

 **ORF**
OCCASIONAL
PAPER

JANUARY 2018

139

**India's Joint Doctrine:
A Lost Opportunity**

ABHIJNAN REJ
SHASHANK JOSHI

India's Joint Doctrine: A Lost Opportunity

**ABHIJNAN REJ
SHASHANK JOSHI**

ABOUT THE AUTHORS

Abhijnan Rej is a Fellow with Observer Research Foundation's Strategic Studies Programme. He currently works on Indian foreign policy and grand strategy, conventional and nuclear deterrence, and Asian geopolitics with a focus on China. His recent ORF publications have covered these subjects, as well as other related issues such as intra-state dynamics in Pakistan, emerging-powers plurilateralism, and Islamist terrorism. Rej's most recent research paper, on India's grand strategy, appeared in *The Washington Quarterly* in the summer of 2017. He is also a media commentator with active presence in Indian and foreign periodicals.

Shashank Joshi is Senior Research Fellow at the Royal United Services Institute. He is also Senior Policy Fellow at Renewing the Centre, within the Tony Blair Institute for Global Change. He is a graduate of Cambridge and Harvard, the latter as a Kennedy Scholar from Britain to the United States in 2007-08. He has lectured to the UK Defence Academy on a regular basis, as well as other political, diplomatic, and military audiences in Britain, Europe, and Asia. He has given evidence to the House of Commons' Foreign Affairs Committee and Defence Committee several times. His most recent book, *Indian Power Projection: Ambition, Arms and Influence*, was published as a RUSI Whitehall Paper in December 2015.

ISBN : 978-93-87407-49-7

India's Joint Doctrine: A Lost Opportunity

ABSTRACT

The Integrated Defence Staff released the first-ever public joint doctrine for the Indian armed forces (JDIAF-2017) in April 2017. Absent a publicly articulated national security strategy, the joint doctrine presents important clues about what that strategy might be. This paper examines JDIAF-2017 in conjunction with other Indian military doctrines, public writings of leading Indian strategists, as well as foreign military doctrines and strategies that influence Indian military thinking. Opening with a comparison of Indian defence planning and the American structure in order to tease out the broader role of the joint doctrine in the Indian system, the paper proceeds to examine the continental view of threats enunciated in JDIAF-2017, and connects it to India's recently-avowed proactive, limited-aims Pakistan strategy. A consequence of this continental view of threats is an army-centric joint doctrine that fails to pay sufficient attention to the role of the other two services, and appears considerably influenced by the US Army's Air Land Battle doctrine. The paper explicates JDIAF-2017's treatment of nuclear issues and their relationship to conventional war, and deals with the near-absence of force-projection and other issues in the joint doctrine. The paper also discusses the Joint Training Doctrine of the Indian Armed Forces that was published as a follow-up to JDIAF-2017.

INTRODUCTION

The Integrated Defence Staff (IDS) of the Indian armed forces released the joint doctrine for the Indian armed forces (JDIAF-2017) in April 2017. This was not the first such document, a classified version having been circulated in 2006.¹ It was, however, the first such extensive public statement of India's approach to joint warfare. Unlike some other countries, India does not publish a national security strategy or defence white paper that is made available for public scrutiny. Absent such a document, a public joint doctrine for the armed forces is perhaps the closest to an official articulation of Indian thinking on how various instruments of force combine to meet national security objectives. However, the joint doctrine has disappointed many.² Scholars, former practitioners, and other observers widely derided JDIAF-2017 as an incoherent, poorly-edited, and lacklustre document, part of which even appear to have been plagiarised from other sources. One former service chief went as far as to call it "anodyne, farcical and premature".³ The most substantive criticism of JDIAF-2017 has focused on its "army-centric" approach, with very few substantive ideas around military jointness and a narrow view of key external threats.⁴

This paper highlights six key sets of problems with JDIAF-2017. The rest of this introductory section describes key external and internal security challenges that ought to have provided context to the doctrine. In the next section, the paper examines JDIAF-2017 as an element in the Indian national security planning process. It compares Indian defence planning with the American structure to tease out the broader role of the joint doctrine in the Indian system, and argues that the lack of a codified national security strategy continues to hobble both jointness and defence planning. The third section examines the continental view of threats enunciated in JDIAF-2017. It argues that Pakistan looms large in Indian defence thinking and connects the joint doctrine to

India's recently-avowed proactive, limited-aims strategy designed to address a Pakistan-related contingency. The paper argues that JDIAF-2017 has sent incomplete and conflicting signals regarding a putative limited-aims strategy.

A consequence of a continental view of threats is an army-centric joint doctrine that fails to pay sufficient attention to the role of the other two services. This issue is reprised in the fourth section, along with an examination of the role of US Army's Air Land Battle doctrine in shaping JDIAF-2017. Key areas of divergence between JDIAF-2017 and the Air Land Battle doctrine are also highlighted in this section. Given that any Pakistan-related military operation would be carried out under a nuclear overhang, the fifth section examines JDIAF-2017's treatment of nuclear issues and their relationship to conventional war. In particular, it teases out new and so-far unexamined issues that the joint doctrine brings out vis-à-vis Indian nuclear command and control and force posture. The sixth section deals with the near-absence of force-projection issues in the joint doctrine, even though in November 2017, the IDS released a follow-up Joint Training Doctrine that contains interesting observations about force projection and interoperability with friendly foreign countries. That document is examined in the penultimate section. The paper closes with a summary of the issues discussed in the paper.

JDIAF-2017 comes at a key moment in the evolution of India's strategic environment. Seventy years into independence, India's national security challenges remain as severe as ever. The long-running insurgency in Indian-administered Kashmir worsened sharply in the summer of 2016. Analysts frequently observe that the violence in the Kashmir Valley in 2016 was comparable to the outbreak of the insurgency in the region in the early 1990s. The year 2016 also saw a series of attacks on Indian military installations in Kashmir and Punjab. One such attack, in September 2016 in Uri, led the Indian Army to

launch publicly avowed cross-border raids – widely labelled “surgical strikes” – against militants in Pakistan-administered Kashmir. Left-wing extremism continues to be a concern in the Indian heartland. In April 2017, an attack by Maoist extremists killed 25 Indian paramilitary personnel, the worst such attack in recent years.⁵

The 2003 informal ceasefire between India and Pakistan has continued to erode. In 2016 alone, there were as many as 449 incidents of cross-border firing on the Line of Control (LoC), up from 152 the previous year.⁶ In recent years, the India-China relationship has considerably worsened with the emergence of multiple disputes. China has blocked India's membership in the Nuclear Suppliers Group, repeatedly prevented the UN Security Council from sanctioning the Pakistan-based terrorist Masood Azhar, and expanded its economic and military footprint in Pakistan through the so-called China-Pakistan Economic Corridor, including in India-claimed Gilgit-Baltistan. The most serious confrontation between the two countries emerged in mid-2017 when China tried to construct a road in the Doklam region claimed by both Bhutan and China, close to the Siliguri Corridor (which is strategically sensitive to India, owing to the access it gives India to the Northeast through a narrow strip between Nepal, Bhutan, and Bangladesh). This construction activity led to a tense two-and-half month standoff between Indian and Chinese troops – the worst such incident in almost three decades.⁷ China's growing presence in the Indian Ocean region, including a new military base in Djibouti, is a further challenge for India.

In the face of these challenges, it is clear that Indian institutions remain far from the inter-service integration that has become the norm in many Western military powers. In a nod to the global trend towards jointness, India established an Integrated Defence Staff (IDS) in October 2001, as a staff for the relatively weak Chairman of the Chiefs of Staff Committee (COSC).⁸ The IDS took the lead on the first joint

doctrine of 2006, with over a half-dozen further, more specialised ones – on subjects from amphibious operations⁹ to electronic warfare¹⁰ – produced in the next several years. It is widely recognised that the IDS “has little impact on how India formulates and implements its military policies.”¹¹ One former Indian officer concludes, with diplomatic phrasing, that “a review of HQ IDS’s endeavours since 2001 would indicate difficulties being experienced in forging jointness and integration in planning processes and structures.”¹² Another analyst, a retired general, argues that the “headless” IDS “serves little purpose,” largely because “all issues of any consequence are dealt with by the civil officials of MoD.”¹³ Yet another view, expressed by a former senior Indian Army officer, is that joint operations are essentially single-service operations in phases, and that jointness is present at the tactical level without a higher-level document or guidance driving it.¹⁴ During the Modi government, early indications of interest in a post akin to that of Chief of Defence Staff (CDS) have fizzled out, as so often it had in the past.¹⁵ India has established a few other tri-service bodies, such as the Defence Intelligence Agency, as well as joint commands, notably the Andaman and Nicobar Command in 2001 and the nuclear-tasked Strategic Forces Command in 2003. Yet these, like the IDS itself, “own” no military assets, and are therefore institutionally weak in relation to the individual services.¹⁶ Gen. Sundararajan Padmanabhan, army chief from 2000–02, described the IDS sans CDS as “an exercise in futility.”¹⁷ Gen. JJ Singh, army chief from 2005–07, has said Indian jointness is still “in a state of transition from single-service entities”, with “a long way to go on the road to further integration.”¹⁸ This is the broader context to JDIAF-2017 which the rest of the paper will analyse in detail.

THE DOCTRINE-STRATEGY-PLANNING DISCONNECT

One of the longest-running debates in the Indian strategic community has been around the need for a publicly articulated national security strategy. Such a strategy, setting out key national-security objectives,

would then steer military doctrines by providing political guidance on the ends that military instruments should meet in war and peace. Determining the use of these instruments would be the task of military strategies of individual services as well as for the joint operations.

While there have been several unofficial and quasi-official publications that have outlined a national security strategy for India,¹⁹ practitioners and scholars have both observed that without a formal document, defence planning – which includes the arms and platforms that a country acquires (force structure) and how it deploys these (force posture) – may lack the necessary strategic guidance, and is at risk of proceeding on an ad-hoc basis.²⁰ This is not to say that the Indian government has neglected strategic concerns entirely. A note published on the IDS website, authored by a then-serving officer of the Indian Army, indicates that the body had forwarded a ‘Draft National Security Strategy and Defence Planning Guidelines’ to the National Security Advisor in 2008.²¹ A former foreign secretary and convenor of the National Security Advisory Board (NSAB) also recently indicated that the Indian government had contemplated drafting such a document in the past.²²

JDIAF-2017 notes, rather cryptically: “Even though we have no *formally articulated* National Security Policy and Strategy, *it does not imply that they do not exist* or are not sufficiently understood [emphasis added]” (p. 4). This formulation may well hint at the existence of a classified national security strategy, or to less formal guidance that the Indian military may occasionally receive from the prime minister’s office. It is unclear from JDIAF-2017 how two other defence planning documents – the Raksha Mantri’s [Defence Minister’s] Operational Directive and the Long-Term Integrated Perspective Plan (LTIPP) – fit into a classified national security strategy. The former is issued by the defence minister to the services, while the latter is prepared by the services and coordinated by

the IDS, which is institutionally weak. The former is essentially a political document, while the latter is a military one.

One presumes, though evidence is scant, that the LTIPP is developed on the basis of the Operational Directive by the HQ IDS.²³ JDIAF-2017 is sparse on details of the LTIPP, only noting that “[i]t charts the size and shape of the Forces over that designated time period [15 years] based on foreseeable strategic trends” (p. 48). The first LTIPP covers the 2012-2027 period and took 12 years to be drafted, after the need for such a document was first proposed to the government by the Arun Singh Committee, in the aftermath of the Kargil war, in 2000.²⁴ The contents of the LTIPP is not known even though a 2002 ‘Report on the First Year of Existence of the IDS HQ’ by the Chief of IDS noted that “the LTIPP is not intended to be a prescriptive document since *it involves much larger issues of national strategy, foreign policy, economic development and so on* [emphasis added].”²⁵ It is unclear from open sources how much more focused the document has become since its initial conception.

In assessing the joint doctrine and its relationship to broader national security strategy, it may be useful to adopt a comparative approach. US analysts have already noted the stylistic similarities between JDIAF-2017 and the Doctrine for the Armed Forces of the United States (JP-1).²⁶ Given this similarity, it is worthwhile to examine the role played by various national planning documents in the latter, to identify what is missing from the former. JP-1 identifies three planning documents that provide strategic guidance to the doctrine of the American armed forces: (1) a national *security* strategy; (2) a national *defence* strategy (until 2016 referred to as the *Quadrennial Defence Review* or QDR); and (3) a national *military* strategy.²⁷ Viewing strategy as a way to connect ends and means through ways, (1) provides the ‘ends’ – the core ‘national priorities’ to be met through the use of (or threat of use of) force; (2) provides the ‘ways’ through DoD guidance; and (3)

provides the 'means' in the form of strategic direction to the military.²⁸ Implicit in this formulation is also the view that 'national security' as a notion is more expansive than the notion of 'national defence'. 'National military policy' is the narrowest of the three constructs.

Ideally, the formulation of (1) should precede (2) which, in turn, should precede (3).²⁹ Taken together, the three form the core of US grand strategy under each administration. The president – through a Congressional mandate – is required to present a national security strategy. The US Secretary of Defence signs off the national defence strategy, while the Chairman of the Joint Chiefs of Staff is responsible for the national military strategy. From these three documents follow strategic planning documents which include a 'unified command plan', 'guidance for employment of force', 'joint strategic capabilities plan', as well as 'defence planning and programming guidance' (DP/PG) documents.³⁰

The analogue of this arrangement in the Indian system, were something similar to be put in place, would be the following. The prime minister and the Cabinet Committee on Security (CCS) would present a national security strategy. The defence minister would be responsible for a national defence strategy. Finally, the Chairman of the Chief of Staff Committee (Chairman-COSC), in the absence of a long-awaited chief of defence staff or equivalent, would be responsible for a national military strategy. These would then inform, for example, LTIPP, which is the (rough) Indian equivalent of the Pentagon's Planning, Programming and Budget Execution Process (PPBE) led by the DP/PG document, in terms of the intention of both documents. (This analogue is approximate since, among other things, LTIPP has a 15-year cycle while the PPBE process has a five-year cycle.³¹ However, it still is an analogue since, like PPBE, LTIPP serves as the guiding document for military acquisitions.) From the LTIPP flows a "Technology Perspective &

Capability Road Map,” a public document that is intended “to provide the industry an overview of the direction in which the Armed Forces intend to head in terms of capability over the next 15 years, which in turn would drive the technology in the developmental process.”³²

The present workings of the Indian system remain unclear. The Raksha Mantri’s Operational Directive has in the past been understood to be issued by the defence minister, as its name would suggest. The system of Operational Directives has been in place since the 1950s – a legacy of the British Raj and its role in establishing independent India’s Ministry of Defence³³ – and prepared by the IDS since its creation in 2001.³⁴ This would make it too narrow to serve as a national security strategy, because it would have limited consideration of relevant factors in the remit of other ministers and departments – such as nuclear strategy, counterterrorism, and homeland security. However, JDIAF-2017 notes two important things in page 41. One is that the Directive is communicated “by the CCS” – which includes the prime minister as well as ministers of defence, finance, home affairs, and external affairs – rather than the defence minister or MoD alone. This indicates fairly wide consultation and imprimatur. Second, JDIAF-2017 observes that the Directive sets out “political end-states,” rather than defence priorities alone. This implies that the Operational Directive may be somewhat wider than the US’ erstwhile QDR. A fuller understanding of the relationship between the Operational Directive, LTIPP, JDIAF-2017, would require greater transparency by the government.

A CONTINENTAL VIEW OF THREATS

JDIAF-2017 takes an overwhelmingly continental view of external threats. As the doctrine notes, “India’s threats primarily emanate from the disputed land borders with our neighbours” (pp. 8-9). This view of India’s environment is much narrower and more traditional in scope

than the Indian Navy (IN) and Indian Air Force (IAF) doctrines that have been released in the past. Notably, in identifying the LoC and Line of Actual Control (LAC), de-facto borders with Pakistan and China, respectively, JDIAF-2017 is the first time that those two countries have been identified as key threats in an Indian military doctrine in such specific terms, although even then not by name.³⁵ One of the arguments against the publication of a national security strategy in the past has been that in order for such a document to have teeth, these two countries would have to be explicitly identified as threats. By doing so, India's diplomatic efforts vis-à-vis China and Pakistan could be hampered, former government officials have argued in private.³⁶ The document's very publication might in itself be viewed as a signal.

While the doctrine is particularly sharp about the threats emanating from Pakistan, especially at the sub-conventional level, it emphasises the role of deterrence in meeting such challenges, as opposed to compellence or coercion. This is evinced by the fact that 'deterrence' is mentioned 24 times in the document, as opposed to 'coercion' that is used eight times or 'destruction', six times. This indicates that strategic restraint – defined in the Indian context as the “reticence in the use of force as an instrument of state policy”³⁷ – continues to shape Indian strategic thinking. At a time when leading political voices in New Delhi are calling for an end to the culture of restraint in how India deals with Pakistan,³⁸ and urging strategies of compellence³⁹ in addressing the challenge of state-sponsored terrorism, this continued emphasis on deterrence is noteworthy and is, perhaps, due to cultural and bureaucratic inertia. However, it remains difficult to square this emphasis on deterrence with public pronouncements on the existence of a proactive limited-aims strategy directed at Pakistan, ostensibly to end that state's support of terrorism on Indian soil.

JDIAF-2017 acknowledges that conventional options for military counterterrorism against Pakistan are indeed limited, because of the

risks of escalation, nuclear use, and international intercession. Therefore, it seeks methods to exploit sub-conventional space as part of India's deterrence-through-punishment strategy. The doctrine notes, "the response to terror provocations could be in form of 'surgical strikes' and these would be subsumed in the sub-conventional portion of the spectrum of armed conflict" (p. 13). While India had indeed carried out covert cross-border strikes in Pakistan-administered Kashmir in the 1990s and 2000s as a response to terror attacks and other provocations,⁴⁰ the publicly-avowed cross-LoC 'surgical strikes' of September 29, 2016 signalled a new form of sub-conventional response. The joint doctrine seeks to systematise such action, turning a largely ad-hoc response into a formal part of doctrine.⁴¹ However, it became clear soon after the September 2016 strikes that, with terrorist attacks⁴² and cross-LoC firing undiminished, the deterrent value of such small-scale action in meeting sub-conventional threats from Pakistan is limited and uncertain, with perhaps greater utility for assuaging domestic political opinion than re-shaping Pakistan's calculus.⁴³

JDIAF-2017 does note the "possibility of sub-conventional [action] escalating to a conventional level" depending on "multiple influences, principally: politically-determined conflict aims; strategic conjuncture; operational circumstance; international pressures and military readiness" (p. 13). This statement follows immediately after the enunciation of sub-conventional options such as 'surgical strikes', indicating the authors' awareness that strikes along the lines of the one in September 2016 could indeed result in escalation to the conventional level. But the reference to "politically-determined conflict aims" also reflects the possibility that India may itself seek escalation as part of its strategy.

This should be understood in the context of the evolution of India's counter-Pakistan conventional strategy. Between 1981 and 2004, India pursued the so-called 'Sundarji doctrine' – a misnomer given that this

was more a strategy (in the ends-means-ways sense) than a doctrine – which envisioned deep strikes within Pakistan using three ‘strike’ corps, perhaps to bisect Pakistan, while seven ‘pivot’ or ‘holding’ corps halted Pakistani offensives and counter offensives.⁴⁴ The strike corps would enjoy close air support (CAS) from the IAF after it had established air superiority over Pakistan.⁴⁵ The Sundarji doctrine was as much about deterrence-by-denial (the ‘dissuasive’ element stemming from a strong defensive position based on the pivot corps that were stationed on the India-Pakistan border) as much as deterrence-by-punishment (the ‘counteroffensive’ element being the strike corps).⁴⁶

The limitations of the Sundarji doctrine became clear with two developments: Pakistan’s testing of nuclear weapons in 1998, and the slow mobilisation during Operation Parakram in 2001. Pakistan’s nuclear redlines, as expressed by the then-head of Pakistan’s Strategic Plans Division (SPD), Lt. Gen. Khalid Kidwai, has it that Pakistan will use nuclear weapons first in the event that a large proportion of the Pakistani war-fighting apparatus is destroyed – precisely a key objective of the strike corps in the Sundarji doctrine.⁴⁷ During Operation Parakram – a massive mobilisation of the Indian army to the India-Pakistan border in response to a terrorist attack on the Indian parliament – the limitations of a planned offensive operation using strike corps based in the interior of Indian territory quickly became clear, with the unwieldy corps taking weeks to move to frontline positions, giving time for the international community to mobilise.

The debate over whether or not Cold Start as a functional strategy exists in Indian military planning was settled in January 2017 when the Indian army chief Gen. Bipin Rawat publicly confirmed that “[t]he Cold Start doctrine exists for conventional military operations.”⁴⁸ From what has been reconstructed by analysts using limited open-source information, the Cold Start doctrine appears to envision a shallow-thrust offensive into Pakistan to capture territory “that can be used in

post-conflict negotiations to extract concessions from Islamabad.”⁴⁹ This offensive ingress is to be executed using a small number of division sized ‘integrated battle groups’ within three to four days of political clearance and mobilisation orders.⁵⁰ Furthermore, proponents argue, the limited aim of capturing a small sliver of Pakistani territory – in contrast to bisecting that country – will guarantee that Pakistan’s nuclear redlines are not crossed.⁵¹

JDIAF-2017 provides some evidence, though far from unequivocal, that an offensive strategy akin to Cold Start exists in Indian war-planning, especially when read in conjunction with the classified second part of the 2004 Indian Army doctrine. The Indian Army’s own doctrine notes, in the context of offensive operations, the need to prepare holding corps “to undertake offensive operations.”⁵² This meshes with the case that the Army has focused on attaching armoured brigades to each of the holding corps, turning them into ‘pivot’ corps, rather than upending the longstanding operational concept: “the concept still calls for I and II Corps to engage and destroy their counterparts in the northern plains sector and for XXI Corps to execute a deep strike in the desert sector.”⁵³ The traditional role of strike corps, “either as battle groups or as a whole” in “captur[ing] sizeable portions of [enemy] territory” is also highlighted in JDIAF-2017.⁵⁴ It notes that, “[i]n the prevailing geo-political environment, some critical planning parameters are maintaining a perennially high degree of operational preparedness [and the] *capability to mobilise swiftly for an early launch to rapidly achieve tangible gains* [emphasis added]” (p. 19). The doctrine also notes that “[t]he character of future wars is likely to be ambiguous, uncertain, *short, swift, lethal, intense, precise, non-linear*, unrestricted, unpredictable and hybrid” (p. 10, emphasis added).

While the ‘short’, ‘swift’, ‘lethal’ and ‘precise’ nature of Cold Start as envisioned can be noted without further comment, the ‘non-linear’ nature of Cold Start may stem from the fact that – as Walter Ladwig

described it in 2007 – “[t]he eight battle groups would be prepared to launch multiple strikes into Pakistan *along different axes of advance* [emphasis added].”⁵⁵ However, the doctrine elsewhere notes – in the context of using special forces for surgical operations – that “[the] possibility of a conventional war [i.e. a big conventional war] under a nuclear over-hang is reced[ing] [...] with attendant political and international compulsions” (p. 49). It is difficult to square this statement with the existence of a proactive offensive strategy like Cold Start.

Assuming that a conventional limited-war strategy does indeed exist in the books of Indian war-planners, one of the key parameters that would determine its efficacy would be the extent to which it can be jointly prosecuted by the Army and IAF. There have been persistent questions over the degree of synergy of air and land power, with continued tensions between the Army’s priority on CAS tailored to the needs of ground forces and the IAF’s wider vision of theatre-wide influence.⁵⁶ The service-centric structure of India’s higher defence management means that disputes over this and other questions are often arbitrated in inefficient and messy ways, as what occurred in the early stages of the Kargil war in 1999.⁵⁷ There is also tension between India’s civil-military norms and structures, which prioritise tight escalation control, and the demands of a “short, swift, lethal, intense, precise, non-linear, unrestricted, unpredictable” battlefield. Certainly, large-scale air interdiction to “engage enemy surface targets, within and *outside the battlespace* [emphasis added]” (p. 25) – as JDIAF-2017 suggests – sits uneasily with the goals of a limited-aims conventional offensive strategy. But at the heart of the problem is that much of the air-land joint operations that JDIAF-2017 envisions is drawn from US Army’s Air Land Battle Doctrine of the early 1980s (adopted by NATO in that period) which was emphatically not about a conventional limited-aims conflict alone (discussed in the next section).

AN ARMY-CENTRIC DOCTRINE

In the absence of a coherent and forward-looking national security strategy, JDIAF-2017 has adopted a continental view of threats by default, focusing on Pakistan and, to some extent, China. The fact that the Indian Army has long sought to establish itself as *primus inter pares* among the three services is well known. At a public event on 6 September 2017, the current chief of army staff Gen. Bipin Rawat openly called for maintaining the “supremacy” and “primacy” of the Army in a joint services environment.⁵⁸ The army-centric perspective of JDIAF-2017 is evident in that the document, remarkably, does not devote any space to discussing the role of the sole functioning tri-service theatre command in the Indian military: the Andaman and Nicobar Command, created in 2001, which is led by a naval officer. The Andaman and Nicobar Command has been troubled in recent years, with reports that the Navy had “reclaimed” leadership of the previously rotating command.⁵⁹ The publication of JDIAF-2017 was a prime opportunity to counteract the trend in inter-service tension and inject a new spirit of jointness into Indian thinking and institutions. This could have been done by both taking a broad view of India’s security challenges beyond its land borders and spelling out how extant tri-service bodies might be strengthened from their weak state. JDIAF-2017 failed to do these.

From a continental view of external threats follows an army-centric joint doctrine, which draws inspiration from a late-Cold War US Army doctrine of AirLand Battle (ALB). ALB became the centrepiece of the NATO defence strategy of ‘Follow-On Forces Attack’ (FOFA) in the mid-1980s.⁶⁰ ALB has historically been an inspiration for Indian strategic planners since then. Both K Subhramanyam, a leading Indian civilian strategist, and Gen. K Sundarji – in visualising a more proactive strategy vis-à-vis Pakistan – were influenced by US Training and Doctrine Command (TRADOC) FM 100-5 which presented ALB.⁶¹ One of the reasons why ALB was an important inspiration for Indian planners was

that it allowed India— in the words of a former Indian army officer – to “outgrow the defensive rut.”⁶² Another prominent Indian strategist, Gurmeet Kanwal, noted in 2008 that “[t]he concept of AirLand Battle will become more relevant on the Indian subcontinent as RMA [Revolution in Military Affairs] technologies gradually come to the forefront.”⁶³ Kanwal also argues that the lessons of Afghanistan and Iraq show the importance of a “coordinated joint AirLand campaign” in meeting the “military aims in a *limited war* [emphasis added].”⁶⁴

ALB's origin was in TRADOC's “Active Defence” doctrine, as codified in the first version of FM 100-5 in 1976, with a the-then revolutionary observation that “[t]he Army cannot win the land battle without the Air Force.”⁶⁵ The doctrine was a shift to offense. It notes “offence is the decisive form of war, the commander's only means of attaining a positive goal or of destroying an enemy force.”⁶⁶ The second edition of FM 100-5 (released in 1982) envisioned deep attacks into the second echelons of the conventionally-superior Warsaw Pact forces with offensive manoeuvres using mechanised forces and air support in the form of close air support (CAS), battlefield air interdiction (BAI), and air interdiction (AI).⁶⁷ ALB is based on four doctrinal precepts: initiative, depth, agility, and synchronisation,⁶⁸ and has the following key features:

1. A Clausewitzian view which implies that a particular combat element may have to relegate its own objectives to some higher-priority objective;⁶⁹
2. An ‘operational level of war’ where operational planning sits between strategy and tactics;⁷⁰
3. ‘Integrated battle’ which suggests a unified approach to warfare;⁷¹
4. “Decentralized execution of mission-type orders,”⁷²
5. “Extended battlefield,” where air support to land operations will extend from CAS to BAI to AI.⁷³

The Indian army doctrine of 2004 and JDIAF-2017 incorporates all of the above but with crucial differences in some cases. That the view of war outlined in the JDIAF-2017 is Clausewitzian has already been noted by others;⁷⁴ the doctrine states the “use of military force is always “political” in nature” (p. 11), channelling Clausewitz’s classic dictum.

As Skinner in his study of the ALB explains, if war is – following Clausewitz – subordinate to meeting political objectives, “[t]his means that efforts should be directed only to those areas that provide the shortest route to the attainment of the [political] goal. Thus, a particular combat element may have to sacrifice or postpone some of its objectives to provide assistance in achieving a high-priority objective.”⁷⁵ From this view followed a more of a support role of the US Air Force for land operations in ALB.⁷⁶ The Indian army’s own doctrine comes close to assigning a subordinate/supporting role to airpower, noting in its ‘Land-Air Operations’ section that while air operations will be planned “jointly to obtain synergistic effect,” “all such air operations should contribute *towards achievement of overall military goal* [emphasis added].”⁷⁷ It also notes that “[t]he objective of air operations will be to degrade enemy’s air power and reduce its capability to interfere with the operations of own land forces, deny enemy land forces the ability to move unhindered, create an imbalance in his force disposition and destroy or severely damage his surface communications and logistic means.”⁷⁸ This view of air power, as an ancillary to land operations, is also emphasised in the section on ‘Air-Land Operations’ in JDIAF-2017 which assigns air power the role of engaging surface targets as well as “destroy/degrade the adversaries’ air power so as to remove/minimise any interference in operations by own land forces” (p. 27).

JDIAF-2017 explicitly includes the operational level of war, as an intermediate level between the military-strategic and the tactical. The operational level of war refers to actions that go beyond the engagement of a single unit (say, an infantry company moving across a valley) but fall

short of large-scale actions (for instance, the combined movement of several corps across different commands). JDIAF-2017 describes this level as that “at which campaigns are planned by Command HQs [headquarters]/Corps HQs [headquarters] and the equivalent level HQs [headquarters] in the Navy and the Air Force” (p. 12). For context, the Indian Army has seven geographic commands, and 14 corps.⁷⁹ This definition of the operational level is consonant with ALB, which posits that operational planning will be carried out at a higher level (corps and beyond) of command.⁸⁰ The corps was the “principal echelon” in ALB and each was allocated a proportion of air assets in support of land operations that the corps commander could utilise according to his or her own discretion.⁸¹ No such arrangement exists between the Indian army and air force for fixed wing assets. Indeed, the Kargil precedent suggests quite the opposite.

JDIAF-2017 also notes the necessity of fighting “integrated theatre battles” (p. 14), another concept borrowed from ALB where (despite not being explicitly described as such in FM 100-5) ‘integrated battle’ is understood to denote a concept of a “unified war with unified goals.”⁸² It explains its understanding of this notion in a footnote: “Integrated Theatre Battle is a battle where services participate in a single cohesive format during war/conflict” (p. 62). But the notion of ‘integrated battle’ in ALB is more expansive and controversial: ‘integrated’ in that context means (tactical) use of “*all* available assets, including nuclear, chemical, and biological weapons [emphasis in original].”⁸³ The Indian nuclear doctrine as it stands commits to no-first use of nuclear weapons and successive governments have emphasized that the Indian nuclear arsenal has no battlefield purpose.⁸⁴

JDIAF-2017 states: “[o]ur [Indian armed forces’] C2 is underpinned by a philosophy of centralised intent and decentralized execution” (p. 36). This could be read as an echo of ALB’s “decentralized execution of mission-type orders.” The language also finds parallel with the US Air

Force's slogan of "centralized control and decentralized execution."⁸⁵ In ALB, decentralisation implies the ability of local commanders to exploit opportunities in their sectors as they see fit, independent of higher-level guidance and control. JDIAF-2017, in contrast, seems to understand this C2 philosophy to imply the ability of the three service command headquarters (SCHQ) to plan operations independently within the framework of resources and directives made available to them by the service headquarters (SHQ) (p. 36). It, crucially, does not specify the degree of freedom available to corps commanders, unlike ALB's idea of C2. It is possible that the Indian Army views the operational level of war as the purview of the seven commands, in which case JDIAF-2017's observation (in pp. 12—13) that the operational level of war includes planning at the corps headquarters level is contradicted.

The notion of an "extended battlefield", in many ways, was a controversial feature of the ALB doctrine which – when incorporated in NATO's FOFA doctrine – was met with considerable scepticism from European member states because it incorporated the notion of a 'deep attack'.⁸⁶ The extended battlefield in ALB is divided into 'Close Battle' area which extends from 'forward line of own troops' (FLOT) to the 'fire support coordination line' (FSCL)⁸⁷ and 'Deep Battle' area which starts from the FSCL. CAS and limited BAI covers the Close Battle area, directed by the army; BAI and AI covers the Deep Battle area, and is under the direction of the air force; beyond the Deep Battle Area is the strategic area which is under the purview of the air force alone.⁸⁸ JDIAF-2017 draws considerable inspiration from these notions. It notes, in the section on 'Air-Land Battle', that "[t]he aim of Air-Land operations is to seek and strike deep to degrade and destroy the adversary's forces at each stage of the battle" (p. 27). That the doctrine has an equivalent in ALB's 'extended battlefield' is made explicit by its claim that "speed and reach of airpower will be utilized for rapid engagement of enemy surface targets *within and outside the battle space* [emphasis added]" (p. 27).

However, the key difference with ALB and the Indian conception of Air-Land operations emerges in how the IAF conceives of control of air assets in CAS, called 'Battlefield Air Strikes' (BAS) in the 2012 IAF doctrine. According to that document, while the ground commander will have a "key role" in determining where CAS/BAS is to be deployed, it will be the air commander who will have "the final authority to decide on the employment of air assets keeping the overall air situations in mind."⁸⁹ Currently, BAS is the sole responsibility of the IAF given that the Indian Army controls only rotary assets (Mi-35 helicopter gunships as well as two squadrons of indigenously-developed ALH-WSI/HAL Rudra). Indian Army aviators have described the IAF's de-prioritisation of BAS and express hope that once the IAF builds up its squadron strength in the coming years, it will be able to dedicate air assets for CAS alone.⁹⁰ The air force's hesitation to deploy part of its assets for CAS/BAS is also accentuated by its observation that "limited air assets imply that BAS should be employed primarily in critical operations and not frittered always in penny packets."⁹¹ In this regard, JDIAF-2017 once again sits uneasily with the 2012 IAF doctrine.

UNCLEAR SIGNALS ON NUCLEAR WEAPONS COMMAND AND CONTROL

JDIAF-2017 states that "[c]entral to our NSS [national security strategy] is to maintain an effective conventional and nuclear deterrent capability" (p. 4). Its description of India's nuclear doctrine and posture is largely orthodox, reaffirming "credible minimum deterrence" and specifically "no first use" (p. 37), in the face of recent debates over possible shifts in Indian nuclear thinking towards pre-emptive counterforce.⁹² However, JDIAF-2017 does make three striking assertions. At least one appears to have been the result of sloppy drafting; if the others are intentional then they represent notable shifts.

First, the joint doctrine declares that: “chaired by the Prime Minister, the [Political Council] is the only body empowered to take a decision on nuclear issues while the *ultimate decision to authorize the use of nuclear weapons rests solely with the prime minister* [emphasis added]” (p. 37). This phrasing is a considerable sharpening of the CCS’ public statement in 2003 reviewing the operationalisation of India’s nuclear doctrine that year, which noted: “The Political Council is chaired by the Prime Minister. It is the sole body which can authorize the use of nuclear weapons.”⁹³ In this regard, the 2003 doctrine represented a return to the draft doctrine of 1999, which stated that “[t]he authority to release nuclear weapons for use resides in the person of the Prime Minister of India, or the designated successor(s).”⁹⁴ In other words, JDIAF-2017 implies a diminution in the role of the Political Council – whose composition is unknown, but presumably includes other cabinet ministers who form part of the CCS – from authorisation of nuclear use to decision-making on “nuclear issues.” One presumes that these unspecified issues, short of nuclear use, would largely pertain to readiness and preparedness, e.g., alerting of nuclear-capable aircraft, dispersal of delivery systems, mating of warheads and missiles, and launch of nuclear-armed submarine sorties.

Second, the originally circulated version of JDIAF-2017⁹⁵ noted, in the context of nuclear command and control (C2): “The defining issue for Nuclear C2 is to maintain *a credible deterrence* [...]” (p. 37). The dropping of the qualification ‘minimum’ initially appeared significant, although some analysts argued, perhaps reasonably, that the sentence’s scope – C2, rather than the doctrine as a whole – explained the wording.⁹⁶ Nevertheless, when Pakistan announced a test of its short-range ballistic missile NASR – widely seen as a tactical nuclear weapon – in July 2017, it echoed the phrase “credible deterrence,” also without the moderating word “minimum.” However, the version of JDIAF-2017 later published on the website of the IDS changed the wording back to

the traditional “credible minimum deterrence.” This implies that the original omission was indeed accidental – a truly remarkable example of poor drafting, and one with potentially serious consequences in terms of shaping adversaries’ perceptions of India’s nuclear arsenal.

Third, the joint doctrine states: “The tri-service SFC [(Strategic Forces Command)] [...] controls all of India’s nuclear warheads and delivery systems” (p. 37). Despite indications that India was beginning to keep a small portion of forces on higher readiness, it was widely held that the various components of India’s nuclear warheads were still held by different agencies, consistent with the posture of maintaining a securely de-mated arsenal.⁹⁷ In 2012, Vice Admiral (retired) Verghese Koithara explained: “[t]he control system in place in India relies fairly heavily on divided custody where bombs and warheads are kept separate from delivery systems. The former are kept in places controlled by DAE and DRDO, while aircraft will be in air force bases and missiles in army controlled locations.”⁹⁸ In 2014, Rear Admiral Raja Menon wrote that “in the guise of safety, India’s nuclear weapons are not only ‘de-mated’ and the core and ignition devices separated from the warhead, but the separate components are under different departmental control”.⁹⁹ In 2015, Manoj Joshi, a former member of the NSAB, wrote that “nuclear warheads and delivery vehicles are reportedly kept de-mated in the control of the Defence Research and Development Organisation (DRDO) and the Department of Atomic Energy (DAE), while the Strategic Forces Command (SFC) handles the delivery system.”¹⁰⁰ In 2016, Gaurav Kampani, a scholar with expertise in Indian nuclear policy, wrote, “[a]s things stand now, two civilian entities, the Bhabha Atomic Research Centre and the DRDO, have custody of the fissile cores and non-fissile trigger assemblies.”¹⁰¹ The JDIAF-2017 raises an interesting possibility that various components of India’s nuclear arsenal are now under unitary SFC control; further research is needed to substantiate this one way or the other.

If the joint doctrine indeed accurately reflects India's thinking on nuclear command and control, our understanding of Indian nuclear posture would need to be substantially revised. Delivery systems like dual-use aircrafts and naval assets capable of delivering nuclear weapons – such as the newly commissioned INS Arihant – were earlier believed to be in the sole custody of the respective service.¹⁰² It is unclear whether JDIAF-2017 is suggesting that the custody of such delivery platforms have indeed been passed over to the SFC.¹⁰³

Finally, despite the joint doctrine's acknowledgement of the way in which the “nuclear overhang” complicates “the possibility of conventional war,” it devotes surprisingly little space to the problems that flow from this. For one, there is no mention of the doctrinal aspects of warfare in a chemical, biological, radiological and nuclear (CBRN) environment, nor of coordination between conventional and nuclear forces, and implications for escalation control and therefore civil-military relations.¹⁰⁴ One potential scenario, pertaining to inadvertent escalation, highlights the importance of coordination between conventional and nuclear forces. At a recent public event, the current IAF chief declared that the Air Force was capable of striking Pakistan's tactical nuclear weapons.¹⁰⁵ Experts have long argued that Pakistani warheads may not be ‘one-point safe’— meaning that a conventional attack on them, whether unintended or deliberate, could cause a yield event and, therefore, nuclear first-use of sorts by India.¹⁰⁶ The IAF has viewed the targeting of potentially nuclear-tasked missile batteries as essentially tactical operations – in effect sanctioning ersatz nuclear missions that can be carried out without higher strategic/political clearance, even though such conventional operations carry the risk of nuclear retaliation from Pakistan.¹⁰⁷

In fact, part of the doctrine appears outright incompatible with these demands. “Our C2 is underpinned by a philosophy of centralised intent and decentralized execution” (p. 36) it argues, later explaining

that “it would always be essential for the civilian authority, in consultation with military (as part of decision making process) to decide the Military Objective and then leave it to the military professionals to decide upon the best way of achieving the objective” (p. 60). This is effectively a rebuke to Indian political leaders, because in past conflicts they have emphatically not been content to “leave it to the military professionals.” This was evident in the restriction on crossing the LoC in Kargil in 1999, and it will likely be true in future conflicts where escalation control will be a paramount political concern.

FORCE PROJECTION: A DISTANT DREAM?

The joint doctrine’s Army-centric perspective is once more evident in its treatment of force projection, or out-of-area operations beyond India’s traditional military frontiers with Pakistan and China. Jointness – notionally the whole point of a joint doctrine – is especially important to force projection, because the typically longer reach of seapower and airpower for transport and combat purposes dilutes the traditionally predominant role of armies in territorial defence, and places a premium on inter-service cooperation.¹⁰⁸ India’s own history with force projection, whether against Sri Lanka in the 1980s or the minor, abortive Lal Dora operation in Mauritius in 1983, makes this clear.¹⁰⁹ Indeed, JDIAF-2017 itself notes “India has to be prepared to influence the world with its geography and all elements of National Power” (p. 7).

Reflecting this, force projection has been a modest but increasingly important part of the Indian Navy and IAF doctrines in recent years. The navy has released various reviews, doctrines, and strategies through the 1990s, 2000s, and 2010s.¹¹⁰ The most recent of these was a Maritime Security Strategy in 2015. These documents set out the service’s emphasis on power projection in important ways that differed from earlier, pre-1990s statements of Indian naval thinking. The 2009 doctrine, for instance, listed “power projection” and “expeditionary ops”

as sixth and seventh on a list of core missions, directly below “sea control,” “sea denial” and “blockade.”¹¹¹ Equally importantly, successive navy chiefs have stressed the importance of blue-water reach and “longevity in distant theatres.”¹¹²

Similar concepts have appeared in air force thinking. The IAF’s 2007 doctrine – presumably informed by the US and Allied examples during Kosovo, Afghanistan and Iraq – emphasised “potent strategic reach” and signalled a clear intention to become an “expeditionary force” and “global player.”¹¹³ Senior, serving IAF officers, acknowledging the force’s “tactically oriented” history, began exhorting further investment in a “credible strategic aerial-intervention capability.”¹¹⁴ In 2009, the former commander of the IAF’s Western Command, Air Marshal VK Bhatia, described the service’s “growing aspirations to transform itself from a mere sub-continental tactical force to an intercontinental strategic aerospace power in conformity with other leading air forces in the world.”¹¹⁵ In 2012, the IAF released an unclassified *Basic Doctrine*. This stated that the IAF’s vision was to “enable force projection within India’s strategic area of influence,” a large territorial area extending well beyond India’s borders.¹¹⁶ The doctrine emphasised the role of aerial refuelling and AWACS in permitting “long range strikes without the need to stage through airfields,” but also noted that “the IAF will be required to [...] if possible, operate from air bases in our neighbourhood.”

These aspirations for naval and airpower, and the implications for India’s way of war, are weakly reflected in JDIAP-2017. The doctrine acknowledges “the need to address consequences of instability and volatility in parts of our extended and immediate neighbourhood” (p. 7), and there is a nod to concerns over the “presence and role of external actors in the [Indian Ocean Region]” (p. 9). But the discussion of low-intensity warfare occur entirely in the context of domestic insurgencies (p. 20), despite the fact that India’s armed forces were ordered to explore

seriously the possibility of a major overseas deployment, in Iraq, in recent history.¹¹⁷

The doctrine's section on airpower is similarly partial. This paper has already explored the ancillary role assigned to airpower in Section 4. A similar tendency is evident in the independent section on airpower. It includes the stark claim that air campaigns "will be to deter, contain or defeat the enemy's air power" (p. 25). Although the doctrine does then proceed – confusingly – to list other types of missions, against tactical and strategic surface targets, the inadvertent implication is that so-called "counter air" missions are the priority. Discussions of precision strike are largely in a theatre or regional context, rather than the much more ambitious vision of the IAF itself. Strategic air power is downplayed altogether.

More importantly than any of this, however, is that the doctrine simply does not grapple with many of the broader, doctrine-relevant challenges that India would face in projection power within the beyond the region. At least two areas come to mind in this respect. One is the growing importance of anti-access/area denial (A2/AD) capabilities, which are proliferating and growing in reach. These change the way in which all forces need to think about theatre entry, particularly in out-of-area operations where force is being projected from less well-defended bases or platforms outside of one's own defended territory. Similarly, the joint doctrine is also silent about A2/AD capabilities that India may itself develop. Another lacuna is the role of multinational coalitions. While Indian planners rightly assume they are likely to have to fight alone against their major state adversaries, the expanding scope of Indian joint exercises with partner nations – notably the United States, but also other Asian powers – also points to the possible importance of international military cooperation against a wide range of state and non-state threats in the future. While the joint doctrine recognises the value of "defence partnerships", including "operating standards" (p. 21),

it has little to say on the doctrinal implications of this. A subsequent joint training doctrine of the IDS sheds more light into these issues.

TRAINING AT HOME AND ABROAD

In November 2017, the IDS HQ released a Joint Training Doctrine (hereon, JTD-2017) which, the authors claim, flows from JDIAF-2017.¹¹⁸ Despite similar stylistic issues between the two including inexplicable use of capitalisation and punctuation that suggests little ‘production quality control’, the JTD-2017 has several observations that are significant. Joint training is an important part of inter-services integration, a key prerequisite for jointness according to a retired senior Indian Army officer.¹¹⁹ JTD-2017 provides guidance for greater ‘horizontal’ as well as ‘vertical’ interoperability through joint training. The latter pertains to joint training between the Indian armed forces and is anodyne in JTD-2017. The former refers to joint training with ‘friendly foreign countries’ (FFCs) and is more noteworthy in their implications.

In fact, JTD-2017 – unlike JDIAF-2017 – presents a much more forward-looking view of India’s global role and security challenges beyond the immediate continental ones. It notes: “[...] as a responsible world leader, India would need to meet its international obligation of supporting other Nations, whenever such assistance is sought and decided/directed by the Political leadership. These efforts mandate an “Integrated application of National Power” even far away from our shores, if so warranted/directed” (p. 1). It also notes – as one of the objectives for joint training – the need to develop bilateral relations with FFCs “especially in the neighbourhood” (p. 7). Coming in the heels of the Doklam standoff, this is notable.

JTD-2017 also acknowledges the need for intelligence sharing with FFCs to enhance interoperability (p. 37). But a basic requirement for

greater intelligence sharing between India and the US (which certainly qualifies as one) for purposes larger than basic maritime domain awareness is the pending “Communications and Information Security Memorandum of Agreement (CISMOA).” CISMOA – or “Communications Compatibility and Security Agreement” (COMCASA), as the agreement is now known – is the third of the four key foundational agreements for military cooperation between the two countries.¹²⁰ Without CISMOA/COMCASA and India’s ability to interface with the US CENTRIXS system, classified intelligence sharing between the two countries will be limited. It is unclear whether JTD-2017 was the IDS’s way of highlighting the importance of CISMOA/COMCASA and relegating the final decision to ink the same to the political leadership.

JTD-2017 notes: “Joint training abroad has dual objectives of developing international military co-operation as well as to derive learning from best practices in vogue in other Militaries” (p. 40) and also the need for “[t]raining of defence personnel (*including those from Friendly Foreign Countries*) for an all round and balanced development in basic, tactical/operational, *joint planning* and organisational aspects etc [...] [emphasis added]” (p. 15). This is striking given that the “best practices” JDIAF-2017 draws on is a US Army Doctrine of late Cold-War vintage (see section 4) and not, say, the AirSea Battle doctrine which in its A2/AD focus is more relevant to naval force projection. A further comment is that joint planning with FFCs (especially for out-of-area contingencies) remain a distant dream absent political guidance on what to plan for to begin with – which brings us back to the need for a national security strategy (see section 2).

Buried in the JTD-2017 is an extremely important statement that portends well – if implemented – for future joint operations between India and FFCs. In page 41, it notes: “The scope of [joint] exercises [with FFCs] includes professional interactions, *establishment of Joint Command*

and Control structures, training in Counter Insurgency/ Terrorism in a multi-national scenario in Joint bi-tri Services environment [emphasis added].” In a recent paper, Gurpreet Khurana, a leading Indian naval strategist, argues that one of the main areas of divergence between India and the US in the maritime domain is the issue of command-and-control (C2). India has, Khurana argues, a long-standing policy of following a “coordinated” approach to C2 than a “joint” one except for operations under the UN mandate.¹²¹ The difference between the two is that in a coordinated approach to C2 in multinational operations, national C2 is retained while in a joint approach it is not. This issue has come to fore once again with the revival of the US-Australia-Japan-India quadrilateral initiative in November 2017. According to JTD-2017, India could indeed establish joint C2 for certain operations and thereby greatly enhance interoperability with FFCs.

CONCLUSION

Beyond the substantial issues highlighted in the previous sections, smaller problems pervade JDIAF-2017 which suggest little inter-ministerial control over the final product. On two occasions, it uses a plural over the singular which suggest that the Ministry of External Affairs (MEA) might not have been consulted before releasing JDIAF-2017. In page 7, the document remarks on the “increasing assertiveness by emerging *powers* [emphasis added].” It is unclear who the other “powers” are who are asserting themselves in the international system, beyond China. Could it be that JDIAF-2017 is also noting Russian intransigence in Ukraine and elsewhere? In that event, it is unlikely that the MEA would have green-lighted such an assertion. Elsewhere, in page 9, it notes: “challenges [that] are exacerbated by *several countries* vying to acquire Weapons of Mass Destruction [emphasis added].” Is the implication that beyond North Korea, Iran – the only other contemporary power with a recent, albeit halted, interest in nuclear

weapons – is also a challenge for India's security environment? Again, it seems unlikely that the MEA would have approved of such an assertion in a public document that is sure to have been scrutinised in great detail in many capitals around the world, including Tehran. Other analysts have already noted the poor formatting and careless proofreading, leaving the document replete with punctuation and syntax errors and rendering it an air of hasty, amateurish work.

In the absence of a published national security strategy, a publicly released joint doctrine of the Indian Armed Forces could have been a key document in shaping Indian national security strategy, taking into account the pronounced shifts in India's external security environment over the past several years. It might have addressed the continued drift in India's progress towards true jointness, after a period in which reforms to higher defence structures have been minimal, tri-service bodies remain weak, and services openly wage turf wars. In a period of heightened tension with India's main state adversaries, China and Pakistan, it might also have reassured India's citizens and partners that the armed forces' leadership was united in the task of developing India's military instruments in a coherent and joined-up fashion. Alas, the doctrine failed in these aims.

This paper has examined the key ideas in JDIAF-2017. It has put the doctrine in the context of India's wider national security planning apparatus, noting that the document's relationship to the Raksha Mantri's Operational Directive, the LTIPP, and other statements of strategy and planning remains unclear. It has also considered an imperfect analogy between the Indian and American defence planning process, highlighting the missing dimensions in India. The paper examined the heavily continental view of threats laid out in the joint doctrine and its relationship to the proactive offensive strategy, or strategies, labelled Cold Start. It observed that JDIAF-2017 was an army-centric joint doctrine that has little to say about how the other

three services may play a larger role in meeting India's external security challenges. In particular, this paper has explored parallels between the precepts enunciated in JDIAF-2017 and the US Army's AirLand Battle Doctrine first enunciated in the early 1980s and adopted by NATO.

While JDIAF-2017 reaffirmed the orthodox tenets of India's nuclear doctrine – no-first-use and credible minimum deterrence – whether through accident or design, it may also have indicated some previously unknown aspects about India's nuclear command and control structure, while remaining unfortunately silent on the larger and important question of the conventional-nuclear interface in wartime. The paper touched on the limited treatment of force projection, despite the increasing importance of the concept in navy and air force documents over the past decade. Finally, it also discussed the Joint Training Doctrine that was released by the IDS in November 2017 which is more forward-looking in terms of its strategic outlook.

In short, JDIAF-2017 is a lost opportunity. The next iteration of this doctrine must address the range of issues highlighted in this paper and the future iterations of service doctrines should use the guidance in the joint doctrine appropriately. [ORF](#)

ENDNOTES

1. Dinakar Peri, "Decoding the Joint Indian Armed Forces Doctrine," *The Hindu*, May 8, 2017, <http://www.thehindu.com/opinion/op-ed/decoding-the-doctrine/article18404994.ece>.
2. "Joint Doctrine Indian Armed Forces," Second Edition, April 2017, accessed October 27, 2017, <http://ids.nic.in/dot/JointDoctrineIndianArmedForces2017.pdf>. All page numbers in the text refer to this document.
3. Sandeep Unnithan, "A shot in the dark," *India Today*, May 4, 2017, <http://indiatoday.intoday.in/story/indian-armed-forces-warfare-strategies-insurgency-kashmir-maoists/1/945169.html>.
4. For a selection of commentary on the joint doctrine, see: Ankit Panda, "India's 2017 Joint Armed Forces Doctrine: First Takeaways," *The Diplomat*, April 28, 2017, <https://thediplomat.com/2017/04/indias-2017-joint-armed-forces-doctrine-first-takeaways/>; Anit Mukherjee, "Joint Doctrine for Armed Forces: The Single-Service Syndrome," *The Hindu*, May 9, 2017, <http://www.thehindu.com/opinion/op-ed/joint-doctrine-of-armed-forces-the-single-service-syndrome/article18410953.ece>; Sudharshan Srihande, "Joint Doctrine of the Indian Armed Forces – Wholly Informational, Hardly Doctrinal," *The Wire*, May 8, 2017, <https://thewire.in/133347/joint-doctrine-indian-armed-forces-wholly-informational-hardly-doctrinal>; Srinath Raghavan, "Defence policy has to be a joint effort between civilians and the military," *Hindustan Times*, May 11, 2017, <http://www.hindustantimes.com/columns/defence-policy-has-to-be-a-joint-effort-between-civilians-and-the-military/story-55KtLiHsr63M1buTG7li3N.html>.
5. "Sukma attack: 25 CRPF jawans killed, worst Naxal attack in years," *India Today*, April 24, 2017, <http://indiatoday.intoday.in/story/naxalites-attack-crpf-camp-chhattisgarh-sukma-jawans/1/936827.html>.
6. "Pakistan violated ceasefire daily in 2015, 2016: MHA," *The Indian Express*, May 7, 2017, <http://indianexpress.com/article/india/pakistan-violated-ceasefire-daily-in-2015-2016-loc-home-ministry-in-rti-reply-4644870/>; PTI, "Over 100 Pak LoC firing incidents in 2017," *Kashmir Monitor*, October 24, 2017, <https://www.kashmirmonitor.in/Details/135023/over-100-pak-loc-firing-incidents-in-2017>.
7. Jeff M. Smith, "High Noon in the Himalayas: Behind the China-India Standoff in Doka La," *War on the Rocks*, July 13, 2017, <https://warontherocks.com/2017/07/high-noon-in-the-himalayas-behind-the-china-india-standoff-at-doka-la/>.

8. A K Lal, *Transformation of the Indian Armed Forces 2025: Enhancing India's Defence* (New Delhi: Vij Books, 2012), 110.
9. Rajat Pandit, "Forces ready with joint amphibious warfare doctrine," *Times of India*, September 7, 2008, <https://timesofindia.indiatimes.com/india/Forces-ready-with-joint-amphibious-warfare-doctrine/articleshow/3453589.cms>.
10. "Indian Armed Forces release Joint Operational Doctrines," *India Strategic*, February 2010, accessed December 26, 2017, <http://www.indiastrategic.in/topstories497.htm>.
11. Stephen P Cohen and Sunil Dasgupta, *Arming without Aiming: India's Military Modernization* (Washington, DC: Brookings Institution Press, 2010), 44.
12. Vinod Anand, "Integrating the Indian Military: Retrospect and Prospect," *Journal of Defence Studies* 2, No. 2, (Winter 2008).
13. SK Sinha, "The Chief of Defence Staff", *Journal of Defence Studies* 1, No. 1 (August 2007): 135.
14. Brigadier (Retd.) Deepak Sinha, discussion of a draft of this paper at the Observer Research Foundation, New Delhi, November 20, 2017.
15. Amit Baruah and Dinakar Peri, "Parrikar pushes for Chief of Defence Staff," *The Hindu*, May 26, 2015/ April 3, 2016, <http://www.thehindu.com/news/national/manohar-parrikar-pushes-for-chief-of-defence-staff/article7245335.ece>.
16. Anit Mukherjee, *Failing to Deliver: Post-Crises Defence Reforms in India, 1998-2010*, IDSA Occasional Paper No. 11 (New Delhi: Institute for Defence Studies and Analyses, 2011), 38; Vipin Narang, *Nuclear Strategy in the Modern Era: Regional Powers and International Conflict: Regional Powers and International Conflict* (Princeton, NJ: Princeton University Press, 2014), 101.
17. Verghese Koithara, *Managing India's Nuclear Forces* (Washington, DC: Brookings Institution Press, 2012), 189.
18. JJ Singh, *A Soldier's General: An Autobiography* (New Delhi: HarperCollins Publishers, 2012).
19. For two recent publications on Indian grand strategy with contributions from former senior Indian armed forces officials, see: Gurmeet Kanwal (editor), *The New Arthashastra: A Security Strategy for India* (Noida: HarperCollins India: 2016) and "Report on National Seminar on India's National Security Strategy," Centre for Land Warfare Studies, September 21, 2016, http://www.claws.in/images/events/pdf/447787821_NSS-SeminarReport.pdf. An influential document for the Singh government that outlined a foreign-policy grand

strategy for India is Sunil Khilnani et al, *Nonalignment 2.0: A Foreign and Strategic Policy for India in the 21st Century* (New Delhi: Viking, 2013).

20. For a recent articulation of the need for a national security strategy by a former chief of the IAF, see Arjun Subramaniam, "It's time for India to formulate a national security doctrine," *The Print*, August 28, 2017, <https://theprint.in/2017/08/28/eagle-eye-time-india-formulate-national-security-doctrine/>. O'Donnell and Joshi argue, with INS Arihant's development and induction as a case study, the need for an Indian grand strategy to guide its defence policy; see: Frank O'Donnell and Yogesh Joshi, "Lost at Sea: The Arihant in India's Quest for a Grand Strategy," *Comparative Strategy* 33 (2014): 446-481.
21. Col. S. A. Rehman, "Jointmanship: The IDS way," undated, accessed October 6, 2017, 3, http://ids.nic.in/art_by_offids/Jointmanship%20-%20The%20IDS%20Way%20%20by%20Col%20SA%20Rehman.pdf. For further corroboration that IDS had indeed forwarded such a strategy to the NSA, see Laxman Behera, "Defence Planning in India," *Journal of Defence Studies* 4, No. 3 (July 2010): 130.
22. Shyam Saran at the Observer Research Foundation, New Delhi, September 27, 2017 at the ORF launch of his new book.
23. Rahul Bedi, "Bury the Me-First doctrines," *The Hindu*, April 5, 2012, www.thehindu.com/opinion/lead/bury-the-mefirst-doctrines/article3281680.ece, accessed 23 October 2017; Rehman, "Jointmanship: The IDS way," 3.
24. Nirupama Soundarajan and Dnyanada Palkar, "The State of Economic Decision Making Within India's Armed Forces is Deteriorating," *The Wire*, October 6, 2016, <https://thewire.in/71373/economic-decision-making-within-indian-armed-forces-deteriorating/>.
25. "HQ Integrated Defence Staff: Report on the First Year of Existence By the Chief of Integrated Defence Staff to the Chairman Chiefs of Staff Committee," Official Website of the Integrated Defence Staff, accessed October 26, 2017, <http://ids.nic.in/reportfirst.htm>.
26. Patrick Bratton and David Smith, "India's Joint Doctrine: Hopeless Muddle or the Start of Strategic Articulation?," War Room, United States Army War College, June 6, 2017, <https://warroom.armywarcollege.edu/articles/indias-joint-doctrine-hopeless-muddle-start-strategic-articulation/>. For a copy of JP-1, see "Doctrine for the Armed Forces of the United States," March 25, 2013, updated July 12, 2017, http://www.dtic.mil/doctrine/new_pubs/jp1.pdf. The more substantive similarity between late-Cold War US army doctrine and JDIAF-2017 will be examined elsewhere in this paper.

27. The FY 2017 National Defense Authorization Act re-designated the QDR as the 'national defense strategy', a classified document. This Act also made the national security strategy a primarily classified document, and the national military strategy has been classified. See: Mark F. Cancian et al, *Formulating National Security Strategy: Past Experience and Future Choices* (Washington, DC: Center for Strategic and International Studies, 2017), XI, <https://www.csis.org/analysis/formulating-national-security-strategy>.
28. "Doctrine for the Armed Forces of the United States," II-4.
29. 'Ideally' since this sequencing is often not followed in practice. The current Trump administration is drafting (1) and (2) simultaneously. For a discussion of why this 'parallel processing' is not optimal, see Thomas Spoehr, "Rules for Getting Defense Strategy Right," *War on the Rocks*, October 3, 2017, <https://warontherocks.com/2017/10/rules-for-getting-defense-strategy-right/>.
30. "Doctrine for the Armed Forces of the United States," II-5.
31. The Indian Ministry of Defence, in response to a question from the parliamentary Standing Committee on Defence, described the role of the LTIPP in guiding acquisitions in the following way: "[T]he acquisition of Weapon Systems and equipment for the Armed Forces flows from the Long Term Integrated Perspective Plan (LTIPP). The current LTIPP spells out the capability desired to be achieved by the Armed Forces over a 15 year period (2012- 27). The LTIPP is translated into specific assets to be acquired, in the form of Services Capital Acquisition Plan (SCAP), covering a five-year period. From the Services Capability Acquisition Plans (SCAP), a list of equipment and weapon systems required to be procured immediately is listed in the form of the Annual Acquisition Plans (AAP)." See: "Capital Outlay on Defence Services, Procurement Policy and Defence Planning", 16th Lok Sabha Standing Committee on Defence (Lok Sabha Secretariat, New Delhi: May 2016), 11, http://164.100.47.193/lsscommittee/Defence/16_Defence_22.pdf. For an introduction to the US PPBE process, see: "Defense Primer: Planning, Programming, Budgeting and Execution Process (PPBE)," Congressional Research Service, September 22, 2016, <https://fas.org/sgp/crs/natsec/IF10429.pdf>.
32. "Technology Perspective and Capability Roadmap," April 2013, Ministry of Defence, <https://mod.gov.in/sites/default/files/TPCR13.pdf>.
33. Gurmeet Kanwal, "Will General Bakshi be India's first CDS?," *Rediff.com*, December 19, 2016, <http://www.rediff.com/news/column/will-general-bakshi-be-indias-first-cds/20161219.htm>.
34. Amit Cowshish, "Distortions in the Discourse on Modernization of Armed

- Forces,” *Journal of Defence Studies* 8, No. 3 (July–September 2014): 11, https://idsa.in/system/files/jds/jds_8_3_2014_amitcowshish.pdf.
35. Of course, other government of India documents have indeed named “land-centric threats” as a key threat to India's external security. See, for example, “*Third Report: Standing Committee on Defence (2014-2015)*,” Lok Sabha Secretariat, Government of India, December 2014, http://164.100.47.193/lsscommittee/Defence/16_Defence_3.pdf.
 36. Off-the-record workshop on military intelligence reforms, Observer Research Foundation, New Delhi, 2016.
 37. Stephen B. Cohen and Sunil Dasgupta, *Arming Without Aiming: India's Military Modernization* (New Delhi: Penguin/Viking, 2010), 1.
 38. “Strategic restraint is passe: Ram Madhav,” *The Hindu*, September 19, 2016, <http://www.thehindu.com/news/national/Strategic-restraint-is-passe-Ram-Madhav/article14987260.ece>.
 39. For an exhaustive discussion of compellence strategies available to India in tackling sub-conventional threats from Pakistan, see George Perkovich and Toby Dalton, *Not War, Not Peace? Motivating Pakistan to Prevent Cross-Border Terrorism* (New Delhi: Oxford University Press, 2016).
 40. One such covert operation was carried out by Indian special forces on August 30, 2011; see: “Operation Ginger: Tit-for-tat across the Line of Control,” *The Hindu*, October 9, 2016, <http://www.thehindu.com/news/national/Operation-Ginger-Tit-for-tat-across-the-Line-of-Control/article15477494.ece>.
 41. Nitin Gokhale, *Securing India The Modi Way: Pathankot, Surgical Strikes and More* (New Delhi: Bloomsbury India, 2017).
 42. An Indian Army convoy was attacked by terrorists on December 17, 2016 in Pampore, Kashmir; see “Pampore Attack: 3 Soldiers Killed After Terrorists Attack Army Convoy Near Srinagar,” *The Hindu*, December 17, 2016, <https://www.ndtv.com/india-news/army-convoy-attacked-in-pampore-near-srinagar-by-terrorists-1638943>.
 43. Arka Biswas, *Surgical Strikes and Deterrence-Stability in South Asia*, ORF Occasional Paper No. 115 (New Delhi: Observer Research Foundation, 2017).
 44. Walter C. Ladwig III, “A Cold Start for Hot Wars? The Indian Army's New Limited War Doctrine,” *International Security* 32, No. 3 (2007/08): 160.
 45. Ibid.
 46. Ali Ahmed, *India's Doctrine Puzzle: Limiting War in South Asia* (New Delhi: Routledge, 2014).

47. Ladwig, "A Cold Start for Hot Wars," 160-168.
48. Sandeep Unnithan, "We will cross again'," *India Today*, January 4, 2017, <http://indiatoday.intoday.in/story/lt-general-bipin-rawat-surgical-strikes-indian-army/1/849662.html>.
49. Ladwig, "A Cold Start for Hot Wars," 165.
50. Ibid.
51. See, for example, Gurmeet Kanwal, "Cold Start: India's Pro-active Offensive Operations Doctrine for War in the Plains," *The War College Journal*, Summer 2016, <http://gurmeetkanwal.com/ArticleDetails.aspx?id=391>.
52. "Indian Army Doctrine Part II" (Shimla: HQ Army Training Command, 2004), 9. Though this document is classified, a copy is available through WikiLeaks: https://wikileaks.org/wiki/Indian_Army_Doctrine-part2_2004.
53. Vipin Narang and Shashank Joshi, "Future Challenges for the Army 2030" in *Defence Primer 2017* eds. Sushant Singh and Pushan Das (New Delhi: Observer Research Foundation, 2017), 20.
54. Ibid.
55. Ladwig, "A Cold Start for Hot Wars," 164.
56. Ladwig, "A Cold Start for Hot Wars," 183; Shashank Joshi, "India's Military Instrument: A Doctrine Stillborn," *Journal of Strategic Studies* 36, No. 4 (2013): 518.
57. Lt. General Harwant Singh describes "posturing and dithering" that "resulted in a delay of nearly one week" in bringing airpower to bear. See "Kargil Controversy: Mismanagement of Higher Defence," *Indian Defence Review* 24, No 3 (Oct-Dec 2009).
58. Dinakar Peri, "Army supremacy has to be maintained: Army Chief Bipin Rawat," *The Hindu*, September 6, 2017, <http://www.thehindu.com/news/national/despise-nuclear-weapons-threat-of-two-front-war-is-real-army-chief-bipin-rawat/article19630592.ece>.
59. Unnithan, "A shot in the dark."
60. Rebecca Grant, "Deep Strife," *Air Force Magazine*, June 2001, 55.
61. Ahmed, *India's Doctrine Puzzle*, 154.
62. Ibid, 92.
63. Gurmeet Kanwal, *Indian Army Vision 2020* (Noida: HarperCollins India, 2008), 237.

64. Kanwal, *Indian Army Vision 2020*, 232.
65. Grant, "Deep Strife," 54.
66. Quoted in: Manfred R. Hamm, "The AirLand Battle Doctrine: NATO Strategy and Arms Control in Europe," *Comparative Strategy* 7 (1988): 192.
67. Grant, "Deep Strife," 54; Douglas W. Skinner, *AirLand Battle Doctrine*, CNA Professional Paper No. 463 (Alexandria, VA: Center for Naval Analyses, 1988).
68. Mark R. Schwartz, "AirLand Battle Doctrine," *Modern War* 6, July-August 2013, 31. For a detailed discussion of BAI, see Skinner, *AirLand Battle Doctrine*, 28.
69. Skinner, *AirLand Battle Doctrine*, 18.
70. Skinner, *AirLand Battle Doctrine*, 13.
71. Skinner, *AirLand Battle Doctrine*, 16.
72. Skinner, *AirLand Battle Doctrine*, 15.
73. Schwartz, "AirLand Battle Doctrine," 31. For a detailed discussion of BAI, see Skinner, *AirLand Battle Doctrine*, 20.
74. Bratton and Smith, "India's Joint Doctrine."
75. Skinner, *AirLand Battle Doctrine*, 18.
76. Ibid.
77. Indian Army Doctrine Part II, 17.
78. Ibid.
79. "Indian Army Corps," *GlobalSecurity.Org*, accessed December 26, 2017, <https://www.globalsecurity.org/military/world/india/corps.htm>.
80. Skinner, *AirLand Battle Doctrine*, 13.
81. Skinner, *AirLand Battle Doctrine*, 12.
82. Skinner, *AirLand Battle Doctrine*, 17.
83. Ibid. It must, however, be noted that ALB or its NATO version as FOFA was promoted to reduce NATO dependence on tactical nuclear weapons as battlefield weapons and was implemented in the background of reduction of TNW assets in the European theatre; see Hamm, "The AirLand Battle Doctrine," 196.
84. For an articulation of this doctrinal aspect, see a 2013 speech by a former Indian foreign secretary and chairman of the National Security Advisory Board: Shyam Saran, "Is India's Nuclear Deterrent Credible?," India Habitat Centre, April 24,

- 2013, <http://www.armscontrolwonk.com/files/2013/05/Final-Is-Indias-Nuclear-Deterrent-Credible-rev1-2-1-3.pdf>.
85. For discussion and problematisation of the USAF's slogan, see: Clint Hintoe, *Centralised Control and Decentralised Execution: A Catchphrase in Crisis?*, *Air Force Research Institute Papers* (Maxwell, AL: Air Force Research Institute, 2009), <http://www.dtic.mil/dtic/tr/fulltext/u2/a550460.pdf>.
 86. Skinner, *AirLand Battle Doctrine*, 17.
 87. The FSCL, while not a boundary line for the area of operation, is coordination line for air and ground elements: "Forces attacking targets beyond an FSCL must coordinate with all affected commanders in sufficient time to allow necessary reaction to avoid fratricide, both in the air and on the ground." See: "Appendix B: Fire Support Coordinating Measures," *US Marine Corps Working Paper 3-16*, https://www.globalsecurity.org/military/library/policy/usmc/mcwp/3-16/fdraft_appb.pdf.
 88. Schwartz, "AirLand Battle Doctrine," 3; Skinner, *AirLand Battle Doctrine*, 19-20.
 89. "2012 Basic Doctrine of the Indian Air Force," Official Website of the Indian Air Force," 61, accessed October 26, 2017, <http://indianairforce.nic.in/pdf/Basic%20Doctrine%20of%20the%20Indian%20Air%20Force.pdf>.
 90. Interview with serving Indian Army aviator, New Delhi.
 91. "2012 Basic Doctrine of the Indian Air Force," 62. Gurmeet Kanwal, a former senior Indian Army officer, agrees with this assessment and concludes that air force assets should almost exclusively be used for BAI/AI; see Kanwal, *Indian Army 2020*, 238.
 92. For a summary of the debate, see: "#NUKEFEST2017 Hot Takes: Potential Indian Nuclear First Use?," *South Asian Voices*, March 20, 2017, <https://southasianvoices.org/sav-dc-nukefest2017-potential-indian-nuclear-first-use/>; Shashank Joshi, "India's nuclear doctrine should no longer be taken for granted," *The Interpreter*, March 22, 2017, <https://www.lowyinstitute.org/the-interpreter/indias-nuclear-doctrine-should-no-longer-be-taken-granted>; Abhijnan Rej, "India is Not Changing its Policy on No First Use of Nuclear Weapons," *War on the Rocks*, March 29, 2017, <https://warontherocks.com/2017/03/india-is-not-changing-its-policy-on-no-first-use-of-nuclear-weapons/>.
 93. "Cabinet Committee on Security Reviews [O]perationalization of India's Nuclear Doctrine," January 4, 2003, http://mea.gov.in/press-releases.htm?dtl/20131/The_Cabinet_Committee_on_Security_Reviews_perationalization_of_Indias_Nuclear_Doctrine.
 94. The provisional nature of the 1999 draft doctrine was highlighted by the-then

national security advisor, Brajesh Mishra, in the opening remarks of the release of the document. Mishra remarked: "Please note that this is a draft proposed by the NSAB and has not yet been approved by the Government." See: "Draft Report of the National Security Advisory Board, before " and insert after " August 17, 1999, <http://mea.gov.in/in-focus-article.htm?18916/Draft+Report+of+National+Security+Advisory+Board+on+Indian+Nuclear+ Doctrine.>"

95. This version is available from a private Indian defence website: http://bharatshakti.in/wp-content/uploads/2015/09/Joint_Doctrine_Indian_Armed_Forces.pdf.
96. Manpreet Sethi, "India's N-doctrine: Still credible, still minimum," *The Tribune*, 16 May 2017, www.tribuneindia.com/news/comment/india-s-n-doctrine-still-credible-still-minimum/407524.html.
97. Vipin Narang, "Five Myths about India's Nuclear Posture," *The Washington Quarterly* 36, No.3 (Summer 2013): 148-150, https://csis-prod.s3.amazonaws.com/s3fs-public/legacy_files/files/publication/TWQ_13_Summer_Narang.pdf.
98. Koithara, *Managing India's Nuclear Forces*, 147.
99. Raja Menon, "A mismatch of nuclear doctrines," *The Hindu*, 22 January 2014, www.thehindu.com/opinion/op-ed/a-mismatch-of-nuclear-doctrines/article5602609.ece.
100. Manoj Joshi, "The Credibility of India's Nuclear Deterrent" in *Deterrence Instability and Nuclear Weapons in South Asia*, Michael Krepon, Joshua T. White, Julia Thompson, and Shane Mason, editors (Washington DC: Stimson Center, 2015), 54.
101. Gaurav Kampani, "India's Evolving Civil-Military Institutions in an Operational Nuclear Context," Carnegie Endowment for International Peace, June 30, 2016, <http://carnegieendowment.org/2016/06/30/india-s-evolving-civil-military-institutions-in-operational-nuclear-context-pub-63910>.
102. Ibid.
103. A serving Indian Army officer has told one of the authors that land-based nuclear delivery assets are indeed in the control of SFC personnel, who wear Army uniforms, conversation on background, October 27, 2017, New Delhi.
104. Robert G. Joseph and John F. Reichart, "Deterrence and Defense in a Nuclear, Biological, and Chemical Environment," *Comparative Strategy* 15, No. 1 (1996).
105. PTI, Air Force capable of striking nuclear, other targets in Pakistan: IAF Chief, *Times of India*, October 5, 2017, <https://timesofindia.indiatimes.com/india/>

air-force-capable-of-striking-nuclear-other-targets-in-pakistan-iaf-chief/articleshow/60958342.cms

106. Narang, "Five Myths About India's Nuclear Posture," 151.
107. The authors thank Vipin Narang for a discussion of these points.
108. Andrew Dorman, Mike Lawrence Smith and Matthew Uttley, "Jointery and Combined Operations in an Expeditionary Era: Defining the Issues," *Defense Analysis* 14, No. 1 (April 1998): 3.
109. Shashank Joshi, *Indian Power Projection: Ambition, Arms and Influence*, Whitehall Paper No. 85 (London: Royal United Services Institution, 2015), 101. For details on the Lal Dora operation see: Ankit Panda, "When India Almost Intervened in Mauritius," *The Diplomat*, August 22, 2015, <https://thediplomat.com/2015/08/when-india-almost-intervened-in-mauritius/>.
110. Iskander Rehman, "India's Aspirational Naval Doctrine," in Harsh V Pant (ed.), *The Rise of the Indian Navy: Internal Vulnerabilities, External Challenges* (Burlington, VT: Ashgate, 2012), 71.
111. "Indian Maritime Doctrine," Integrated Headquarters, Ministry of Defence (Navy), 2009, pp. 92, 125.
112. Rajat Pandit, "Blue-Water Navy is the Aim", *Times of India*, November 1, 2006.
113. Rajat Pandit, "IAF Plans War Doctrine to Expand "Strategic Reach,"" *Times of India*, August 2, 2007.
114. Arjun Subramaniam, "The Strategic Role of Airpower: An Indian Perspective on How We Need to Think, Train, and Fight in the Coming Years," *Air & Space Power Journal* 22, No. 3 (Fall 2008).
115. Benjamim Lambeth, "India's Air Force Evolves," *Air Force Magazine*, March 2015, 63.
116. "Basic Doctrine of the Indian Air Force: 2012", 10.
117. Rudra Chaudhuri, *Forged in Crisis: India and the United States Since 1947* (Oxford University Press, 2014), 175-265.
118. JTD-2017 is available at the IDS website; "Joint Training Doctrine: Indian Armed Forces," November 2017, accessed November 24, 2017, <http://ids.nic.in/Doctrine/JTD%202014%20NOV%20FINAL.pdf>. All page numbers in the body of this section refer to this document.
119. Brigadier (Retd) Deepak Sinha at an internal discussion at ORF, November 20, 2017.

120. For a basic primer on the foundational agreements, see Ankit Panda, "LSA, CISMOA, BECA and the Future of the US-India Defense Partnership," *The Diplomat*, April 7, 2016, <https://thediplomat.com/2016/04/lisa-cismoa-beca-and-the-future-of-the-us-india-defense-partnership/>. For the change in nomenclature, see Air Marshal RK Sharma (Retd.), "Proposed US Foundational Agreements between US and India," *CAPS in Focus*, May 13, 2016, http://capsindia.org/files/documents/CAPS_Infocus_RK_SHARMA_00.pdf.
121. Gurpreet Khurana, "Optimising India-US Maritime-Strategic Convergence," *Strategic Analysis* 41, No. 5 (2017): 438.

Observer Research Foundation (ORF) is a public policy think-tank that aims to influence formulation of policies for building a strong and prosperous India. ORF pursues these goals by providing informed and productive inputs, in-depth research, and stimulating discussions. The Foundation is supported in its mission by a cross-section of India's leading public figures, including academic and business leaders.



Ideas • Forums • Leadership • Impact

20, Rouse Avenue Institutional Area, New Delhi - 110 002, INDIA
Ph. : +91-11-43520020, 30220020. Fax : +91-11-43520003, 23210773
E-mail: contactus@orfonline.org
Website: www.orfonline.org