above issues were addressed by government by introduction of following one-time timelines in 2013 (R. 19 (2A) was introduced in Citizenship Rules with effect from 16.7.2013) (Tandon, 2022: 301).

Implementation of Assam Accord

Steps taken by Assam government towards implementation of Assam Accord are discussed below. On basis of information available on official website of Government of Assam, following progress has been made. (<https://assamaccord.assam.gov.in/portlets/assam-accord-and-its-clauses>).

Foreigners Issue: Clause 5 of Assam Accord contains provisions regarding detection and expulsion of foreigners from state of Assam (who have entered or re-entered post 24.3.1971). It also provides for registration and regularisation of (Assam domiciled) foreigners who have entered Assam within designated dates. The progress made is as follows: (Tandon, 2022: 339)

- a) The government has suitably strengthened its machinery for more effective and expeditious foreigner's detection and government detection.
- b) Thousands of re-infiltrators from Bangladesh have been detected and deported. This is continuous and ongoing process.
- c) There are about 100 Foreigners Tribunals functioning in Assam for detection and deportation of foreigners.

Preservation and Promotion of Cultural, Social, Linguistic Identity and Heritage of Assamese People: Clause 6 of Assam Accord requires provision of constitutional, legislative, administrative safeguards to protect, preserve and promote cultural, social, linguistic identity and heritage of Assamese population. The progress made is as follows: (Tandon, 2022: 339)

- a) Establishment of Srimanta Sankardeva Kalashetra Society which is committed to work for preservation, promotion and upliftment of people of Assam.
- b) Modernisation of Jyoti Chitran Film Studio and efforts to make studio film hub of entire north-eastern region.
- c) Financial assistance to satras of Assam as well as historic monuments for their preservation, protection and development.

Economic Development: Clause 7 of Assam Accord requires government to ensure all-round economic development of Assam. Following steps have been taken: (Tandon, 2022: 340)

- a) Construction of rail-cum-road bridge(s) over various places.
- b) Setting up of Numaligarh Refinery Ltd., which has displayed creditable performance since its commencement in 1999 and has been conferred status of Mini Ratna PSU.
- c) Reopening of Shil Ghat Jute Mill
- d) Setting up of Assam Gas Cracker Project
- e) Setting up of Indian Institute of Technology and other Central / State Universities.

Security of International Border: Clause 9 of Assam Accord mandates government to secure international borders to prevent infiltration from Bangladesh. This includes construction of physical barriers, fencing, patrolling, roads along border etc. The progress made is as follows: (Tandon, 2022: 340-341):

- a) Out of total length of 280 kilometres of Indo-Bangladesh border in Assam, 208 kilometres have been fenced.
- b) With respect to riverine / char area of border, feasibility study is ongoing for use of ‘high-tech physical and non-physical’ barriers to seal these areas.
- c) Floodlight work along border is in progress and numerous border check posts set up.

Prevention of Encroachment of Government Land: Clause 10 of Assam Accord mandates strict enforcement of laws to prevent encroachment of government lands and lands in tribal belts and blocks; and to evict unauthorised encroachers. Land administration is being done as per relevant provisions of Assam Land and Revenue Regulation 1886 and its rules (Tandon, 2022: 341).

Restricting Acquisition of Immovable Property: Clause 11 of Assam Accord mandates strict enforcement of laws to restrict acquisition of immovable property by foreigners in Assam. Efforts are made to strictly implement Assam Alienation of Land (Regulation) Act, 1980 (Tandon, 2022: 341)

Registration of Births and Deaths: Clause 12 of Assam Accord requires maintenance of birth and death registers. About 700 centres were set up in Assam by Health and Family Welfare Department to issue birth and death certificates. Steps are taken to computerise process and introduce online system (Tandon, 2022:342).

Illegal Migrants (Determination by Tribunals) Act, 1983 (IMDT Act)

IMDT Act, 1983 was part of ‘special measures’ taken by government to tackle illegal migration problem in Assam. Statement of Objects and Reasons of IMDT Act are as follows:

- a. Influx of foreigners who illegally migrated to India across borders of eastern and north-eastern regions and remained in India pose threat to integrity and security of said regions and substantial number of such foreigners who migrated into India after 25.03.1971 had, by taking advantage of circumstances of such migration and their ethnical similarity and other connections with people of India, illegally remained in India without having lawful authority to do so giving rise to serious problems.
- b. Continuance of such foreigners in India was detrimental to interest of India.

Assam Governor’s Report of 1998

Despite introduction of IMDT Act and Assam Accord, problem of illegal migration into Assam could not be curbed. In 1988, Governor of Assam submitted report to President of India on grave threat posed by influx of people into Assam from Bangladesh which highlighted dangerous consequences of large scale migration for people of Assam as well as India. The report warned that such unchecked migration would reduce indigenous people of Assam to minority in their own state and their cultural survival was in jeopardy, political control weakened and employment opportunities undermined (Tandon, 2022: 305-306).

Challenge to IMDT Act: Sonowal I Judgement

In 2004, writ petition titled Sarabanda Sonowal v. Union of India was filed in Supreme Court of India questioning constitutional validity of IMDT Act and IMDT Rules. Supreme Court while striking down IMDT Act and accompanying rules, made following directions:

- a. Provisions of IMDT Act were declared ultra vires and were struck down.
- b. Tribunals and appellate tribunals under IMDT Act were ordered to cease functioning.
- c. All cases pending before tribunals under IMDT Act would stand transferred to tribunals constituted under Foreigners Order, 1964 and would be decided in terms of Foreigners Act 1946 and Foreigners Order, 1964.

- d. Government authorities were permitted to initiate fresh proceedings under Foreigners Act 1946 against persons whose cases were yet to be referred to tribunals for any reason.
- e. All appeals pending in appellate tribunal under IMDT Act were directed to be abated.
- f. Government was directed to constitute sufficient number of tribunals under Foreigners Order, 1964 to effectively deal with cases of foreigners who had illegally come to Assam from Bangladesh.

Foreigners (Tribunals for Assam) Order, 2006

To overcome various observations and directions of Supreme Court in Sonowal I Judgement, Foreigners (Tribunals for Assam) Order, 2006 was promulgated on 10.02.2006 (2006 Order). 2006 Order supplanted Foreigners Order, 1964 so far as Assam was concerned. Foreigners Order, 1964 was made inapplicable to Assam and replaced with 2006 Order.

Sonowal II Judgement

The 2006 Order was challenged before Supreme Court by Sarbananda Sonowal and finally Supreme Court in which is commonly known as Sonowal II Judgement struck down 2006 Order for amongst others, being arbitrary, unreasonable, adversative to principles enshrined in Assam Accord and violative of Article 14 of the Constitution. Supreme Court opined that it appeared that 2006 Order had been issued just as cover up for non-implementation of directions issued in Sonowal I judgement. The 2006 order was unnecessary in light of Foreigners Act, 1946 and orders made thereunder, as well as directions issued in Sonowal I Judgement. The 2006 order did not serve purpose sought to be achieved by Foreigners Act, 1946 or Citizenship Act or obligations cast on central government to protect the nation in terms of Article 355 of the Constitution of India highlighted in Sonowal I Judgement. Supreme Court lamented that conduct of government in bringing out 2006 Order exhibited lack of will in ensuring that illegal migrants were evicted from India. Supreme Court opined that government had simply refused to implement Foreigners Act, 1946 and Foreigners Order 1964 in state of Assam or comply with directions of court in Sonowal I. Supreme Court also observed that while Foreigners Act placed ‘burden of proof’ on concerned person to show that he was an Indian citizen, this legal position was sought to be significantly altered by 2006 Order, which placed burden on tribunal itself to substantiate that a given person was a foreigner. This reversal in legal position was viewed by Supreme Court as detrimental to notion of removing illegal migrants from India. No rational reason has been put forward for excluding Assam from ambit of Foreigners Act, 1946 and Foreigners Order, 1964 and supplanting it with 2006 Order. Supreme Court quashed 2006 Order and directed government to implement its directions passed in Sonowal I Judgement.

Thana Level Committee (TLC)

Government of Assam had issued notification dated 25.05.2005 for constituting TLC for purpose of avoidance of harassment to genuine Indian citizens in name of detection of foreigners. TLC was to have advisory role and keep strict vigil against rumour mongers and ensure that no genuine citizen was harassed in any way in name of suspected foreigners. Any person within thana area could submit an application to concerned officer regarding presence of illegal migrants in area. On receipt of application, officer of thana was required to examine and verify same. Police station was required to apprise TLC of action taken on application. TLC was obligated to take all steps to ensure that there was no tension or misunderstanding among different communities living within thana area relating to issue of illegal migrants. TLC was required to ensure that no person took law into his hands in matter detecting suspected illegal migrants. Guwahati High Court in *State of Assam v. Jamait-E-Ulema-E-Hind* (2018 (4) GLT 264) struck down above notification dated 27.05.2005 and constitution of TLC on following premise: After declaration of IMDT Act as unconstitutional, there was no scope for concept of TLC. Foreigners Act, which was applicable for whole of India including Assam, left no scope for TLC and TLC has no authority to accept or verify illegal migrants petitions.

Assam NRC Judgement (Assam Public Works v. Union of India)

In 2012, large scale riots took place in Assam which led to filing of another set of petitions in Supreme Court. In batch of petitions, Section 6A of Citizenship Act was challenged. The other prayers of the said petitions included immediate deportation of illegal migrants from Assam and from India,

updating Assam NRC by taking into account NRC prepared in 1951 and taking the year 1951 as the base period for purpose of detection of illegal migrants (Judgement dated 17.12.2014 in a batch of petitions of Assam Sanmilita Mahasangha & Others v. Union of India, W.P. (C) No. 562/2012; Assam Public Works v. Union of India, W.P. (C) No. 274/2009 and All Assam Ahom Association & Ors. v. Union of India, W.P. (C) No. 876/2014). Petitioners in said petitions made slew of contentions before Supreme Court that sovereignty and integrity of India were at stake on account of influx of illegal migrants into India from neighbouring country. Influx of migrants was major cause of periodic clashes in Assam affecting law and order situation, including loss of life and property and culture of people was being eroded owing to large-scale illegal migration. Supreme Court made following set of observations:

- a. Supreme Court discussed various issues highlighted in White paper dated 20.10.2012 prepared by state of Assam on foreigner's issue to hold that very little had been done to implement promises set out in Assam Accord. The following issues were highlighted:
 - i. The set-up of foreign tribunals and their performance was questioned. It was noted that there was a large cumulative pendency of cases in tribunals which needed to be addressed.
 - ii. White Paper rued absence of proper procedure between governments of India and Bangladesh regarding deportation of illegal migrants. It was noted that deportation was being carried out through 'push back' method which was neither sufficient nor completely effective.
 - iii. The international borders with Bangladesh had not been secured. Large parts of border were still porous and required fencing.
- b. On Foreigners Tribunals, Supreme Court observed that number of tribunals set up were low resulting in low number of decisions by tribunals. Even 'push back mechanism' was not entirely successful because 'pushed back' persons would not be able to re-enter on account of porous borders.
- c. On porous borders, Supreme Court observed that large parts of borders were unfenced. Apart from Assam portion of border, even border with West Bengal and other north-eastern states was porous, thereby making it extremely easy to cross. The situation was contrasted with Indo-Pakistan border which was properly fenced and properly manned.
- d. Supreme Court directed union and state governments to take effective and expeditious steps to check above-mentioned issues which were resulting in mass migration, including fencing of borders, creating broader roads, installation of flood lights along the border, deployment of sufficient forces for proper patrolling etc. Supreme Court also requested Guwahati High Court to expedite selection process for members of foreigner's tribunal and also monitor functioning of tribunals.
- e. On issue of deportation, Supreme Court directed union government to enter into discussions with government of Bangladesh for streamlining deportation procedure.
- f. Supreme court directed government to conclude NRC in Assam in time-bound manner.
- g. Supreme Court stated that issues regarding challenge to unconstitutionality of Section 6A of Citizenship Act needed to be adjudicated by five judge bench of Supreme Court.

Assam NRC

Assam NRC exercise commenced post above discussed Supreme Court judgement and has been carried out under its supervision. The entire exercise took about five years and final draft of NRC was published on 31.08.2019. About 19 lakh people have been excluded from it. Foreigners Tribunals have taken a view that NRC list of 2019 is final NRC list (State v. Bikram Singha F.T. case No. 129/2017 & Police Enquiry No. TD/3654/98 (10.09.2021, Foreigners Tribunal II, Karimganj, Assam). Young leaders such as Shri. Sarbananda Sonowal and Shri. Himanta Biswa Sarma—both of whom subsequently served as Chief Ministers in Assam—emerged as vocal proponents of firm stance against illegal immigration. Despite their strong political positioning, actual implementation of deportation measures remained limited. As of 2020, only 329 out of approximately 1.43 lakh individuals declared as foreigners by Foreigners' Tribunals had been deported to Bangladesh.

Conclusion

Illegal migration from neighbouring countries to India presents complex challenge that demands well-calibrated, multidimensional strategy. While India's geopolitical location and humanitarian traditions have shaped its historical openness, scale, persistence, and evolving nature of undocumented migration necessitate decisive policy and institutional reforms. Strengthening border controls through modern surveillance technologies, biometric tracking, intelligent infrastructure, enhanced inter-agency coordination, is essential to deter unauthorized crossings. Judiciary must support firm enforcement of immigration laws, distinguishing between genuine asylum seekers and economic migrants while ensuring due process and rule of law. Improving government mechanisms for identification, data integration, and deportation, as well as streamlining functioning of Foreigners Tribunals, are critical to operational efficiency. Misuse of visa categories highlight urgent need for rationalized and secure visa policies. Public awareness, political resolve, and robust diplomatic engagement are indispensable for sustainable migration governance. India's commitment to justice and human rights must be balanced with imperatives of national security, demographic stability, and socio-economic equity. Only through comprehensive, pragmatic, and humane approach can India safeguard its sovereignty while preserving rights and dignity of individuals within its borders.

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