# Conceptual Assessment of NFU – Case Study of India

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## Abstract

*No-First-Use (NFU) of nuclear weapons is a declaratory commitment that a nuclear armed state makes to assure potential adversaries that it will not be the first to use nuclear weapons in a crisis. This commitment is often seen as a restraint measure to minimize the chances of actual use of nuclear weapons. This research paper offers conceptual assessment of NFU and explains why other states remain skeptical of adversary's stated pledge to adhere to NFU during a possible crisis situation. The paper comprises of two sections. The first section analyzes the theoretical aspects of an NFU policy and identifies the essential elements of nuclear posture that a claimant state is required to ensure. The second section evaluates evolving nuclear posture of India in the light of identified criteria for a credible NFU policy. By analyzing the consistency between New Delhi's declared commitment and its force posture, the paper concludes that India's shift towards counterforce targeting strategy inherently contradicts the NFU policy.*

**Key Words:** No-First-Use, Strategic Stability, CBMs, Nuclear Deterrence, Counter Force.

## Introduction

While the international community fails to meaningfully approach the broader goal of eliminating nuclear weapons, there is a general

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agreement on the significance of reducing reliance on nuclear capability in national security strategies of nuclear armed states.[2] Practically, there has been little progress towards this end and nuclear modernization trend is on the rise.[3] Risks of use of nuclear weapons have increased recently due to evolving technological developments, setbacks to nuclear arms control, growing political tensions among major powers,[4] and belligerent behavior of leadership during crises by threatening the actual use of nuclear weapons that brings a conflict to brink of nuclear war.[5]

The goal of reducing reliance on nuclear weapons directly depends upon the nuclear postures and policy declarations made by the nuclear weapons' states. However, many of these states follow aggressive postures whereby they not only modernize the nuclear arsenals but also elevate the threats to use these weapons. For instance, the US Nuclear Posture Review (NPR) 2018 hinted at Trump administration's greater willingness to use nuclear weapons in a first

[2] North Atlantic Treaty Organization, "Brussels Summit Communiqué issued by Head of States and Government Participating in the meeting of North Atlantic Council in Brussels 14 June 2021," *Press Release*, June 14, 2021, Available at: https://www.nato.int/cps/en/natohq/news_185000.htm (accessed on 23 July 2021).

[3] Aiden Warren and Philip M. Baxter (eds.), *Nuclear Modernization in the 21st Century: A Technical, Policy, and Strategic Review* (Oxon: Routledge, 2020); Adam B. Lowther and Stephen J. Cimbala, (eds.), *Defending the Arsenal: Why America's Nuclear Modernization still matters* (New York: Routledge, 2017); Amy F. Woolf, *Russia's Nuclear Weapons: Doctrine, Forces and Modernization* (Washington DC: Congressional Research Service, 2021).

[4] Tytti Erästö and Petr Topychkanov, "Towards Greater Nuclear Restraint: Raising the Threshold for Nuclear Weapon Use," Report No. 2020/6 (Stockholm: SIPRI Insights on Peace and Security, May 2020), 3.

[5] Jeffrey Lewis, ""Night of Murder": On the Brink of Nuclear War in South Asia," *Nuclear Threat Initiative*, November 6, 2021, Available at: https://www.nti.org/analysis/articles/night-murder-brink-nuclear-war-south-asia/ (accessed on 8 November 2021).

strike.[6] NPR 2018 outlined close integration of conventional and nuclear forces and broadened the range of possible circumstances under which Washington might consider using nuclear weapons. It noted that the US nuclear capability contributes to "deterrence of nuclear and non-nuclear attack, assurance of allies and partners, achievement of the US objectives if deterrence failed, and the capacity to hedge against an uncertain future."[7]Although some argue that the US must consider declaring the pledge to not use nuclear weapons first in a crisis, the US allies would see it as a sign of weakness raising questions about Washington's commitment towards extended nuclear deterrence for mutual defence.[8]

Such global trends constrain the commitments to not use nuclear weapons first in a crisis situation – which is otherwise considered a significant restraint measure. While most of the nuclear armed states retain the option of first use of nuclear weapons even against a conventional threat, China and India claim adherence to NFU policy.[9] The extent to which these states actually adhere to this commitment and the degree of consistency between their declaratory policies and force postures vary to a greater degree from each other. China has consistently maintained its decade long unconditional NFU

[6]U.S. Department of Defense, *Nuclear Posture Review 2018* (Washington DC: February 2018), 4, Available at: https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF (accessed on 19 July 2021).

[7] Ibid.

[8]George Perkovich and Pranay Vaddi, *Proportionate Deterrence: A Model Nuclear Posture Review* (Washington DC: Carnegie Endowment for International Peace, January 2021), 14, Available at: https://carnegieendowment.org/files/Perkovich_Vaddi_NPR_full1.pdf (accessed on 4 May 2021).

[9]People's Republic of China, *China's National Defense in the New Era*, The State Council, Edition 2019 (Beijing: Information Office, July 24, 2019), 9, Available at: http://english.www.gov.cn/archive/whitepaper/201907/24/content_WS5d3941ddc6d08408f502283d.html (accessed on 4 June 2021).

pledge by relying on posture of assured retaliation and eschewing strategies for pre-emptive use of nuclear weapons despite confronting a range of conventional counterforce threats to its retaliatory capability.[10] On the contrary, India's NFU pledge remains dubious wherein several statements by Indian officials have further eroded its credibility.

This paper analyzes the significance of NFU as a credible policy and identifies the required nuclear posture that could justify this claim. It takes India's nuclear policy as a case study to go beyond often quoted Indian officials' statements showing interest to revise the NFU and analyzes the inconsistency between New Delhi's declared commitment and its evolving nuclear posture. Hence, the paper is divided into two sections. The first section discusses the conceptual aspects of NFU. While most of the existing debate on NFU considers this political commitment as a measure of restraint, there is little focus on correlation between this commitment and nuclear posture of a state declaring this policy. Hence, by taking into account the factors that inherently keep a state skeptical of adversaries' NFU declaration, the first section of the paper primarily addresses two questions. First, can NFU serve as a CBM between nuclear adversaries? Second, what does it take to ensure a credible NFU posture?

The second section of the paper discusses India's nuclear posture as a case study to assess and validate the conceptual underpinnings from the first section. A nuclear weapons state's commitment about whether or not it intends to use its nuclear capability first in a crisis directly impacts deterrence and strategic

[10]Tong Zhao, "China and the international debate on no first use of nuclear weapons," *Asian Security*, Ahead of Print (December 2021), 8, Available at: DOI: https://www.tandfonline.com/doi/epub/10.1080/14799855.2021.2015654?needAccess=true (accessed on 22 December 2021).

stability by shaping the perceptions of both friends and adversaries.[11] In the light of India's nuclear posture, this paper critically evaluates the efficacy of India's proposal for bilateral NFU agreement with Pakistan and willingness to negotiate global NFU treaty. This assessment explains why other states do not consider these proposals as credible and tangible CBMs and helps to understand how NFU serves political interests of India.

To study this phenomenon, this paper employs deductive reasoning and qualitative research methodology that uses explanatory and critical analyses methods. It uses secondary research techniques including synthesis of existing literature on conceptual dimensions of NFU and ongoing scholarly debate regarding India's evolving nuclear posture. While particularly focusing on the latter, the paper uses interpretivist epistemology to analyze key drivers behind India's changing strategic thinking. Hence, the case study technique is the main thrust of this paper to assess conceptual validity and explore causal relationship between effectiveness of NFU as a declaratory commitment and a state's nuclear posture.

## Debating NFU – Conceptual Underpinnings and Operational Requirements

NFU is a political commitment made by a nuclear armed state to signify that its nuclear capability is confined only to mission of deterrence and shall not be used first under any circumstances, neither as a pre-emptive strike nor as a response to non-nuclear attack by the adversary.[12] This commitment relies primarily on the principle of nuclear weapons being used only as a weapon of last resort in a

[11] Brad Roberts, "Debating Nuclear No-first-use, Again," *Survival: Global Politics and Strategy*, Vol. 61, no. 3 (2019), 39.

[12] Ankit Panda, "No First Use and Nuclear Weapons," (New York: Council on Foreign Relations, July 17, 2018), Available at: https://www.cfr.org/backgrounder/no-first-use-and-nuclear-weapons (accessed on 31 August 2021)..

retaliatory strike in case the adversary uses the same first in a crisis. Nevertheless, the term last resort itself is a subjective notion that allows the decision maker to employ nuclear weapons according to its own perceived threshold—that could even be at the start of a conflict. NFU commitment requires that a nuclear armed state would only authorize the use of its nuclear capability if attacked first by the same. Thus, it constitutes a defensive nuclear strategy based on the pledge that a nuclear armed state does not intend to use these weapons as means of warfare and aggression, rather only aims to deter potential nuclear attack.[13] While this commitment reduces the possibility of unintended or accidental use of nuclear weapons, it signifies restrained nuclear posture and thus is often considered as a confidence building measure (CBM).[14]

**NFU as a Measure of Restraint**

Despite broader agreement on deterrent role of nuclear weapons, there have been differing views on the usability of this capability. The most convincing among these perspectives was given by scholars like Bernard Brodie, who considered this technology as a tool for deterrence with the sole purpose to avert wars.[15] The dominance of deterrence perspective, based on the threat of punishment, is hallmark of theory of nuclear revolution which emphasized that adversaries' ability to destroy each other had made wars less likely.[16] The atomic stalemate receded the probability of war. Owing to this logic of mutually assured destruction (MAD), the idea of using nuclear weapons

[13] Zhenqiang Pan, "A Study of Chinas No-First-Use Policy on Nuclear Weapons," *Journal for Peace and Nuclear Disarmament*, Vol. 1, no. 1 (2018), 115.

[14] Liu Huaqiu and Zheng Hua, "Confidence-building Measures in Asia," in *Chinese Perspectives on Confidence-building Measures*, ed. Michael Krepon (Washington DC: The Henry L. Stimson Center, 1997), 6.

[15] Bernanrd Brodie (ed.), *The Absolute Weapon: Atomic Power and World Order* (New York: Harcourt, 1946), 214.

[16] Sufian Ullah, "Arms Control in Crisis: An Assessment of Contemporary Trends," *IPRI Journal*, Vol. 20, no. 2 (Summer 2020), 124.

against a nuclear armed adversary appeared suicidal. Hence, the threat of retaliation, being the core element of deterrence strategy, prevents the states from actually using nuclear weapons.[17] This aspect forms the basis of NFU to be considered as a measure of restraint. The unwavering adherence to this commitment can potentially enhance first-strike stability[18] and crisis stability[19] between the adversaries. Consequently, if all the nuclear armed states adhere to not using nuclear capability against their adversaries, it would complement the larger goal of disarmament by helping them pursue global zero.

However, this optimism rests on idealistic considerations and has not been able to fully impact policy considerations of nuclear armed states, as they often see at least two other potential uses of this capability than just deterring their use by the adversary. First, 'cross deterring' the use of other weapons of mass destruction.[20] For

[17] Klaus-Dieter Schwarz, "The Future of Deterrence," (Berlin: Stiftung Wissenschaft un Politik German Institute for International and Security Affairs, June 2005), 7, Availableat: https://www.swp-berlin.org/publications/products/research_papers/Microsoft_Word___S13_05_swz_engl_ks.pdf (accessed on 8 June 2021).

[18] First strike stability is defined as a condition in which neither power "perceives the other as motivated to strike first in a crisis". For details, see Glenn A. Kent, Randall J. DeValk, and David E. Thaler, *A Calculus of First-Strike Stability (A Criterion for Evaluating Strategic Forces)* (Washington DC: RAND Corporation, 1988).

[19] Crisis stability is referred to as "a condition in which neither side fears initiation of an armed clash—nuclear, conventional, or subconventional (including a preemptive strike against nuclear assets)—in the event of an interstate political crisis either because of the presence of a comprehensive first strike defense or other impracticability." For details, see Thomas F. Lynch III, "Crisis Stability and Nuclear Exchange Risks on the Subcontinent: Major Trends and the Iran Factor," *Strategic Perspectives*, No 14 (Washington DC: National Defence University Press, 2013), 2.

[20] Christopher Ford, "The Catch-22 of NFU," (Washington DC: Hudson Institute, January 4, 2011), Available at: https://www.hudson.org/research/9109-the-catch-22-of-nfu (accessed on 13 June 2021). For further details on cross-deterrence, see Tim Sweijs and Samuel Zilincik, "The Essence of Cross-Domain Deterrence," in *NL ARMS Netherlands Annual Review of Military Studies 2020: Deterrence in the 21st Century—Insights from Theory and Practice*, eds. Frans Osinga and Tim Sweijs (The Hague: Asser Press - Springer, 2020) 129-158.

instance, Indian nuclear doctrine explicitly threatens using nuclear weapons in case of being attacked by the chemical and biological weapons. Likewise, Obama administration also considered the possibility of threatening the use of nuclear capability in response to biological weapons.[21] Second, nuclear armed states also use nuclear capability to deter conventional wars.

Nuclear deterrence is often asymmetric in nature, as it allows weaker military powers to compensate for conventional asymmetries and deter relatively stronger adversaries.[22] For instance, with Soviet Union developing its own nuclear deterrent, the US decided not to adhere to NFU pledge and explicitly considered the possibility of using nuclear capability first in a crisis. The then US National Security Advisor, Paul Nitze, wrote in 1950 that the Soviet Union would interpret American NFU commitment as 'an admission of great weakness.'[23] It was an indirect recognition of the fact that the Soviet Union possessed stronger conventional forces as compared to the US and that the latter's most reliable tool to deter this threat was the nuclear deterrent capability. Similarly, in case of US-Soviet deterrent relationship, non-adherence to NFU became and remains to be a center piece of US defence strategy despite growing normative emphasis on the need to reduce reliance on nuclear weapons in defence strategies. The successive administrations in the US have chosen to retain the option of first-use of nuclear weapons. In the past, Joe Biden had expressed support for 'sole purpose' policy for nuclear capability, which is often

[21] Ibid.

[22] Muthiah Alagappa, "Nuclear Weapons and National Security: Far-Reaching Influence and Deterrence Dominance," in *The Long Shadow: Nuclear Weapons and Security in the 21st Century Asia*, ed., Muthiah Alagappa (Stanford: Stanford University Press, 2008), 479.

[23] Paul Nitze, *National Security Council Report 68*, US State Department, NSC-68 (Washington DC: Policy Planning Office, April 14, 1950), 44, Available at: https://digitalarchive.wilsoncenter.org/document/116191.pdf (accessed on 2 June 2021).

seen as identical to NFU, but has not yet shown any intent to alter this policy after becoming the President of the US.[24]

**Ensuring a Credible NFU**

To understand what an NFU commitment is, one needs to comprehend what it is not. The US adopted flexible response strategy in 1961 that enabled its leadership to think of a variety of responses to address low-level conflicts. NATO, later on, adopted this strategy in 1967.[25] The threat of nuclear first use, implicit or explicit, constituted a key feature in the military strategy of the transatlantic alliance during the Cold War and continues to remain so even after the collapse of Soviet Union.[26] Unlike the doctrine of flexible response, a nuclear armed state pledging NFU explicitly communicates to potential adversaries that it shall carry out punitive strikes should it be first attacked by nuclear weapons. This strong commitment requires robust retaliatory capability. Hence, for a state to declare NFU pledge, its confidence in survivable second-strike capability and development of adequate means to carry out retaliatory strike are the essential prerequisites.

However, to what extent an adversary may consider such a pledge as a credible policy? The possibility that nuclear weapons might be used in a first-strike mission lies inherent in the mere possession of this capability. Even if a state maintains its nuclear arsenal at lower alert level, it is too difficult a task to identify a specific point at which it can be believed not to possess any intentions to employ nuclear weapons in the first-use. Further, improving technological developments – such as improved accuracy of delivery systems and

[24] "U.S. Nuclear Weapons Policy: Considering "No First Use," (Washington DC: Congressional Research Service, October 13, 2021), Available at: https://sgp.fas.org/crs/nuke/IN10553.pdf (accessed on 15 October 2021).

[25] Lawrence Freedman, *The Evolution of Nuclear Strategy (3rd ed.)* (New York: Palgrave Macmillan, 2003), 271.

[26] Michael S. Gerson, "No First Use: The Next Step for U.S. Nuclear Policy," *International Security*, Vol. 35, no. 2 (Fall 2010), 7.

intelligence, surveillance, and reconnaissance (ISR) capabilities – have made it plausible to carry out low-yield nuclear strikes without the fear of massive destruction, thus increasing the chances of nuclear use.[27]

NFU policy is not merely a political commitment. It should rather be backed by appropriate nuclear force posture and responsible nuclear behavior that avoids forward deployment, launch on warning postures—such as mating warheads with delivery systems—and delegation of command and control.[28] Scott Sagan suggests that for NFU to be believable, a state needs to recalibrate military deployments, exercises, and alert levels in a manner consistent with this doctrine's requirements.[29] Thus, an NFU policy requires that the state making this pledge must follow these steps:

i. not to develop counter-force capabilities that may be used for pre-emptive strikes,
ii. maintain a small number of survivable delivery systems and not expand nuclear arsenals beyond the minimum requirements of a credible deterrent,
iii. not to put nuclear forces on hair trigger alert to prevent accidental use of nuclear weapons,
iv. ensure low-alert levels by keeping delivery systems and nuclear warheads in a de-mated form to avoid unintended or early use of nuclear weapons,
v. non-deployment of nuclear weapons outside own territory and not to offer extended deterrence to non-nuclear allies.

[27]Keir A. Lieber and Daryl G. Press, "The New Era of Counterforce: Technological Change and the Future of Nuclear Deterrence," *International Security*, Vol. 41, no. 4, (Spring 2017), 27.
[28] Ramesh Thakur, *Nuclear Weapons and International Security: Collected Essays* (New York: Routledge, 2015), 226.
[29] Scott D. Sagan, "The Case for No First Use," *Survival*, Vol.51, no. 3 (2009), 177.

The combination of these steps is, therefore, a prerequisite to diminish the preparedness of a state to use nuclear weapons for a first strike. Thus, a declaratory policy can only be credible if supported by the required nuclear posture.

**NFU – As a CBM**

The NFU concept, as a viable nuclear strategy has also drawn criticism on the notion that adversaries tend not to trust a belligerent state's declared and especially unconditional NFU commitment. NFU is often considered as merely a declaratory policy: that the decision whether to use nuclear weapons first will be made according to the situation during crisis. As Lawrence Freedman argues "in a war between nuclear armed states, it is preferable to have an element of uncertainty about where a conflict may lead instead of believing that there would be reliable restraints in place because of NFU declarations."[30] At the practical level, this argument holds strength as NFU declaring states may adopt ambiguous postures. The absence of credible verification mechanisms further aggravates adversary's perceived dilemma. However, at the theoretical level, the pledged NFU policy would reduce that particular state's reliance on nuclear weapons in its military strategy. Scott D. Sagan notes that it is very rare that a classified nuclear doctrine of a state is completely inconsistent with its declaratory policy because such declarations do not merely promise restraint rather; they signal intent and shape the perceptions of allies and adversaries alike.[31]

From this standpoint, an NFU declaration may positively serve to alleviate misperceptions and reduce the possibility of early or

[30] Lawrence Freedman, "No First Use of Nuclear Weapons," *Paper presented at Pugwash Meetings: London Workshop on No First Use of Nuclear Weapons November 15-172002*), Available at: https://pugwash.org/2002/11/17/london-workshop-on-no-first-use-of-nuclear-weapons-2/ (accessed on 15 May 2021).
[31] Sagan, "The Case for No First Use,"165.

accidental employment of nuclear weapons. Hence, declaring an NFU commitment is also seen as a CBM[32] that aims to strengthen the norm against using nuclear weapons as tools of warfare. However, the implementation of this policy is a tough task and may confront serious challenges with regards to verifiability of structures and readiness levels of adversary's nuclear arsenal. These challenges, along with the skepticism behind sincerity in NFU related commitments, have been the constraining factors in adoption of NFU as a confidence or security building measure.

To what extent NFU pledge can be considered a CBM and the degree to which this CBM may contribute to crisis stability in asymmetric crises remain questionable on two accounts. First, as Alexander Lanoszka and Thomas Scherer assert, the benefits of NFU between states having disparate military capabilities are overstated because the conventional military superiority of one state can be as destabilizing as an ambiguous first-use policy.[33] The defining conventional power of one state over its adversaries keeps the latter wary of this military asymmetry and explore means to alleviate this imbalance, particularly through balance of terror[34] by establishing its own deterrence. This argument holds relevance to South Asia where Pakistan's non-adherence to NFU can be seen as a product of growing conventional imbalance vis-à-vis India. In such asymmetric situations, a weaker state believes that exercising ambiguity regarding its policy of using nuclear weapons contributes to crisis stability because of its

[32] Devin T. Hagerty, *Nuclear Weapons and Deterrence Stability in South Asia* (Cham: Springer, 2019), 120.

[33] Alexander Lanoszka and Thomas Leo Scherer, "Nuclear ambiguity, no-first-use, and crisis stability in asymmetric crises," *The Nonproliferation Review*, Vol. 24, no. 3/4 (2018), 344.

[34] Balance of terror is a situation in which the threat of mutual annihilation between states having credible nuclear deterrent capabilities deters military aggression from both sides. For details, see Albert Wohlstetter, "The Delicate Balance of Terror," *Foreign Affairs*, Vol. 37, no. 2 (Jan 1959), 211-234.

inherent deterrent value that keeps the adversary guessing and thus prevents it from any potential aggression. Although nuclear ambiguity carries risks of miscalculation and inadvertent escalation,[35] Muthiah Alagappa argues that secrecy and ambiguity is not a cultural trait, rather a product of belief that it enhances deterrent value of relatively smaller nuclear forces.[36] The opponents of NFU policy believe that calculated ambiguity serves deterrence well by ensuring its effectiveness against evolving challenges.[37]Therefore, irreconcilable gap in military prowess constrains the prospects of concluding an NFU agreement between nuclear adversaries.

Second, given the difficulties in ascertaining enemy's ambiguous nuclear postures, states have generally been skeptical about adversaries' adherence to NFU. The absence of any substantive verification measures to ensure reduced state of readiness fosters mistrust and thus diminishes the prospects of any declaratory measure being considered as a CBM. The NFU pledge that is not supported by the required force posture is considered a mere rhetoric. The rationale for adopting such a policy is only to gain moral high ground. As Hugh Beach observes, no nuclear armed state has ever configured its arsenal because of having committed to NFU.[38] Contrary to this, states have adopted NFU as a policy measure only once they are confident of their conventional capability vis-à-vis their adversary. For instance, the erstwhile Soviet Union continued adherence to NFU policy for as long as it had relative superior conventional strength as compared to NATO

[35]Thomas G. Mahnken and Gillian Evans, "Ambiguity, Risk, and Limited Great Power Conflict," *Strategic Studies Quarterly: Perspective*, Vol. 13, no. 4 (Winter 2019), 58.
[36] Alagappa, "Nuclear Weapons and National Security," 506.
[37] Roberts, "Debating Nuclear No-first-use, Again," 42.
[38]Hugh Beach, "Implementation of No First Use of Nuclear Weapons Strategy/Agreements," *Paper presented at Pugwash Meetings: London Workshop on No First Use of Nuclear Weapons November 15-172002*), Available at: https://pugwashconferences.files.wordpress.com/2018/02/200211_london_nws_paper_beach.pdf (accessed on 15 May 2021).

forces. When the ratio of forces between Russia and its adversary reversed after the collapse of Warsaw Pact, it decided to abandon its declared NFU policy in order to compensate for its conventional might that was in disarray.

In 1993, Russia decided to abandon the former Soviet Union's NFU pledge, which it had made in 1982, and emulated the US approach to overcome conventional inferiority.[39] NATO's expansion to Czech Republic, Hungary, Poland and Baltic States around the advent of twenty-first century further increased Moscow's reliance on the threats of first use of nuclear weapons.[40] Likewise, the South Asian strategic situation is another example where the conventional advantage allows India to have a declared NFU policy. Thus, New Delhi's NFU pledge was a product of its confidence in conventional superiority and not the other way round. On the other hand, the relatively weaker state, Pakistan, aims to deter possible aggression through its nuclear capability. Pakistan's reluctance to consider India's proposed agreement on NFU in 1994[41] may be seen in this perspective. K. Subrahmanyam wrote in 1995 that one of the objectives of India's unilateral adoption of NFU was to attain moral high ground, in case Pakistan refused to follow suit, "the diplomatic advantage will be with India and this country can claim that any nuclear threat in this region can originate only from Pakistan."[42]

[39]Steve Fetter and Jon Wolfsthal, "No First Use and Credible Deterrence," *Journal for Peace and Nuclear Disarmament*, Vol. 1, no. 1 (2018), 106-107.
[40] Ibid.
[41]Kumar Sundaram and M. V. Ramana, "India and the Policy of No First Use of Nuclear Weapons," *Journal for Peace and Nuclear Disarmament*, Vol. 1, no. 1 (2018), 164.
[42]K. Subrahmanyam, "'No First Use' Issue: India Must Act Unilaterally," *The Times of India*, April 26, 1995, quoted in Sundaram and Ramana, "India and the Policy of No First Use of Nuclear Weapons," 164.

## India and the NFU

Since its official declaration in 1999, India's nuclear doctrine has remained under discussion on multiple accounts most important being the massive retaliation and the NFU pledge.[43] India has traditionally used the notions of minimum deterrence and NFU as two prominent elements of its nuclear doctrine to be seen as a responsible nuclear weapons state. This paper only focuses on NFU pledge of India that remains one of the most controversial and debated issue of Indian nuclear doctrine. While taking into account recent debate on possible revision of New Delhi's commitment to NFU,[44] this section goes beyond mere analysis of Indian officials' statements on the subject and analyzes whether India's emerging nuclear posture is consistent with its declared NFU policy.

## NFU Pledge as a Political Tool

Though the NFU commitment has long remained the cornerstone of India's nuclear doctrine, the subject is largely controversial because of divergent nuclear signaling by the Indian officials. India declared an NFU policy in its nuclear doctrine published in 2003.[45] Despite attaching caveats to this commitment that India shall retaliate with nuclear capability in case its forces are attacked by chemical or

[43] Rajesh Rajagopalan, *India's Nuclear Doctrine Debate*, (Washington DC: Carnegie Endowment for International Peace, June 30, 2016), Available at: https://carnegieendowment.org/2016/06/30/india-s-nuclear-doctrine-debate-pub-63950 (accessed on 4 May 2021).

[44] Hans M. Kristensen and Matt Korda, "Indian nuclear forces, 2020," *Bulletin of the Atomic Scientists*, Vol. 76, no. 4 (2020), 218.

[45] Government of India, Prime Minister's Office, "Cabinet Committee on Security Reviews Progress in Operationalizing India's Nuclear Doctrine," *Press Release*, January 4, 2003, Available at: https://archive.pib.gov.in/archive/releases98/lyr2003/rjan2003/04012003/r040120033.html (accessed on 4 May 2021), quoted in Zulfqar Khan & Ahmad Khan, "Strategic Impasse Over India's Doctrinal Restructuring," *The Washington Quarterly*, Vol. 39, no. 1 (2016), 142 and 153.

biological weapons anywhere in the world, New Delhi has largely used this policy to project its restrained nuclear posture. Experts believe that this caveat has already eroded the sanctity of NFU in country's official doctrine.[46] This ambiguity, therefore, undermines the credibility of India's NFU pledge and urges the adversary to take it as merely a verbal assurance. Nevertheless, this commitment has helped India gain political mileage from the West. As Kumar Sundaram and M. V. Ramana point out, Indian officials have used NFU pledge on diplomatic front as a tool to resist international pressure to sign any treaties that could constrain New Delhi's choices to develop its nuclear arsenal.[47]

On 26 September 2013, India's Minister of External Affairs Salman Khurshid reiterated the commitment to observe NFU posture and hinted at the proposal of establishing global NFU treaty as a legally binding arrangement.[48] Stating that "we are ready to negotiate a global No-First-Use treaty" at the High-level Meeting of the General Assembly on Nuclear Disarmament.[49] Salman Khurshid refrained from specifying any caveats that India has otherwise attached to this commitment. Also, any prospective global NFU treaty would require all the nuclear armed states to extend unconditional negative security assurances to all non-possessor states. It remains questionable whether India is actually willing to remove additional caveats and commit not to retaliate unless first attacked by nuclear weapons. This equivocation in proposing a global treaty suggests how the NFU is used as a diplomatic

[46]Mansoor Ahmed, "Nuclear Learning: Potential Shifts in India's No-First-Use Doctrine," *Stimson Initiative Video*, 1:57, June 27, 2017, Available at: https://www.youtube.com/watch?v=rlaXNExtIeg (accessed on 4 July 2021).

[47] Sundaram and Ramana, "India and the Policy of No First Use of Nuclear Weapons," 153.

[48]Minister for External Affairs H.E MR. Salman Khurshid, "High Level Meeting of the General Assembly on Nuclear Disarmament, New York," *Statement*, September 26, 2013, Available at: https://www.pminewyork.gov.in/pdf/uploadpdf/19593pmi68.pdf (accessed on 4 March 2021).

[49] Ibid.

gambit to portray India's so-called responsible nuclear behavior while diverting international focus from the ambiguities in this commitment and it's evolving nuclear capabilities.

The debate on denouncing NFU pledge has gained salience only recently, whereby signaling on this aspect started almost a decade ago. India's then Chief of Army Staff General Deepak Kapoor hinted at the possibility of revisiting NFU commitment in 2009.[50] Media reports suggest that he toiled this idea in context of faulty narrative on Pakistan's growing nuclear arsenal.[51] Then the Defence Minister of India Manohar Parrikar stressed on not to tie up country's nuclear doctrine with NFU pledge.[52] Shivshankar Menon, former Foreign Secretary and National Security Advisor of India, argued that "if Pakistan were to use tactical nuclear weapons, it would effectively free India to undertake a comprehensive first strike against Pakistan."[53]

Dr. Zafar Nawaz Jaspal notes that within India, the debate on NFU policy has three different streams.[54] The first stream belongs to the Indian officials who are in favour of upholding the NFU commitment. The second group is frustrated with this stance and emphasizes on altering this policy, thus signifying the aggressive mindset in the country. For instance, Defence Minister George Fernandes argued in a media talk that India can survive a nuclear attack, but Pakistan cannot.[55] Defence Secretary Yogindra Narain also

[50]'May have to revisit nuclear no-first use policy: Army chief,' *Times of India*, September 6, 2009.
[51] Ibid.
[52] "Why bind ourselves to 'no first use policy', says Manohar Parrikar on India's nuke doctrine," *Economic Times*, November 11, 2016.
[53]Shivshakar Menon, *Choices: Inside the Making of India's Foreign Policy* (Washington DC: The Brookings Institution Press, 2016), 117.
[54] Zafar Nawaz Jaspal, *India's 'Surgical Strike' Stratagem, Brinkmanship and Response* (Islamabad: Khursheed Printers (Pvt.) Ltd., 2019), 204.
[55]Michael Richardson, "Q&A / George Fernandes: India and Pakistan are not 'imprudent' on nuclear option," *The New York Times*, June 3, 2002.

made threatening remarks while arguing that if surgical strike fails to resolve things, we must be ready for mutual destruction.[56] Brahma Chellaney went to an even further extent by arguing that India should call Pakistan's nuclear bluff and Indian military has the capability to target every nook and corner of Pakistan.[57] These statements coming from hawkish personalities indicate growing calls within India to publicly give-up its NFU policy. The third group advocates two-fold policy i.e., continue following NFU policy for diplomatic consumption while simultaneously develop preemptive nuclear strike capability.

The debate around this issue revitalized after Vipin Narang, an Indian American scholar, quipped that "India will not allow Pakistan to go first," rather it could be the first to use nuclear weapons in South Asia, instead of Pakistan.[58] Although he was skeptical of India's ability to carry out a disarming or splendid first-strike, he believed that New Delhi might develop such capabilities in future.[59] Dr. Mansoor Ahmed observes that rhetoric and debate on India's NFU has followed a steady growth and maturation of India's counterforce capabilities."[60]

This brings us to the next question: to what extent India's nuclear force posture is consistent with the NFU pledge? While most of the skepticism regarding New Delhi's dubious NFU pledge revolves around statements by Indian officials who criticize the NFU policy and call for abandoning it, India's development of counterforce capabilities contradicts the official commitment. While Pakistan seemingly has never believed in the credibility of New Delhi's NFU policy, recent

[56] Ibid.
[57] Ibid.
[58] Narang, "Beyond the Nuclear Threshold."
[59] Ibid.
[60] Mansoor Ahmed, "Risks of Asymmetry and Future Escalation in India-Pakistan Relations," *South Asian Voices*, May 29, 2020, Available at: https://southasianvoices.org/risks-of-asymmetry-and-future-escalation-in-india-pakistan-relations/ (accessed on 9 June 2021).

signaling on possible revision of this policy holds significant implications for deterrence stability in South Asia. It directly indicates New Delhi's frustration with the status-quo as Pakistan's robust deterrence denies it of any space to engage in misadventures.

## Evolving Nuclear Posture of India – Trends and Implications

The urge to renounce Indian NFU pledge is driven by technological advancements, especially the development of weapons that can be used in a counterforce role. The dangers of conflict escalation and inadvertent or unauthorized use of nuclear weapons in South Asia are generally seen among the key challenges to the norm against use of nuclear weapons in the region.[61] However; ambiguous nuclear signaling, revision of nuclear doctrine, and development of counterforce capabilities indicate that any use of nuclear weapons may be driven by an attempted preemptive first-strike. Given the technological advancements and rapidly growing nuclear forces, Indian strategic leadership contemplates counter force targeting strategy against Pakistan.[62] A force posture that was seen in the past to be on recessed deterrence mode and only able to retaliate massively, is increasingly poised towards carrying out low casualty strikes by undermining adversary's survivability of nuclear weapons and consequently damage its deterrent capability.

[61]Toby Dalton and George Perkovich, *India's Nuclear Options and Escalation Dominance* ( Washington DC: Carnegie Endowment for International Peace, May 2016), 3, Available at: https://carnegieendowment.org/files/CP_273_India_Nuclear_Final.pdf (accessed on 7 May 2021).

[62] Cristopher Clary and Vipin Narang, "India's Counterforce Temptations: Strategic Dilemmas, Doctrine, and Capabilities," *International Security*, Vol. 43, no. 3 (Winter 2018/19), 41.

Despite claiming minimalism,[63] the rapidly expanding nuclear program and force structure suggest that India's nuclear posture is steadily drifting towards a first-use strategy, rather than retaliation that is based on counter-value targeting. It signifies that India pursues an escalation dominance strategy against Pakistan, instead of upholding the notion of mutual vulnerability that serves as the cornerstone of deterrence stability.[64] New Delhi is rapidly increasing its nuclear stockpiles and to fulfill the requirements of its fissile material production capacity, it keeps almost all of its fissile material production facilities outside IAEA safeguards.[65] A study by Dr. Mansoor Ahmed concludes that India has the capability to produce approximately 2261 to 2686 nuclear weapons.[66] India's triad of nuclear forces currently comprises of a variety of delivery systems based on enhanced readiness and alert levels. India's inventory of nuclear capable missiles that may be employed in counterforce missiles include short-range and inter-mediate range delivery systems such as Prahaar (150 kilometers range), canisterized Pralay (150-500 kilometers range), BrahMos (300-500 kilometers range), Shourya (750 kilometers range) and Nirbhay (1000 kilometers range).[67] Even if these missiles – particularly Prahaar and BrahMos – are not used for nuclear strike, they offer potent options for conventional counterforce strikes against the adversary. Nevertheless, integration of Brahmos with 42 SU-30MKI fighter bombers in India's Strategic Forces Command validates its nuclear role.

[63] Ayesha Abbasi, "India's Nuclear Minimalism: Looking through the Smokescreen," *IPRI Journal*, Vol. 19, no. 2 (2019), 37.

[64] Rizwana Abbasi and Zafar Khan, *Nuclear Deterrence in South Asia: New Technologies and Challenges to Sustainable Peace* (New York: Routledge, 2020), 59, also see Tanzeela Khalil, "Trends in India's Nuclear Force Modernization: Regional and Global Implications," *CISS Insight*, Vol. 7, no. 2 (2019), 64.

[65] Mansoor Ahmed, *India's Nuclear Exceptionalism: Fissile Materials, Fuel Cycles, and Safeguards* (Cambridge: Belfer Center for Science and International Affairs, 2017), 6.

[66] Ibid, 52.

[67] Yogesh Joshi and Frank O'Donnell, *India and Nuclear Asia: Forces, Doctrine, and Dangers* (Washington DC: Georgetown University Press, 2019), 197.

In the naval domain, India has developed submarine launched ballistic missiles (SLBM) K-15 and K-4 with possible role, as pointed out by Air Vice Marshal Arjun Subramanian, of using in counterforce strikes.[68] New Delhi is also developing multiple targetable independent reentry vehicles (MIRVs) and maneuverable warheads,[69] raising the question on whether India seeks to develop nuclear war-fighting capabilities.[70] Development of MIRVs, coupled with ballistic missile defence (BMD) systems and canister based ballistic missiles with greater precision and accuracy, makes the state possessing these capabilities confident of its ability to intercept adversary's retaliatory strike. Hence, by developing these counterforce capabilities, India seeks to minimize the possible repercussions of escalation to initiate a crisis.[71]

For a counter value posture, relatively smaller survivable nuclear forces, based on low alert levels and centralized command and control structure, are adequate to credibly deter an adversary. On the contrary, counterforce targeting strategy requires relatively huge arsenal and higher alert levels. Traditionally, the two major factors that prevent a state from using nuclear weapons are the fear of retaliation from adversary and massive civilian casualties. However, the enhanced accuracy of delivery systems has made it plausible to carryout low-casualty counterforce attacks, thus making the task of nuclear

[68]Aqeel Akhtar & Sufian Ullah, "India's sea-based nuclear forces and strategic stability in South Asia," *Australian Journal of Maritime and Ocean Affairs*, DOI: 10.1080/18366503.2021.1961352 (Aug 2021), 9.

[69]Yogesh Joshi, Frank O'Donnell and Harsh V. Pant, *India's Evolving Nuclear Force and its Implications for U.S. Strategy in the Asia-Pacific* (Carlisle: Strategic Studies Institute and US Army War College, 2016), 49.

[70]Joshi and O'Donnell, *India and Nuclear Asia*, 25.

[71] Zafar Nawaz Jaspal," The Introduction of Ballistic Missile Defense in South Asia: Implications on Strategic Stability," in *Nuclear Learning in South Asia: The Next Decade*, eds. Feroz Hasan Khan, R. Jacobs, and E. Burke (Monterey: Naval Postgraduate School, 2014), 125.

survivability more challenging.[72] India successfully tested Agni-V, with intercontinental range of 5000 kilometers plus, in2018.[73] Agni-V is reportedly equipped with Micro Inertial Navigation System (MINS) and Ring Laser Gyro based Inertial Navigation System (RINS) that provide double digit accuracy of the missile.[74] Inertial guidance is a self-contained system that does not rely on external sources such as radio signals, and gyroscope enables the guidance system to sense if there are any changes in orientation of the missile during flight, thus ensures achieving accuracy required to destroy targets at longer ranges.[75]

The enhanced precision of Agni-V makes it an equal to the best missiles of the US and Russia that they might use in a counterforce role. Hans Kristensen's study highlights Circular Error Probable (CEP) of Agni-V to be 100 meters,[76] whereas Arjun Subramanian specifies it to be 80 meters.[77] For a missile to be used in a retaliatory counter-value role, it needs not to have higher accuracy as the nuclear explosion even hundreds of meters away from a population center would inflict unacceptable damage in terms of massive casualties. However, high accuracy of Agni-V may also necessitate arming it with a small low-yield

[72]Keir A. Lieber and Daryl G. Press, "The New Era of Counterforce: Technological Change and the Future of Nuclear Deterrence," *International Security*, Vol. 41, no. 4 (2017), 27.

[73]"India successfully test-fires nuclear capable Agni-5," *The Times of India*, June 4, 2018.

[74] Arjun Subramanian, "Longer Reach and Enabling More Options: Agni V," (New Delhi: Center for Air Power Studies, April 30, 2012), 2, Available at: https://capsindia.org/longer-reach-and-enabling-more-options-agni-v/ (accessed on 8 June 2021).

[75]Donald MacKenzie, *Inventing Accuracy: A Historical Sociology of Nuclear Missile Guidance* (Massachusetts: The MIT Press, 1990), quoted in Michael Koch and Alon Chanoch, 'Inventing Accuracy,' *UC Davis* (December 2011): 209, Available at: http://web.cs.ucdavis.edu/~rogaway/classes/188/fall11/p209.pdf (accessed on 3 June 2021).

[76]Hans M. Kristensen, 'India's Missile Modernization Beyond Minimum Deterrence,' *Federation of American Scientists*, October 4, 2013, Available at: https://fas.org/blogs/security/2013/10/indianmirv/ (accessed on 8 June 2021).

[77]Arjun Subramanian, "Longer Reach and Enabling More Options."

nuclear warhead to avoid any massive damage and serve as a potent threat to adversary's missile launchers and command and control systems protected by hardened shelters or underground structures. These parameters make Agni-V more usable in a counterforce role that not only undermines the credibility of the NFU pledge but also the policy of massive retaliation.

Despite ensuring accuracy, an attacker's ability to launch successful strikes against desired targets remains questionable. Lieber and Press's study highlights that the chance of a US ICBM to destroy a hardened missile silo, which could resist overpressure of 3,000 pounds, has increased from 54 percent in 1985 to 74 percent in 2017, and despite improving accuracy there are 20-30 percent chances that a missile might fail to hit its target.[78] To overcome this problem, multiple warheads may be launched against a single target. Development of MIRVs, therefore, can be aimed not only at evading a ballistic missile defence system but also at striking a target multiple times in a disarming counterforce attack. Employing multiple reentry vehicles increases the probability of at least one warhead hitting the assigned target. India has been developing MIRV technology for its Agni series missiles. Defence Research and Development Organization (DRDO) officials have already hinted that the upcoming missiles of this series would be equipped with MIRVs.[79]

On 28 June 2021 and 18 December 2021, India tested medium range advanced variant of Agni class missile called Agni-P. This canisterized ballistic missile can reportedly strike at the range between 1000 and 2000 km.[80] The missile offers New Delhi growing accuracy

[78] Lieber and Press, "The New Era of Counterforce," 21.

[79] Kristensen, "India's Missile Modernization Beyond Minimum Deterrence."

[80] Timothy Wright and Joseph Dempsey, "India tests new *Agni*-P missile," *International Institute for Strategic Studies*, July 29, 2021, Available at: https://www.iiss.org/blogs/analysis/2021/07/mdi-india-tests-agni-p-missile (accessed on 30 July 2021).

and prompt strike capability in India's nuclear arsenal. Experts consider this development contradictory to India's stated doctrinal claim of exercising minimum deterrence and a shift from countervalue targeting strategy to counterforce posturing.[81]

It is also a myth that India keeps its arsenal in a disassembled and de-mated form. It has now increased the readiness of several systems through canisterization. The 2017Armed Forces Joint Doctrine noted that the Strategic Forces Command controls India's nuclear arsenal, including the warheads and delivery vehicles.[82] This change in alert levels makes nuclear weapons more usable if and when required, particularly in a situation where crisis rapidly escalates to higher levels. These structural and capabilities related changes do not conform to minimalism, assured retaliation posture, and the pledge to not use nuclear weapons first in a crisis. In addition to nuclear capable counterforce weapons, India's missile defence systems, anti-submarine warfare (ASW) technologies such as unmanned underwater vehicles (UUVs)[83] that 'gather intelligence during peacetime and war,' and cyber operations, add further strength to New Delhi's counterforce capabilities and pose significant threat to the survivability of Pakistan's retaliatory capability.

India's signals of rescinding its NFU commitment and growing counterforce capabilities have a direct bearing on deterrence stability

[81]Sidharth Kaushal, James Byrne, Joe Byrne and Gary Somerville, "India's Nuclear Doctrine: The Agni-P and the Stability–Instability Paradox," (London: RUSI, July 8, 2021), Available at: https://rusi.org/explore-our-research/publications/commentary/indias-nuclear-doctrine-agni-p-and-stability-instability-paradox (accessed on 11 July 2021).

[82]Ministry of Defence, *Joint Doctrine Indian Armed Forces* (New Delhi: Directorate of Doctrine, 2017), Available at: https://www.ids.nic.in/IDSAdmin/upload_images/doctrine/JointDoctrineIndianArmedForces2017.pdf (accessed on 14 July 2021).

[83] Sufian Ullah, "Analysing India's Naval Development Strategy," *IPRI Journal*, Vol. 19, no. 1 (2019), 103.

in the region and beyond. As these capabilities grow further, it would weaken deterrence equilibrium in South Asia. The gradual shift towards counterforce targeting options reflects India's attempt to escape deterrence and make war, especially a nuclear war, more likely. Increasing threats to the survivability of Pakistan's nuclear assets would mean erosion of mutual vulnerability that might embolden India to initiate limited conventional war against Pakistan. This backdrop may generate false sense of confidence that India's counterforce capabilities would prevent Pakistan from using nuclear weapons first in a limited war. This thinking relates to New Delhi's escalation dominance strategy[84] through which it aspires to subdue Pakistan. Just like India introduced Cold Start Doctrine with an aim to strike Pakistan without provoking nuclear escalation, it may see counterforce weapons as a tool to conduct limited war below the nuclear threshold.

A state's counterforce strategy is directly linked to adversary's survivability of nuclear weapons. As Gallagher and Sorice argue, a state with stronger arsenal survivability leaves it lesser advantageous for adversary to contemplate counterforce strategy because of limited capability to locate, identify, and then destroy adversary's nuclear arsenal in a pre-emptive first strike. None of the nuclear adversaries want the other to go first; so nuclear first-strike stability is severely undermined due to threat of rapid escalation of crisis to nuclear levels.

## Conclusion

A state considering the NFU as a defining feature of its nuclear policy relies on minimalist posture based on assured retaliation and low alert

[84]Toby Dalton and George Perkovich, *India's Nuclear Options and Escalation Dominance* (Washington DC: Carnegie Endowment for International Peace, May 2016), 3, Available at: https://carnegieendowment.org/files/CP_273_India_Nuclear_Final.pdf (accessed on 7 May 2021).

levels. For an NFU commitment to be credible, the claimant state's force posture should be consistent with its stated commitments. Such a state remains confident that it could absorb adversary's attempted first-strike and still possesses adequate survivable nuclear forces to launch retaliatory strike and inflict unacceptable damage to the opponent. Any consideration of counterforce strikes runs contrary to NFU commitment as it keeps open the option of pre-emptive nuclear use. By evaluating India's NFU pledge in light of its growing counterforce capabilities, the paper concludes that India's evolving nuclear posture is contradictory to its declared NFU policy. Indian strategic thinking is dominated by the urge to tilt South Asian strategic equilibrium in its favour. The technological developments in Indian nuclear arsenal, along with aggressive ambitions frequently stated by the Indian officials, suggest a gradual shift in New Delhi's strategic thinking from counter value targeting strategy to preemptive counter force strikes. This trend inherently contradicts a credible NFU pledge and further erodes the credibility of this doctrinal commitment.