

## Colloquium

### Reassessing India's Nuclear Doctrine

Significant changes in India's regional nuclear security environment, the progressive break-down of the global arms control regime and fresh impetus to the nuclear arms race among the US, Russia and China pose new challenges to India's security and nuclear strategy. A principal victim of these developments is the undermining of deterrence that has underpinned peace and stability among the nuclear weapon states. Pakistan's deployment of tactical nuclear weapon, the *Nasr*, its 'first use' doctrine, the persistent Chinese assistance for its nuclear programme and delivery systems, and China's own rapid military and nuclear modernisation are similarly undermining deterrence stability and nuclear restraint in the region.. Should India's 2003 nuclear doctrine based on 'no first use' and 'massive retaliation' be modified to deal with the new security challenges, as some have argued? We carry alternative perspectives on this vital issue by two of the country's leading and most knowledgeable experts in this edition of colloquium.

# Voices of Change in Indian Nuclear Doctrine – an Analysis

V K Saxena

On 21 Aug 2019, the Defence Minister while on a visit to Pokhran for paying homage to the former Prime Minister Atal Behari Vajpayee on his first death anniversary, made a statement on one of the founding pillars of the Indian Nuclear Doctrine, i.e., the policy of No First Use (NFU) of nuclear weapons. He said, that NFU is not a binding commitment, while India has strictly adhered to that position. 'What happens in future depends on the circumstances'<sup>1</sup>.

While the NFU forms the corner stone of India's nuclear doctrine, debates for or against this stance have been in the public space ever since the Cabinet Committee on Security released its official nuclear doctrine on 04 Jan 2003<sup>2</sup>. This doctrine, which came four years after the release of Draft Report of National Security Advisory Board (NSAB) on Indian Nuclear Doctrine in 1999,<sup>3</sup> called for building a credible minimum deterrent with a posture of NFU and non-use of nuclear weapons against non-nuclear weapon states. The nuclear retaliation to the first strike was envisaged to be 'massive' and designed to inflict 'unacceptable' damage to the adversary. Such a retaliatory strike could only be authorised by civilian political leadership through the Nuclear Command Authority. It also stated, that that in the event of a major attack against India or Indian forces anywhere, by biological or chemical weapons, India will retain the option of retaliation with nuclear weapons<sup>4</sup>.

One of the prominent differences between 1999 and 2003 was related to nuclear retaliation to first strike wherein the words 'punitive' retaliation was replaced with 'massive' retaliation.<sup>5</sup> While the arguments challenging the NFU and replacement of 'punitive' with 'massive' have been doing the rounds in the strategic community for years, the same have once again been revived afresh soon after the Defence Minister's statement inserted an

---

Lt Gen (Dr) V K Saxena, PVSM, AVSM, VSM is the former Director General of the Corps of Army Air Defence. He has been decorated three times by the President of India. Presently, he is the Distinguished Fellow at VIF.

element of ambiguity in the status quo debate. In fact the current government, prior to assuming office in its previous inning in 2014, had stated in its Party's manifesto that if voted to power, the Party will revise and update the country's nuclear doctrine bringing it in sync with the current geostrategic realities<sup>6</sup>. However, soon thereafter, once voted to power and on his first visit to Japan, Prime Minister Modi underlined the government's commitment to NFU calling it a part of India's 'cultural heritage'. On the flip side, the then Defence Minister, Manohar Parrikar, expressed surprise publically as to why India should be bound by NFU? Such has been the political see-saw of viewpoints leading to the current political debate.<sup>7</sup>

**Prime Minister  
Modi underlined the  
government's commitment  
to NFU calling it a part of  
India's 'cultural heritage.'**

This article re-visits various arguments against NFU and the massive retaliation stance and offers the viewpoint of the author on the issue.

### Voices for Change

Based on the opinions expressed over the past years the following positions can be briefly enumerated:

#### I. Will retaliatory strike be Possible?

The most dominant counter argument to the NFU status originates from the fact that NFU is essentially based on the premise of 'retaliation'. The big question is, whether after taking the first strike, will there be enough residual capability left to retaliate with assured second strike which has to be 'massive' enough as to cause 'unacceptable damage'?

Experts have argued that the above is only possible if the country has extreme confidence in the fact that not only, its nuclear arsenal will survive the first strike and still retain devastating retaliatory capability, but also, the crises management system is in place to put together the second strike and execute the same before the international pressure bears upon us to do otherwise. Do we have our systems in place to assure the above two conditions?<sup>8</sup> Sadly, NO.

#### II. Moral Dilemma of Second Strike

There is another view that the NFU is like the 'Panipat Syndrome' of allowing the adversary to inflict defeat on us on our own soil. With NFU in place, the enemy is free to use his full capability to attrite India's (nuclear) capability in his first strike. The

probability of taking out enemy's nuclear capability in counter force targeting will be extremely low as these systems are largely based on mobile missiles platforms or submarines. The option left for India will be to strike at the enemy's counter value targets such as population centres, etc. There will be a moral dilemma to take this option<sup>9</sup>.

The NFU status has not been put to nation-wide debate since the Doctrine came out in 2003 and the NDA Government lost elections in 2004 before getting a chance to get it debated at the national level. The NDA in its 2014 manifesto promised to revise and update the doctrine but the PM put cold water on it calling NFU as part of our 'cultural heritage'. No government has a right to put its people in the peril of sudden destruction without exhausting all options. There is a need for building a degree of 'ambiguity' in the doctrine instead of taking clear cut position like the NFU<sup>10</sup>. For instance, the ambiguity, of the type contained in the recent statement of the Defence Minister quoted earlier should form a part of our nuclear doctrine<sup>11</sup>.

### III. Why Suffer First Strike?

Some experts have argued that NFU prevents the country from acting against an 'imminent nuclear attack'. They go to great lengths to define what imminence will actually mean. Open threats? Deployment of weapons? Mating the warheads? Various levels and stages have been quoted, all boiling down to the bottom line of striking at the adversary before he gets a chance to launch a first strike. Ambassador Shiv Shankar Menon, the former National Security Advisor, has written that India may have to resort to first use in case it has definitive information on Pakistan's intent to launch first<sup>12</sup>.

### IV. Demonstrate Assertiveness

India's potential adversaries are taking bold steps in shaping their nuclear arsenal. As of Nov 2019 Pakistan has an arsenal of 150-160 nuclear weapons. In addition, it has a stockpile of some 3.4 metric tons of Highly Enriched Uranium (HEU) fit for weapon grade. This is sufficient for making 10-15 warheads per year<sup>13</sup>. China is a major nuclear giant with at least six different types of nuclear payloads: 15-40 Kiloton (KT) fission bomb; 20KT Missile warhead; 3 Megaton (MT) missile thermo-nuclear warhead, 3 MT thermonuclear gravity bomb, 4-5 MT missile warheads and 200-300 KT missile warhead, etc. In addition, it is assessed to have some 150 Tactical Nuclear Warheads. One estimate puts the warhead estimate to about 434.<sup>14</sup>

With all the above and counting, some experts opine that the NFU represents our

strategic passivity, probably holding on for nothing else but bureaucratic 'muscle memory'-- a legacy that needs a change. Our doctrine needs to be more forceful and assertive. In that, we should respond to the adversary's build up by giving up the self-imposed shackle of NFU<sup>15</sup>. The threat of first use will strengthen our deterrence and will instil a greater degree of uncertainty in the minds of the adversaries, thus applying an element of deterrence even for non-nuclear provocations, such as the support to terror groups, etc.<sup>16</sup>

Further, in support of abandoning NFU, some experts argue that India cannot keep its arsenal limited simply because our stockpiles not only have to survive the first strike, but also need to retain a residual capability, adequate to cause 'unacceptable' damage in a 'massive strike'.

#### V. An Unenforceable Concept

Another voice of concern questions the NFU based on the intrinsic nature of the nuclear weapons per se. It is argued that such weapons of mass destruction cannot be designed for a second strike response; implying thereby, that intrinsically such weapons are weapons of first strike when the time and the situation are so grave so as to make their use a necessity. Probably it is meant, that keeping such weapons for second strike will be a non-executable option because in the debilitating first strike of the enemy, much of the retaliatory capability will be destroyed. A second strike mustered from the residual resources of a devastated arsenal will certainly not be capable of being 'massive' with a potential to cause 'unacceptable' damage.

In the same vein it is also argued, that keeping the weapon components de-mated and de-alerted is like inviting the adversary to destroy them in detail. The argument is, that the de-mated and de-alerted chain will be so widespread and so long that destruction of any link in the chain will make the end-response impossible. Worthwhile to remember that post first strike will be a time of great crises, confusion and national chaos. Surely, the strength of the chain lies in its weakest link.

#### VI. Get Back to 'Punitive'

There is also been pressure from informed circles that the words 'massive retaliation' in the current doctrine must be replaced with the words 'punitive retaliation'. This pressure has grown considerably ever since our western neighbour has declared his possession of Tactical Nuclear Weapons (TNW) that can be used, as claimed, for a limited effect in the battlefield for tactical aims without the danger of blowing over to all-out nuclear war. The argument is with the perception of Pakistan who will be

convinced that in response to an odd use of a TNW in the Tactical Battle Area spilling over to a limited domain, the response of a 'massive retaliation' which can cause 'unacceptable damage' will neither be driven by reason nor accepted by the Indian political leadership.

This thought and belief provides an ideal space for Pakistan for continuing nuclear blackmail under whose garb, nasty acts of terrorism could be pursued without the danger of ever crossing that level of threshold that could initiate a 'massive' retaliation. Two demands originate from this thought process. One, that India's doctrine must give the decision makers 'space' and, two, it must have the requisite wherewithal to 'exploit that space'. The connotation of 'space' demands a flexibility of proportional response, wherein, India could respond one-on-one to a possible use of a TNW and not remain locked with a solitary option of 'massive' or nothing, leaving the adversary comfortable in his thought that the threshold for 'massive' will not be reached either on grounds of rationality or on political correctness and he is free to conduct, in the garb of nuclear blackmail, lethal acts of terror sponsorship.

### A Viewpoint on Voices of Change

NFU by itself is a hollow proposition which draws no mileage and carries no conviction if seen in isolation. In fact, no country believes in the NFU declaration of the other. As for our NFU, Pakistan believes that it is a peace time declaration only to earn some points in the international fora. A Pakistani view has it that in the light of recent doctrines of the Indian Army such as the Joint Doctrine of the Indian Armed Forces issued in 2017 or the Land Warfare Doctrine issued in 2018 which envisage a limited war or a low intensity conflict based upon pro-active offensive duly preceded by pre-emptive strikes have long eroded the credibility of its NFU policy<sup>17</sup>. Similar views were expressed both by Pakistan and China following the statement of Rajnath Singh.<sup>18</sup> So our NFU stance is not credible to the potential adversaries as regards our intention. Then what value if any, it has as a position, we continue to hold on to?

**NFU actually stands on the twin foundations of 'massive' and 'unacceptable'.**

NFU actually stands on the twin foundations of 'massive' and 'unacceptable'. So long as the adversary is 'convinced' that there is only one response from India and that response is going to be a 'massive retaliation' with a potential to cause 'unacceptable damage' he will be deterred to press the button. The bottom line for NFU to have any meaning and effect is to achieve that level of 'conviction and credibility'. It is a tall order.

Do we have it now? Naysayers will reply in a NO while the others will like to believe 'May Be'. They may probably support their belief with the fact that given all the variables, the deterrence has held in our scenario; period.

There is a need for greater scrutiny of this belief. Before that is taken, a word on what is 'unacceptable.' What will be unacceptable to a potential adversary is a matter of our perception and understanding of his mind set. It is the sense of the author that for Pakistan, it could be an 'existential threat'. A strike that could wipe much of what is Pakistan today.

What about China? Experts have argued that China has a nuclear prowess that can deliver a catastrophic and a crippling blow to India. What will be unacceptable for a country of China's stature and standing? Consider a bout between two unequal adversaries. While the stronger knows that it can strike a catastrophic blow on his opponent, if he is also sure, that come what may, his opponent will survive the blow and will yet be capable to strike back causing damage and destruction to his vitals he will be deterred to strike first. Another layer of deterrence will reside in the overall standing of the stronger where one blow to his vitals will be unacceptable, even to him; even if the same is not all annihilating. Talking in the same breath, while China knows that it can strike a debilitating nuclear blow to India, if it is also convinced that come what may, India will strike back causing damage and destruction to its counter value targets, deterrence will hold. Taking on destruction to a population centre (even if one or two) will be unacceptable to China's standing. It will thus be seen that the perception of 'unacceptability' has different connotations both for Pakistan or China.

Therefore, if NFU has to have some relevance, the fundamental requirement is to build that level of capability which yields the type of belief in our potential adversaries as stated above. How to build this capability? A viewpoint is presented.

The nuclear retaliatory capability stands on three strategic pillars:-

1. Warheads.
2. Delivery Means.
3. Command Control and Authorisation regime.

#### *Warheads*

It is fundamental to NFU that so long as a viable number-- that will be left as a residual after the first strike is absorbed -- can cause the damage to the 'level of unacceptability' of the adversary, there is no need to chase numbers in the ongoing warhead number race.

Having met the condition as stated above, this position sets to rest all the arguments of being more assertive, more responsive and more pro-active in matching the warhead-to-warhead race, which the counter NFU voices demand so vociferously.

It is hoped that such a number exists in the knowledge of the government, duly validated by technical analysis from domain experts, on the likely catastrophic damage of the first strike and the assured residual capability likely to survive. Of course, it will not be such a neat arithmetic in the time of national crises and all-round havoc and chaos, but if the residual number is ensured come what may, and that the adversaries are convinced about the same, NFU will hold and the numbers will unlikely to be called into play. Nuclear weapons are weapons of peace provided the deterrence holds. There is a case for some overt assertion by some quarters of the government in direct/indirect references at forums that matter, which may add credibility to the belief that residual retaliatory capability beyond the first strike is ensured, in case that has been achieved.

This brings to the argument of de-alerted, de-mated stance versus having weapons 'ready to use'. Having had a first-hand knowledge it is stated that the status is not as neat as stated above. There are a large number of stages and many a degree of readiness of warheads and delivery means that follow from a well-defined chain-- from cold start to a fully operational status. There is also a huge concern of safety and security of 'ready to use' weapons, worst being the possibility of the catastrophic event of their initiation upon taking the first strike.

It will, therefore, be more prudent to locate the multiple components related to the warheads in connected and interlinked sites in way that it meets the dual requirement of safety during first strike coupled with the capability to be mated for the second strike, both in time and space. This of course is a very tall order fraught with huge uncertainties and un-predictabilities, but again it is to be hoped and believed that if government stands firm on NFU, the same has been done in the best possible manner, keeping various degrees of safeties and readiness status in view. The same goes with alerted/de-alerted status which again is not a binary position. There are many stages of alert escalation based on inputs from multiple sources. In a clear taking of the position where the first strike is envisaged to be absorbed, the very complex issue of alert status would have to be tied up. Suffice to say that not all is known in the public domain. That we hold on to the NFU as a conscious decision and not as bureaucratic muscle memory is reason to believe that this very complex decision requiring multiple techno-scientific inputs stands addressed or if there are voids, it is the priority of the government to plug them.

In essence, if the bottom line position of the certainty of 'massive' and 'unacceptable' is driven home, much of alert and mated possibilities or otherwise will be put to rest. As to the quantum of warheads, open source is filled with data on this. Suffice to say that in the NFU stance, the numbers are a direct function of the Government's (experts) understanding of the quantum that will ensure residue for 'massive and 'unacceptable' retaliation, post first strike. For the sake of numbers, one recent estimate puts it at 130-140 warheads with enough weapon grade plutonium to support 150-200 warheads. No claim is made of the correctness or otherwise of these open source figures as these are considered irrelevant to the main argument.

### *Delivery Means*

It is well known from the open sources that India has the capability to deliver nuclear weapons through all the three mediums of land, sea and air. Multiple tests of Prithvi and Agni series of missiles with claimed capabilities as communicated in the media have repeatedly validated this capability (technical details not covered). As to artillery, it is a technical fact that 155mm calibre guns held by India are capable to carry special warheads. Similarly, the details of successful trials of Dassault Mirage2000 and SEPCAT Jaguars are available for our adversaries to form their opinion on India's capability to use air arm for a secondary nuclear strike role. Also, the details of the INS Arihant class of weapons with Sagarika K 15 missiles or the development of a submarine launched ballistic missile version of Agni III, known as Agni III SL, are well documented in the media.

**if the bottom line position of the certainty of 'massive' and 'unacceptable' is driven home, much of alert and mated possibilities or otherwise will be put to rest.**

These very open and very overt declarations of capabilities are meant to drive home the message of credibility of the triad in India's arsenal. Two nagging questions immediately arise. One, will India's triad stand the first strike? Two, are the warheads duly miniaturised to be carried on board as weapon payloads of ballistic missiles/ air launched weapons? In search of an answer, recourse is taken to the government's unflinching stand of NFU; many a voices of change notwithstanding. Also, it will be reasonable to believe that adequate safety measures in military terms would have been adopted by the Services in keeping their strategic weapons safe based on a realistic threat perception. Also keeping in mind the fact that the three mediums are totally distinct and separate, it is to be hoped and believed that some portions, if not all of the triad, will survive; or the adversary will so believe.

### *Command and Control*

With the establishment of the Strategic Forces Command (sometimes also referred in the open source as Strategic Nuclear Command) way back in 2003, India has actually gone past the basic question whether it has the institutional arrangement to deliver a nuclear weapon when the need so arises. This arrangement means a lot of things, integration of warheads and delivery means under one command, fool proof command, control and communication systems, a hierarchy of commands and authorisation regime with stake holders in place, integration one-on-one with national command post and national political hierarchy, decision making chain with next-for earmarked, safety and security of the decision making chain, clarity on the sequence of action in various contingencies of the survival of the whole or part of decision chain, linkages to warheads and delivery means and redundancies therein, to name a few.

**The remaining question is – whether there will be a political will to take the design for ‘massive’ and ‘unacceptable’ retaliation?.**

The remaining question is – whether there will be a political will to take the design for ‘massive’ and ‘unacceptable’ retaliation? There are no direct answers as this will depend on the adversary’s mind set of what he believes to be the answer. Few indicators that may shape his belief for the future scenario:-

1. Should the NFU actually get played out it will be in a catastrophic, chaotic, and devastating situation post first strike, wherein, the option to strike back, will have to be a fait-accomplis.
2. Capability to pick up the residual capability (hopefully unscathed), clearing it through the surviving political decision-making chain and executing the delivery will be a very challenging but no-holds-barred decision, considering what the country would have suffered.
3. If the adversary believes in the adequacy, security and survivability of the three strategic pillars, namely, warheads, delivery means and command and control measures to the extent of massive and unacceptable retaliation, he will believe that such a decision will indeed be forthcoming. The argument that Indians are intrinsically not wired for crises management may have to change with the current realities.

4. Balakot and such other things are very small as compared to the big time decision stated above, yet it gives some hint of what this Government can do and will not hesitate to do if the push does come to the shove.

*On TNW Tit for Tat*

With all that said in support of the NFU, there is no logic and rationale to go in for Tactical Nuclear Weapons (TNW) in a tit-for-tat mode. Let there be any TNW, if the belief of the adversary is unshaken in 'certain', 'massive' and 'unacceptable' retaliation, the TNW button is unlikely to be pressed. In fact, by taking the TNW recourse India will make the nuclear game 'playable'. It would be a biggest folly of belief that a nuclear exchange, however small, once initiated is ever controllable. The deterrence contained in adversary's belief of massive and unacceptable retaliation is adequate to deal with TNW.

India does not have to indulge in nuclear gameplay but when it strikes, it will cause unacceptable devastation and IT SURELY WILL HAVE THE CAPABILITY TO DO SO POST FIRST STIKE. That is the belief in the adversary that has to be built.

The above argument also sets to rest, the voices for changing the word massive to punitive. Punitive presumes nuclear game play. Massive puts forth a strong wall of deterrence. That is the difference. India believes in solid deterrence not nuclear gameplay. That there is an ample space for conventional war-fighting as displayed in recent events even with TNWs in place validates the soundness of 'massive' and 'unacceptable' as pillars of NFU. Besides all the above, why should we not exploit all other advantages of NFU -

1. Responsible nuclear power status.
2. Part of Missile Technology Control Regime.
3. Part of Wassenaar Arrangement.
4. Part of Australia Group.
5. Strong membership claim to Nuclear Suppliers Group even as a non-signatory of NPT.
5. No engagement in warhead race, number-to-number.
6. Onus of escalation always with the adversary.
6. Weapons in desired state of dis-assembly (keeping second strike surety intact).
7. No uncertainty of nuclear pre-emption.

The list can go on.

In any case, the adversaries believe that India's NFU is a peacetime declaratory policy to earn some 'brownie points' in international fora, it has no sanctity in war. If that be so, why loose brownie points for no strategic advantage??

**NFU MUST STAY.**

## References

1. Talukdar, Sreemoy. "Rajnath Singh's Remarks on 'No First Use' of Nukes Indicate Ambiguity in Nuclear Policy in India's Interest." *Firstpost*, August 21, 2019. <https://www.firstpost.com/india/nfu-has-outlived-its-purpose-rajnath-singhs-remarks-on-shift-in-indias-nuclear-policy-indicate-ambiguity-in-doctrine-essential-7191381.html>.
2. "The Cabinet Committee on Security Reviews Perationalization of India's Nuclear Doctrine." Ministry of External Affairs, Government of India. Accessed February 6, 2020. [https://mea.gov.in/press-releases.htm?dtl/20131/The\\_Cabinet\\_Committee\\_on\\_Security\\_Reviews\\_perationalization\\_of\\_Indias\\_Nuclear\\_Doctrine+Report+of+National+Security+Advisory+Board+on+Indian+Nuclear+Doctrine](https://mea.gov.in/press-releases.htm?dtl/20131/The_Cabinet_Committee_on_Security_Reviews_perationalization_of_Indias_Nuclear_Doctrine+Report+of+National+Security+Advisory+Board+on+Indian+Nuclear+Doctrine).
3. "Draft Report of National Security Advisory Board on Indian Nuclear Doctrine." Ministry of External Affairs. Accessed February 6, 2020. <https://mea.gov.in/in-focus-article.htm?18916/>
4. "The Cabinet Committee on Security Reviews Perationalization of India's Nuclear Doctrine." Ministry of External Affairs, Government of India. Accessed February 6, 2020. [https://mea.gov.in/press-releases.htm?dtl/20131/The\\_Cabinet\\_Committee\\_on\\_Security\\_Reviews\\_perationalization\\_of\\_Indias\\_Nuclear\\_Doctrine+Report+of+National+Security+Advisory+Board+on+Indian+Nuclear+Doctrine](https://mea.gov.in/press-releases.htm?dtl/20131/The_Cabinet_Committee_on_Security_Reviews_perationalization_of_Indias_Nuclear_Doctrine+Report+of+National+Security+Advisory+Board+on+Indian+Nuclear+Doctrine).
5. "Draft Report of National Security Advisory Board on Indian Nuclear Doctrine." Ministry of External Affairs. Accessed February 6, 2020. <https://mea.gov.in/in-focus-article.htm?18916/>
6. PTI. "Nuclear Doctrine Will Be Revised: BJP Manifesto." *The Economic Times*, April 7, 2014. <https://economictimes.indiatimes.com/news/politics-and-nation/nuclear-doctrine-will-be-revised-bjp-manifesto/articleshow/33399610.cms?from=mdr>.
7. Dalton, Toby. "Much Ado About India's No-First-Use Nuke Policy." *Carnegie Endowment for International Peace*, September 26, 2019. <https://carnegieendowment.org/2019/09/26/much-ado-about-india-s-no-first-use-nuke-policy-pub-79952>.
8. Karnad, Bharat. *Nuclear Weapons and Indian Security: The Realist Foundations of Strategy*. New Delhi: Macmillan, 2002, p 442
9. "India's Ex-SFC on Nuclear Doctrine." Shashank Joshi, July 2, 2014. <https://shashankjoshi.wordpress.com/2014/07/02/indias-ex-sfc-on-nuclear-doctrine/>.
10. *ibid*
11. Mudur, G.S. "Rajnath Singh's Nuclear Tweet Surprises Few Experts." *Telegraph India*.

Telegraph India, August 16, 2019. <https://www.telegraphindia.com/india/rajnath-singh-s-nuclear-tweet-surprises-few-experts/cid/1698295>.

12. ET Bureau. "Nuclear Rethink: A Change in India's Nuclear Doctrine Has Implications on Cost & War Strategy." *The Economic Times*, August 17, 2019. <https://economictimes.indiatimes.com/news/defence/nuclear-rethink-a-change-in-indias-nuclear-doctrine-has-implications-on-cost-war-strategy/articleshow/70718646.cms?from=mdr>.
13. "Pakistan." Nuclear Threat Initiative - Ten Years of Building a Safer World. Accessed February 19, 2020. <https://www.nti.org/learn/countries/pakistan/nuclear/>.
14. Ibid.
15. Joshi, Shashank. "India's Nuclear Anxieties: The Debate Over Doctrine | Arms Control Association." *Arms Control Association*, May 2015. <https://www.armscontrol.org/act/2015-05/features/india-s-nuclear-anxieties-debate-over-doctrine>.
16. Ibid.
17. Malik, Haris Bilal. "Pakistan's Skepticism on India's NFU Policy Stands Validated." *Modern Diplomacy*, September 17, 2019. <https://moderndiplomacy.eu/2019/09/18/pakistans-skepticism-on-indias-nfu-policy-stands-validated/>.
18. Ibid.