

THE ROLE OF AIRPOWER IN INDIA'S NATIONAL SECURITY

*A Blue Paper on the
contemporary role of
Airpower*

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Combat Capability of the Indian Air Force

What is the doctrine of IAF and how is it structured?

The primary task of the IAF is to secure Indian airspace and conduct aerial warfare during a conflict and protect our security interests from the Persian Gulf to the Straits of Malacca.^[1] IAF is the 4th largest air force in the world. The mission of IAF is to be a modern, flexible and professional aerospace power with full spectrum capability to protect and further national interests and objectives.^[2]

The IAF is on a modernisation drive to induct multirole Rafale, Light Combat Aircraft (LCA) Tejas, helicopters, transport and strategic airlift capability. It is divided into five operational commands (to conduct military operations) and two functional commands (to maintain combat readiness). Each command is headed by an Air Marshal and has 3 to 10 air bases.

<i>Operational Commands</i>	<i>Functional Commands</i>
<i>Central Air Command, Allahabad</i>	<i>Training Command, Bengaluru</i>
<i>Eastern Air Command, Shillong</i>	<i>Maintenance Command, Nagpur</i>
<i>Southern Air Command, Thiruvananthapuram</i>	
<i>South Western Air Command, Gandhinagar</i>	
<i>Western Air Command, Delhi</i>	

[1]-<http://www.indianairforce.nic.in/>

[2] Mission statement, "Basic doctrine of the IAF," p1(2012)

At <http://www.indianairforce.nic.in/>

Present composition of IAF

There are total of 2040 aircraft, of which 900 are combat capable (rest being other roles like logistics) aircraft^[2] The inventory & role are as below.

Type of aircraft	Role
Sukhoi 30 MKI, MiG 29	Air superiority/Ground attack
Mirage 2000	Multirole fighter ^[3]
MiG 21 Bison	Interceptor
Jaguar 2000, MiG 27	Ground attack
Beriev A-50	Airborne Early warning & control
IL 78	Aerial refuelling
IL 76, C-130J Hercules, C-17 Globemaster	Transport, strategic airlift, troop carrier & Special Forces Operations
An 32, Dornier 228	Transport
Mi 26, Mi 8, Mi 17, Mi 24,	Heavy & Medium lift , utility, Casualty Evacuation, armed and attack roles ^[4]
Mi 35	Attack helicopter
Dhruv, Chetak, Cheetah	Light utility helicopters, troop transport, search and rescue
Searcher, Heron	Unmanned aerial vehicles ^[5]

[2]-Military Balance 2016, International Institute of Strategic Studies

[3]-French Rafale will replace & augment Mirage, Jaguar & Mig 21 fleets

[4]-Boeing Apache, Light Combat Helicopter (LCH), Rudra attack helicopter, Mi 17V5 and Chinook heavy lift helicopters will replace & augment Mi 8, Mi 17 & Mi 24 fleets

[5] - Defence Research & Development Organisation is developing two unmanned combat air vehicles named Rustom & Aura

Aircraft as a nuclear delivery system

With long range ballistic missiles in our inventory, why do we need aircraft to deliver nuclear weapons?

A nuclear triad

The purpose of having aircraft for nuclear weapon delivery in a nation's arsenal is to complete the nuclear triad—land and sea based ballistic missiles. The main reason of having a triad of strategic bombers, inter-continental ballistic missiles (ICBMs) and submarine launched ballistic missiles (SLBMs) is to significantly reduce the possibility of an enemy destroying all of a nation's nuclear forces in a 'first strike' attack. This, in turn, ensures a credible second strike capability.

Strategic bombers

*These have much greater flexibility in their deployment and can serve as both first and second strike options. In contrast to submarine launched ballistic weapon which is optimised for **survivability**, air delivered nuclear weapon is optimal for **flexibility**. In the Indian context, multi-role fighters like Mirage 2000 or SU 30 MKI with an aerial refueling aircraft kept at 'safe' points constitutes a second strike option and a credible deterrent capability.*

Conclusion

In order to have a credible deterrent, air bombers form an important part of nuclear triad.

How does India go towards a mixed force structure of manned aircraft and Unmanned Aerial Vehicles?

Manned aircraft are very expensive to operate and maintain. Given the high training costs of pilots, do we see an advantage in investing in UAVs to have a mix of manned and unmanned planes?

Will UAVs replace manned aircraft in the near future?

UAVs are highly effective against non-state actors as demonstrated by the US in Iraq, Afghanistan and Libya. UAVs fly at low speeds and low altitudes that make them susceptible to anti-aircraft(AA) fire apart from being easy targets for fighter interceptions. UAVs are effective against adversaries with low technological capabilities. But in the Indian context, adversaries with strong air defence capabilities will restrict UAVs from carrying out limited intrusive missions and will not be as effective as manned aircraft in the near future.

Perceived escalatory role

There is a fundamental difference between the way the West and India look at airpower. The West looks at airpower as the first responder. But India looks at airpower differently. If it were to respond to the Uri attacks by striking terrorist hideouts using airpower for example, it would be seen as a major escalation. These perceptions may need to be reviewed in order to exploit the full potential of air power.

Conclusion

UAVs won't replace manned aircraft. They will however be used for effective intelligence gathering against Pakistan or China in the Tactical Battle Area (TBA) and in an offensive manner whenever India inducts armed UAVs.

How can air power be used for asymmetric or 4th generation warfare (4GW)?

Conflicts below a certain threshold of warfare have seen air forces across the world reorienting themselves. How can air force be used in unconventional warfare?

Air forces have conventionally looked at the big battle

Air forces are generally wired to fight large scale battles and shape the environment by striking targets deep within enemy territory. The last decade however, (from Iraq and Afghanistan) has seen air forces restructure, reorient and rearm themselves to sub conventional conflicts, the new age warfare.

Three competencies of air power that can be harnessed:

—Tactical reconnaissance/surveillance with the UAVs

Used for intelligence collection (interception of communications) and location of enemy.

— Precision strikes

At very short notice and varied distances – this will depend on political will. Escalation dynamics will need to be factored while planning strikes (this was probably the reason that response to Uri strikes didn't use air power)

— Casualty evacuation (Casevac)

For troops involved in counter insurgency operations, air force can be called upon for speedy casevac – something the IAF is fully enabled for. In hostile terrain, asymmetric warfare needs to be supported by speedy airlift of special forces and commandos.

Destroying command and leadership nodes

In the final war of Eelam IV, the Sri Lankan air force (SLAF) broke the LTTE's back. In the last 6 months of conflict, its chief Prabhakaran was perpetually on the run due to SLAF attacks. In the absence of clear directives from leadership, the cadres were decimated by the Sri Lankan military. If a government is not too worried about escalation, then airpower can be a very serious threat against non-state actors.

What are some of the concerns with the joint command structure?

How can the Chief of Defence Staff (CDS), as the single point military advisor to the government and joint operational commands lead to efficient warfighting?

How will CDS change things?

The Indian doctrine does not plan for expeditionary operations unlike the US or UK. If a brigade size force (3000—5000 troops) is to be assembled for Out-of-Area Contingency Operations, it could be done under a single officer specifically chosen for the task. The operational command is likely to be exercised by the respective services. Presently, only the Andaman & Nicobar Command is a joint command.

Cost Prohibitive

Making all commands into joint theatre commands becomes counterproductive in the Indian context. The key reason is the very high cost of air assets. The continental landmass of India has three theatres— Western, Eastern and Northern. The Western and Northern theatres are very difficult to manage due to their geographical expanse. Each theatre commander (a three star officer) will demand a minimum level of assets. This duplication will effectively result in 2 air forces, 2 navies and so on. India does not have that kind of financial wherewithal.

Flexibility of airpower will be lost

By assigning airpower to theatre commands, the flexibility will be lost. The US can do it because it has an expeditionary doctrine and budgetary allocation.

Apprehension of predominance of army control in CDS by other services

Even in the US, 'jointness' was forced by the congressional Goldwater-Nichols Act in 1987. The services were against the move but ceded only due to political pressure. This is bureaucratic politics model wherein every bureaucracy resists any move to reduce its relevance or power. Even in India, it will have to be a political decision, backed by economic rationale.

How can air power be used as a tool of diplomacy and humanitarian assistance?



How can we use exploit the expeditionary capability of the IAF for power projection?

Out of Area Contingency (OOAC) Operations

The Indian political & bureaucratic establishment does not like to use the word 'expeditionary' in its lexicon. Instead, it is called OOAC which denotes deployment of armed forces on a specific request from India's neighbourhood. OOAC is becoming more important not only for force projection, but also for diaspora protection of late and assisting foreign nationals in distress.

The profile of the latest IAF assets acquired, the C-130 Hercules, C-17 Globemaster (both for strategic airlift), Chinook and Apache helicopters (casualty/hostage evacuation), demonstrates India's capability to support such operations. This demands beyond Line-of-Sight communications which is possible only with adequate satellite cover. This has been achieved with the creation of an integrated space cell that caters for satellite intelligence for military as well as civilian purposes.

Strategic airlift for diaspora evacuation

IAF is the second air force after the USAF to use C-17 aircraft so extensively. Examples of Yemen and South Sudan recently have demonstrated IAF's reach.

Conclusion

India should invest in getting more of these assets in its force structure.

Medium Multirole Combat Aircraft - Rafale

How will the IAF deal with shortage of numbers of MMRCA?

Balancing act between guns and butter

The projection of 126 aircraft was based on very calibrated analysis of the pace at which existing aircraft will be phased out. The other factor for the IAF is to reach its projected combat capability of 42 air squadrons. A balance had to be struck between aviation assets for the army and MMRCA.

Affordability factor

The political establishment felt that although 126 may be the desired number, it is too high from affordability factor. There is a need to maintain balance between numbers and desired capability. Hence, only 36 were ordered.

Make in India programme

If the government orders Rafale in large numbers, it would have had an adverse impact on indigenous aircraft manufacturing industry. By reducing the numbers, the government has sent a strong signal to the DRDO & HAL to expedite on the Light Combat Aircraft (LCA) project Tejas

LCA Tejas for IAF

Even the IAF is contemplating to increase the numbers with LCA which is presently in Final Operational Clearance (FOC) stage.

Manageable force structure

36 numbers of Rafale is not optimal but manageable. The high technological capability which Rafale brings will certainly offset the reduction in numbers (to an extent).

What explains Indian Army's increasing air strike capability?

*Why does Indian Army need air power?
Why can't air force give the desired air support?*

Airpower over Tactical Battle Area (TBA)

Airpower is increasingly employed in the TBA—reconnaissance, strikes against enemy combat potential, and shaping the battlefield etc. The logic is that we should be able to hit the enemy before they come to the battlefield. This shapes the environment for our own forces to operate easily.

Growth of army aviation

*The army field commanders want to control the tactical battlefield. Traditionally, this support has come from the air force. **But the army wants a quicker response time.** Hence the strong pitch for a separate army aviation corps. Practically, the IAF attack helicopters are directly under the army in the TBA. They are assigned to the corps and there is good synergy between surface formations and air elements.*

IAF's apprehensions

Two questions are debated in the procuring of assets for army aviation—resources and competency. The IAF has been operating aircraft for about a century whereas army aviation is a recent phenomenon. Additionally, the air force needs to handle training for army's aviation wing.

Conclusion

Army's aviation capabilities are likely to keep growing despite concerns of the IAF.