iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 12 **Issue:** III **Month of publication:** March 2024

DOI: https://doi.org/10.22214/ijraset.2024.58823

www.ijraset.com

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International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 12 Issue III Mar 2024- Available at www.ijraset.com

From Pokhran to Power Plants: Tracing the Evolution of Nuclear Policy in India

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Abstract: ***This research paper endeavors to comprehensively examine the nuanced trajectory of India's nuclear policy, unfolding from the watershed moment of the Pokhran nuclear tests in 1974 to its subsequent evolution in the context of energy security and strategic considerations. The paper meticulously navigates through historical milestones, policy shifts, and geopolitical dynamics that have shaped India's nuclear stance over the decades. The Pokhran tests, marked by the codename "Smiling Buddha," represented a seminal point in India's pursuit of nuclear capabilities, altering its strategic calculus and ushering in an era of cautious self-reliance. Subsequent to the tests, India faced international sanctions, leading to a reassessment of its nuclear policy to balance security imperatives with diplomatic considerations. The research scrutinizes the pivotal moments in India's nuclear journey, including the 1998 Pokhran-II tests that thrust India onto the global nuclear stage. The ensuing debates and negotiations, culminating in the India-US Civil Nuclear Agreement in 2008, further underscore the evolving nature of India's nuclear policy. The paper analyzes the dual-use nature of nuclear technology, exploring how India has sought to leverage its nuclear capabilities not only for strategic deterrence but also for meeting its burgeoning energy demands. The shift towards a more pronounced emphasis on nuclear energy, encapsulated in the ambitious "Three-Stage Nuclear Power Programme," reflects India's quest for energy security amid growing concerns about climate change and the need for sustainable development. Moreover, the research investigates the diplomatic intricacies of India's engagement with international non-proliferation regimes and assesses the implications of its evolving nuclear policy on regional stability. It sheds light on the challenges and opportunities presented by the Indo-US nuclear deal and India's entry into the Nuclear Suppliers Group (NSG). The paper concludes by offering insights into the contemporary landscape of India's nuclear policy, considering the interplay of domestic imperatives, technological advancements, and geopolitical realities. In essence, this research paper serves as a comprehensive and critical analysis of the multifaceted evolution of India's nuclear policy, emphasizing its transition from a position of strategic defiance to a more nuanced and integrated approach that balances security, energy, and global cooperation.***

Keywords: Pokhran, Nuclear Policy, Geopolitics, Security, Indo-U.S. Civil Nuclear Deal, Non-proliferation, Strategic Autonomy, Kudankulam Nuclear Power Plant, Credible Minimum Deterrent, Energy Security, NFU, PTBT, CTBT, NPT.

I. MEANING OF NUCLEAR POLICY AND NUCLEAR POLICY IN INDIA

Nuclear policy refers to a nation's stance, decisions, and actions regarding the development, deployment, and potential use of nuclear weapons. This multifaceted policy domain encompasses issues such as nuclear weapons proliferation, disarmament, non-proliferation agreements, arms control, nuclear energy development, and the overall strategic framework guiding a country's nuclear activities. It involves the formulation of principles, strategies, and doctrines that guide a nation's behavior in the nuclear realm, both domestically and in international relations. India's nuclear policy is an intricate and multifaceted framework shaped by a complex history and evolving security challenges within South Asia. It is fundamentally guided by the principles of "credible minimum deterrence" and "no first use" (NFU). The doctrine emphasizes nuclear weapons as a means of defense and retaliation, rather than offensive use. India's nuclear journey began in the 1960s, with its first nuclear test, codenamed "Smiling Buddha," in 1974. This landmark event positioned India as a nuclear-capable state, though it was labeled a "peaceful nuclear explosion". For decades, India maintained strategic ambiguity regarding its nuclear capabilities, neither confirming nor denying the possession of nuclear weapons. However, in 1998, India openly declared itself a nuclear power after conducting a series of nuclear tests. These tests sparked international criticism and sanctions but solidified India's position as a de facto nuclear weapons state.

The core pillar of India's nuclear policy is "credible minimum deterrence." This strategy entails possessing a nuclear arsenal that is sufficient to deter potential adversaries from launching a first strike. The focus is on maintaining a force that can survive a potential attack and inflict unacceptable damage in retaliation, thereby making the cost of any aggression too high. The NFU policy is a cornerstone of India's defensive approach. India pledges not to be the first to use nuclear weapons in a conflict. However, the policy allows for retaliation if India or its forces are subjected to a nuclear attack, or to an attack by biological or chemical weapons.

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The development of a nuclear triad has become a focal point of India's nuclear advancements. A triad refers to the ability to launch nuclear weapons by land, air, and sea, significantly enhancing the survivability of India's nuclear forces. Land-based capabilities include the Agni series of ballistic missiles, with varying ranges and capabilities. The air-based component is developing, with the potential inclusion of fighter jets like the Rafale and Sukhoi Su-30MKI, modified to carry nuclear weapons. The most significant stride has been towards the sea-based leg, with the indigenous development of nuclear-powered ballistic missile submarines (SSBNs) like the INS Arihant class.

A unique aspect of India's nuclear policy is its commitment to a strong command and control structure under civilian authority. The Nuclear Command Authority (NCA), composed of a Political Council chaired by the Prime Minister, and an Executive Council, is responsible for making all key decisions regarding the nuclear arsenal. This system ensures political oversight and reduces the risk of accidental or unauthorized use.

In addition to the key principles of minimum deterrence and NFU, India maintains a policy of 'non-use against non-nuclear weapon states'. This assures states without nuclear capabilities that India will not use these weapons against them.

India's nuclear policy faces numerous challenges, both domestically and internationally. The constantly evolving security dynamics of the region, particularly with respect to Pakistan and China, pose a considerable challenge. Modernization of nuclear arsenals by these neighboring countries leads to ongoing considerations about the efficacy of India's deterrent capabilities. Externally, India encounters pressure from the international community to join global non-proliferation initiatives like the Comprehensive Nuclear-Test-Ban Treaty (CTBT) and the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). Domestically, there is an active debate about the future of India's nuclear program, with some advocating for enhanced deterrence in light of regional security concerns and others promoting a more robust commitment to nuclear disarmament.

India's nuclear policy remains steadfast in principle but continues to adapt in the face of evolving security requirements and geopolitical complexities. It is a policy born out of necessity and shaped by the need for national defense in a challenging region while trying to adhere to principles of responsibility and restraint in the nuclear realm.

II. EVOLUTION OF NUCLEAR POLICY IN INDIA AND LATER DEVELOPMENTS

The evolution of India's nuclear policy has been a complex and multifaceted journey, marked by significant milestones, geopolitical shifts, and a delicate balancing act between security imperatives, international norms, and domestic energy needs. The initiation of India's nuclear program can be traced back to its first successful nuclear test, known as "Smiling Buddha," conducted on May 18, 1974, at the Pokhran Test Range in the Thar Desert. This test marked India's entry into the group of nuclear-armed nations and was a watershed moment that significantly altered its approach to nuclear weapons. The motivations behind the Pokhran tests were deeply rooted in India's security concerns, particularly perceived threats from its neighbors. The geopolitical context of the Cold War, regional power dynamics, and India's desire to establish a credible minimum deterrent all played crucial roles in shaping the decision to conduct nuclear tests. The 1974 tests were framed within the context of ensuring India's strategic autonomy and were met with a mixed international response. While some nations expressed concern over nuclear proliferation, India defended its actions by emphasizing the need for self-defense in a volatile regional security environment. In the aftermath of the Pokhran tests, India faced increased diplomatic isolation, particularly in the context of the Nuclear Non-Proliferation Treaty (NPT). The NPT, aimed at preventing the spread of nuclear weapons, was perceived by India as discriminatory, as it classified countries into nuclear-armed and non-nuclear-armed categories, with the former having certain privileges. India's refusal to sign the NPT underscored its commitment to an independent foreign policy and its rejection of what it viewed as a biased international nuclear order. The subsequent years saw India articulating its nuclear doctrine and policy with more clarity. In the late 1990s, India declared a No First Use (NFU) policy, signaling a significant shift in its nuclear posture. The NFU policy emphasized India's commitment to using nuclear weapons only in response to a nuclear attack, highlighting a defensive orientation. This doctrine aimed to assuage concerns about the potential for India to engage in nuclear brinkmanship and contributed to regional stability by underscoring the defensive nature of India's nuclear capabilities. Then comes the Focus on Minimum Credible Deterrence where India maintains a posture of "minimum credible deterrence", emphasizing that its nuclear weapons are solely for defensive purposes. This means India aims to keep a nuclear arsenal that is sufficient to deter a first strike from other nations, but not so extensive as to provoke an arms race.

India's nuclear policy evolved later too with the development of the Nuclear Triad: India is actively working towards developing a nuclear triad, which means having the capability to deliver nuclear weapons by land, air, and sea. This includes: Land-based: Ballistic missiles like the Agni series (Agni-I, II, III, IV, and V). Air-based: Fighter aircraft capable of carrying nuclear weapons, potentially including Rafale and Sukhoi Su-30MKI jets. Sea-based: Nuclear-powered ballistic submarines (SSBNs) such as the INS Arihant class.

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ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 12 Issue III Mar 2024- Available at www.ijraset.com

A pivotal moment in the evolution of India's nuclear policy occurred in 1998 when the country conducted a series of nuclear tests, once again at the Pokhran Test Range. These tests, conducted under the codename "Operation Shakti," marked a departure from India's earlier stance and represented a bold assertion of its nuclear capabilities. The international response to these tests was swift, with condemnation from various quarters and the imposition of economic sanctions. However, India's nuclear status was now irrevocably acknowledged, and the tests demonstrated a shift from the earlier ambiguity to a more assertive nuclear posture. In the early 2000s, the geopolitical landscape underwent significant changes with the end of the Cold War, and India sought to redefine its role in the global nuclear order. The Indo-U.S. Civil Nuclear Deal, signed in 2008, was a landmark agreement that marked India's reintegration into the international nuclear community. The deal granted India access to civilian nuclear technology and fuel, effectively recognizing it as a responsible nuclear state. This marked a strategic shift, with India aligning itself more closely with the global non-proliferation regime while still maintaining its commitment to strategic autonomy.

At the same time, India pursued an ambitious nuclear energy program as a crucial component of its overall nuclear policy. The establishment and expansion of nuclear power plants, such as the Kudankulam Nuclear Power Plant, showcased India's commitment to meeting its growing energy demands. Nuclear energy was seen as a means to diversify the energy mix, enhance energy security, and address environmental concerns by reducing dependence on fossil fuels. The challenges associated with the nuclear energy program included issues of safety, public perception, and technological capabilities. In conclusion, the evolution of India's nuclear policy reflects a nuanced journey characterized by strategic considerations, diplomatic maneuvering, and responses to evolving geopolitical dynamics. From the initial Pokhran tests to the articulation of a credible minimum deterrent, the declaration of a No First Use policy, and the subsequent engagement with the global nuclear community through the Indo-U.S. Civil Nuclear Deal, India's nuclear policy has adapted to changing circumstances while preserving its core principles. As India continues to balance its security imperatives with global expectations and domestic energy needs, its nuclear policy will remain a critical component of its national security strategy. The strategic relationship between India, Pakistan, and China plays a crucial role in its nuclear policy considerations. The continued nuclear development by both Pakistan and China influences India's security calculations. India continues to face pressure from the international community to join global non-proliferation treaties like the Comprehensive Nuclear-Test-Ban Treaty (CTBT) and the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). There is some ongoing domestic debate in India about the necessity and future trajectory of its nuclear program. Some advocate for stronger deterrence measures, while others call for a more active role in global nuclear disarmament efforts. India's nuclear policy is likely to retain a strong focus on deterrence. The country is expected to continue modernization efforts towards a robust nuclear triad and to further refine its nuclear doctrine. Simultaneously, India will likely face ongoing international calls for disarmament and greater engagement in nonproliferation efforts.

Subsequently, the evolution of India’s Nuclear policy can be also divided into phases like pre-independence period, then the Post-independence period and the Nehruvian era where India's post-independence period witnessed a nuanced evolution of its nuclear policy, prominently shaped during the Nehruvian era. Jawaharlal Nehru, India's first Prime Minister, articulated a distinct stance on nuclear weapons, advocating for disarmament and international cooperation. This commitment to peace was reflected in India's approach to the global nuclear order, with Nehru pushing for a nuclear weapons-free world. However, the geopolitical realities of the Cold War and regional security concerns compelled India to reconsider its position. The 1962 Sino-Indian War and the 1964 Chinese nuclear test intensified India's security apprehensions, prompting a reassessment of its nuclear policy. By the late 1960s, under Prime Minister Indira Gandhi, India began to prioritize strategic self-reliance and conducted its first nuclear test, "Smiling Buddha," in 1974. This marked a significant departure from the Nehruvian vision, underscoring India's determination to secure its national interests through a credible nuclear deterrent. The post-independence period and the Nehruvian era thus illustrate the dynamic interplay between idealistic aspirations for disarmament and the pragmatic pursuit of national security imperatives in shaping India's nuclear policy.

Then comes the period of Pokhran I (1974) and the Indira Gandhi era as already discussed above, next phase which is the Post-Pokhran I to the 1998 tests where the Rajiv Gandhi Plan was very important part. Rajiv Gandhi's Action Plan for a Nuclear-Weapons-Free and Nonviolent World Order, proposed in 1988, stands in contrast to India's overall nuclear policy. While India has developed nuclear weapons and maintains a credible minimum deterrence, Gandhi's plan advocated for complete global nuclear disarmament in a phased and verifiable manner. This idealistic vision aimed to eliminate the threat of nuclear weapons altogether. However, the plan did not gain traction with existing nuclear powers, and India itself hasn't pursued complete disarmament. Despite this, India still emphasizes disarmament goals within its nuclear doctrine, reflecting the Gandhi plan's underlying desire for a world free from nuclear weapons.

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The next phase in the evolution of India's nuclear policy is the strategic doctrine or the nuclear doctrine which has been already mentioned and discussed in the beginning as an overview with that the post-1998 developments as a later phase and India's efforts to engage in civil nuclear cooperation. India has engaged in civil nuclear cooperation with various countries, including Russia, France, and Canada, fostering partnerships for nuclear energy development, research, and collaboration. These efforts are driven by India's commitment to achieving energy security and sustainability while adhering to rigorous non-proliferation standards. However, challenges such as liability concerns and the need for harmonizing international regulations have posed hurdles in expanding these collaborations. Nonetheless, India's persistent efforts to engage in civil nuclear cooperation underscore its commitment to leveraging nuclear technology for peaceful purposes while navigating the complexities of the global nuclear order.

The relations of India with Pakistan and China where India's nuclear policy is heavily influenced by its relationships with both Pakistan and China. Pakistan's nuclear weapons program, seen as a response to India's, fuels a regional arms race and creates a constant threat of escalation in conflicts. China, on the other hand, is a larger nuclear power with a disputed border with India. While tensions exist, their nuclear doctrines are more stable. This complex situation shapes India's nuclear strategy, with some prioritizing deterrence against Pakistan and others emphasizing a broader capability to counter China and ensure strategic independence.

India's stance on non-proliferation and disarmament is complex. It advocates for complete nuclear disarmament but criticizes the existing treaties like the Non-Proliferation Treaty (NPT) for being discriminatory, as they allow established nuclear powers to keep their arsenals while restricting others. India maintains a no-first-use policy and observes a testing moratorium, but hasn't signed the Comprehensive Test Ban Treaty (CTBT). It emphasizes universal and verifiable disarmament but believes established powers need to show greater commitment before India commits to total elimination. India's nuclear policy has undergone significant shifts. Initially, it pursued "nuclear ambiguity," advocating for disarmament globally while developing its own capabilities. This culminated in a peaceful nuclear explosion (PNE) in 1974, defying international norms. After facing sanctions, India continued a slow build-up, only declaring itself a nuclear weapon state after conducting further tests in 1998, following similar actions by Pakistan. Since then, India has adopted a "minimum credible deterrence" doctrine, focusing on a lean arsenal sufficient to deter attacks. Recent developments include a possible shift towards a more robust deterrent with longer-range missiles, potentially influenced by China's growing nuclear power. India's nuclear policy has significant implications for regional and global security. On the one hand, it contributes to deterrence stability in South Asia. A credible minimum deterrence posture with Pakistan discourages large-scale conventional war due to the risk of escalation. However, tensions and a history of conflict with Pakistan raise concerns about accidental use or miscalculation. Additionally, India's nuclear ambitions, particularly if they move towards a larger arsenal, could trigger a regional arms race with China, further complicating the strategic landscape. Globally, India's stance on disarmament complicates efforts towards non-proliferation. While advocating for disarmament goals, its unwillingness to join certain treaties weakens the global norm against nuclear weapons. Ultimately, the direction of India's nuclear policy will influence whether it contributes to a more stable and secure world or fuels regional anxieties and undermines global disarmament efforts.

The future of India's nuclear policy faces several potential trajectories. One path involves India continuing to refine its "minimum credible deterrence" strategy, focusing on maintaining a survivable and effective nuclear force to deter both Pakistan and China. Another possibility is a more assertive posture, potentially including a larger and more diverse arsenal, influenced by China's nuclear expansion. Additionally, India might push for reforms in the global non-proliferation architecture, seeking a more equitable system before committing to deeper disarmament steps. The chosen path will likely depend on the evolving security environment, particularly India's relations with Pakistan and China, as well as progress towards broader international nuclear disarmament efforts.

III. LITERATURE REVIEW

The literature surrounding the evolution of nuclear policy in India offers a comprehensive understanding of the historical, geopolitical, and strategic dimensions that have shaped the country's trajectory from the Pokhran nuclear tests to the development of nuclear power plants. The seminal work of George Perkovich, "India's Nuclear Bomb: The Impact on Global Proliferation," provides an in-depth analysis of the events leading up to the 1974 Pokhran tests and their aftermath. Perkovich explores India's motivations, including security concerns vis-a-vis China and the perceived discriminatory nature of the global nuclear order. His work forms a foundational basis for understanding the roots of India's nuclear ambitions and the subsequent evolution of its policy.

Building on this foundation, the writings of K. Subrahmanyam, a key architect of India's nuclear doctrine, contribute significantly to the literature. His seminal paper "India's Nuclear Policy" delves into the strategic thought behind India's decision to conduct the Pokhran tests in 1998, emphasizing the quest for a credible minimum deterrent. Subrahmanyam's insights illuminate the domestic and international factors influencing India's nuclear policy, providing a crucial perspective on the strategic rationale and the defensive posture articulated by India in the aftermath of the tests.

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Further contextualizing the international dimensions of India's nuclear journey, the works of Ashley J. Tellis, particularly "India's Emerging Nuclear Posture: Between Recessed Deterrent and Ready Arsenal," offer a detailed examination of India's nuclear doctrines and the implications of its evolving posture. Tellis dissects the significance of the Indo-U.S. Civil Nuclear Deal, portraying it as a transformative moment in India's engagement with the global nuclear community. His analysis sheds light on how India strategically balanced its security imperatives with diplomatic initiatives to secure its nuclear future in the international arena.

In understanding the domestic implications and challenges associated with India's nuclear policy, M.V. Ramana's "The Power of Promise: Examining Nuclear Energy in India" presents a critical examination of India's nuclear energy program. Ramana delves into the complexities of nuclear power expansion, addressing issues of safety, public perception, and technological capabilities. His work is instrumental in comprehending the domestic dynamics that shape India's pursuit of nuclear energy as a key component of its broader nuclear policy.

The intersection of history, strategy, and geopolitics is masterfully explored in Rajesh Basrur's "Minimum Deterrence and India's Nuclear Security." Basrur navigates through the historical context of India's nuclear ambitions and the articulation of a minimum deterrence policy. He provides insights into the challenges and nuances associated with maintaining a credible deterrent while avoiding arms races, contributing to a holistic understanding of India's nuclear strategy.

A more recent addition to the literature is the edited volume "India's Nuclear Policy," featuring contributions from prominent scholars such as Bharat Karnad and Rajesh Rajagopalan. This comprehensive collection analyzes India's nuclear policy in the contemporary geopolitical landscape, encompassing issues ranging from non-proliferation challenges to regional security dynamics. The diverse perspectives offered in this volume contribute to a nuanced understanding of the complexities shaping India's nuclear policy.

In conclusion, the literature review reveals a rich tapestry of scholarship that comprehensively explores the evolution of India's nuclear policy. From Perkovich's foundational insights into the genesis of India's nuclear program to Subrahmanyam's strategic analysis and Tellis's examination of international dimensions, these works collectively contribute to a nuanced understanding of India's nuclear journey. Ramana and Basrur's focus on nuclear energy and deterrence strategies, respectively, further enrich the literature by addressing domestic challenges and strategic considerations. The more recent edited volume offers a contemporary overview, demonstrating the continued relevance and evolution of India's nuclear policy in the 21st century.

IV. RESEARCH GAP

While existing literature has extensively explored the historical events and geopolitical considerations surrounding India's nuclear policy, there is a noticeable research gap regarding the nuanced interplay between India's nuclear weapons program and its nuclear energy endeavors. The literature tends to focus predominantly on either the security and strategic aspects of India's nuclear policy or the domestic implications of its nuclear energy program. However, there is a dearth of comprehensive studies that systematically trace the intricate connections and tensions between these dual facets of India's nuclear trajectory.

Understanding how the development of nuclear weapons, particularly the Pokhran tests and subsequent strategic decisions, has influenced or shaped the concurrent expansion of nuclear power plants is crucial for a holistic comprehension of India's nuclear policy evolution. Additionally, the research gap extends to the examination of the socio-political and environmental consequences of this dual pursuit. Exploring how public perception, political dynamics, and environmental concerns interact with both the nuclear weapons and energy dimensions would provide a more comprehensive understanding of the challenges and opportunities embedded in India's nuclear policy evolution.

By addressing this research gap, the study aims to contribute significantly to the existing body of knowledge, providing a nuanced analysis that bridges the divide between security-driven nuclear strategies and the imperative for sustainable and secure nuclear energy development in India.

V. RESEARCH OBJECTIVES

The research objective of this study is to comprehensively trace the evolution of India's nuclear policy from the landmark Pokhran nuclear tests in 1974 to the contemporary emphasis on nuclear power plants. The primary focus is on understanding the interconnected dynamics between India's pursuit of nuclear weapons and its development of nuclear energy capabilities. By examining the geopolitical, strategic, and domestic factors influencing this evolution, the research aims to provide a nuanced understanding of how India's nuclear policy has adapted over time, addressing gaps in the existing literature and shedding light on the intricate relationship between national security imperatives and energy considerations.

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A. *Hypothesis*

The hypothesis of this research posits that the evolution of India's nuclear policy, spanning from the Pokhran tests to the development of nuclear power plants, reflects a complex interplay between security imperatives, geopolitical considerations, and the pursuit of sustainable energy sources.

It is hypothesized that the strategic decisions surrounding nuclear weapons development have influenced the trajectory of nuclear energy initiatives, and vice versa. By tracing this evolution, the study aims to uncover patterns, correlations, and causal relationships that contribute to a more comprehensive understanding of India's multifaceted nuclear policy.

VI. FINDINGS

1) *Historical Context of Pokhran Tests:* The Pokhran nuclear tests in 1974 marked India's entry into the nuclear club, driven by security concerns and the desire for strategic autonomy. International reactions varied, contributing to India's sense of isolation but also solidifying its identity as a nuclear-armed state.
2) *Strategic Shift in 1998:* The series of nuclear tests in 1998 signaled a strategic shift, emphasizing a credible minimum deterrent and challenging the existing global nuclear order. The declaration of a No First Use (NFU) policy showcased a commitment to a defensive posture.
3) *Geopolitical Dynamics:* Changing global geopolitics, post-Cold War, influenced India's approach to nuclear weapons and its quest for global recognition. The Indo-U.S. Civil Nuclear Deal in 2008 marked a significant turning point, integrating India into the global nuclear community.
4) *Dual Pursuit of Weapons and Energy:* The pursuit of nuclear weapons and nuclear energy coexisted, with both influencing and shaping each other. The challenge of balancing energy needs with global non-proliferation norms became evident in policy decisions.
5) *Nuclear Energy Expansion:* The establishment and expansion of nuclear power plants, exemplified by the Kudankulam Nuclear Power Plant, reflected India's commitment to diversify its energy mix. Challenges in public perception, safety, and technological capabilities emerged, impacting the pace of nuclear energy growth.
6) *Domestic Dynamics:* Public perception and political dynamics played a crucial role in shaping India's nuclear policy, especially concerning safety concerns associated with nuclear energy. The socio-political landscape influenced the prioritization of nuclear weapons vis-a-vis nuclear energy.
7) *Environmental Considerations:* The dual pursuit had environmental ramifications, with discussions on the ecological impact of nuclear weapons tests and the safety of nuclear power plants. Balancing energy security with environmental sustainability emerged as a critical challenge.
8) *Landscape:* The present nuclear policy landscape reflects India's strategic autonomy, adherence to non-proliferation norms, and a simultaneous commitment to sustainable energy solutions. Continued engagement with the international community shapes India's role in the evolving global nuclear order.

These findings collectively illustrate the complex evolution of India's nuclear policy, emphasizing the interconnected nature of its pursuit of nuclear weapons and nuclear energy, influenced by historical, geopolitical, domestic, and environmental factors.

VII. RECOMMENDATIONS

1) *Integrated Policy Framework:* Develop an integrated framework aligning nuclear weapons and energy pursuits.
2) *Public Engagement:* Enhance public awareness and engagement on nuclear policy issues.
3) *International Collaboration:* Strengthen international collaborations in nuclear energy and non-proliferation.
4) *Commitment to Non-Proliferation:* Reinforce commitment to non-proliferation through active participation in disarmament efforts.
5) *Investment in Advanced Technologies:* Allocate resources for research in advanced, safe, and sustainable nuclear technologies.
6) *Strategic Diplomacy:* Engage in strategic communication and diplomacy to build trust and showcase responsible nuclear behavior.
7) *Regular Policy Review:* Establish a mechanism for periodic review and adaptation of nuclear policy.
8) *Sustainable Development Integration:* Integrate nuclear policy with broader sustainable development goals.

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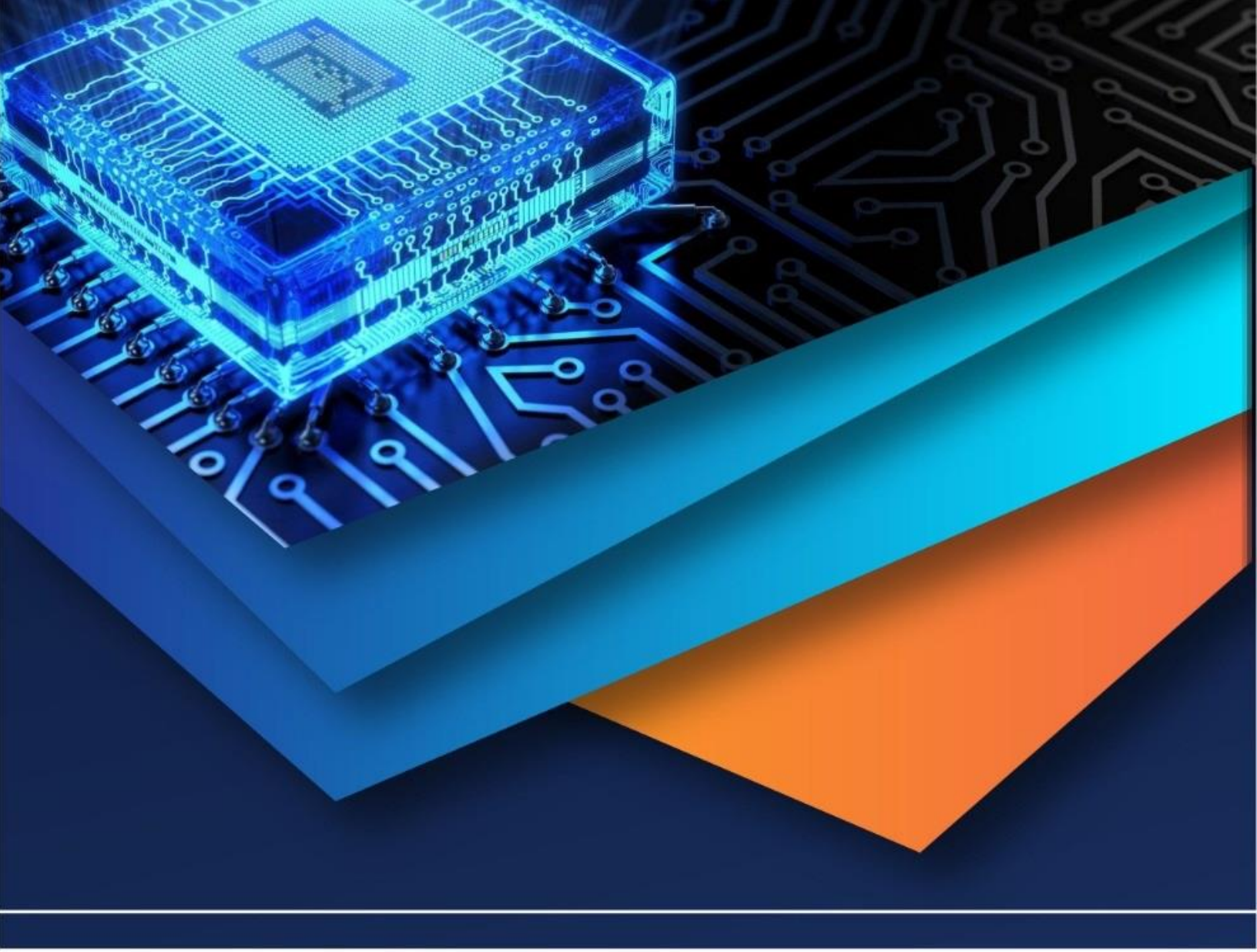
VIII. CONCLUSION

In conclusion, the evolution of India's nuclear policy, as traced from the Pokhran tests to the current emphasis on nuclear power plants, represents a complex and interconnected journey. The nation's pursuit of nuclear weapons and nuclear energy has been shaped by a dynamic interplay of geopolitical, security, and domestic factors. From the strategic shift post-Pokhran to the integration into the global nuclear order with the Indo-U.S. Civil Nuclear Deal, India's nuclear trajectory reflects adaptability amid changing global landscapes. The dual pursuit of nuclear weapons and energy introduces challenges requiring an integrated policy approach. As India navigates its nuclear future, it is crucial to balance security imperatives with sustainable development goals, foster international collaborations, and engage the public transparently to ensure a responsible and secure nuclear future.

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