

AEROSPACE POWER AND FOREIGN POLICY: GLOBAL AND INDIAN SCENARIOS

SC MUKUL

For good or for ill, air mastery is today the supreme expression of military power, and fleets and armies, however, vital and important, must accept a subordinate rank.

—Winston Churchill

INTRODUCTION

Powerful nations radiate powerful influence far across their geographical borders over countries and continents through their foreign policies. And this influence, in other words, power projection, is mostly coercive, often disregarding the opinions of a majority of sovereign nations. President Bush, during the build-up for the Operation Desert Storm offensive, was brazenly explicit in conveying his threat even to friendly countries when he said, “If you are not with us, you are against us.” The world has watched in recent decades how a couple of powerful nations have not felt deterred from launching punitive operations against unfriendly regimes. The ongoing conflicts in West Asia and Central Asia are glaring examples of this reality.

Air Marshal **SC Mukul** PVSM AVSM VM VSM (Retd) was commissioned into the fighter stream of the IAF in January 1972. After a variety of field and staff appointments, he retired from HQ IDS in December 2010.

The final element of national power—the use of military tools for power projection—is aptly defined by Carl Von Clausewitz as “a true political instrument, a continuation of political intercourse, carried on with other means.”

Much as the weaker nations might despise such arrogance of the mighty nations, the latter have been succeeding in enforcing their plans, even if partially, in different parts of the world.¹

Classically defined, the foreign policy of a country is the product of both geography and history and is impacted by global, regional and internal developments. It is the tool by which a country interacts with the world outside its borders. It is designed to promote national interest, security and development, namely, protection of a country's national sovereignty and territorial integrity; and promotion of the well-being of its

people.² It provides the context within which we can examine the existence and utility of the military as an instrument of foreign policy.

POWER PROJECTION

The ability of a nation to apply all or some of its elements of national power—political, economic, informational, or military—to pursue its foreign policy objectives in the international arena is a measure of its power projection. The final element of national power—the use of military tools for power projection—is aptly defined by Carl Von Clausewitz as “a true political instrument, a continuation of political intercourse, carried on with other means.”

Military assets, depending on how they are employed, can advance a state's foreign policy goals by facilitating the projection of both hard or soft forms of military power based on the political goals being sought and the level of force employed,³ as given below:

1. Col Karan Kharb (Retd), “State of Military Might in Resurgent India” Vivekananda International Foundation, August 25, 2014, Available at <http://www.vifindia.org/article/2014/august/25/state-of-military-might-in-resurgent-india>
2. http://www.idsa.in/idsacomments/TasksbeforeIndianForeignPolicy_ArvindGupta_090512
3. Walter C Ladwig III, “India and Military Power Projection”, *Asian Survey*, vol. 50, no. 6, December 2010, pp. 1162–1183.

- Four of these goals relate to the employment of “soft” military power (securing sea lanes of communication, non-combatant evacuation operations, humanitarian relief, and peace-keeping); and
- Five other goals are primarily concerned with “hard” military power (showing the flag, compellence / deterrence, punishment, armed intervention, and conquest).

Traditionally, during ancient and medieval times, it was the land forces which were predominant as a tool of power projection. As the world horizon expanded, it was sea power which ruled the world. It

was only a century ago that air power became a factor of any consequence in warfare, and by extension, became available to statesmen. In fact, the ascent and success of air power as a tool of power projection over the last century have flowed primarily from the fact that public and senior civilians in the government of the time realised the value of air power, understanding it to be a uniquely new approach to success in conflict. The growth of air power since then and its dramatic effect on the fate of nations in the international arena can be gauged by the fact that air power has been, during and since World War II, the final arbiter of military campaigns, including campaigns fought largely over the seas, and has succeeded sea power as the ideal instrument for a nation to project power, i.e. to become its voice in the international dialogue of power politics in both peace and in war.

With the advent of nuclear weapons, air power became the centre-piece of power projection in the form of strategic bombers till other forms of delivery caught up after a couple of decades. The launching of the Sputnik-1 on October 4, 1957, by the Soviet Union, as a low orbit artificial earth satellite

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Aerospace power has increasingly become the favourite choice for the politicians for enforcing foreign policy imperatives as it enables a nation to convey its will in times of need by its reach, mobility, flexibility and quick response. It has the inherent capability to escalate and de-escalate a situation quickly, with an ability to influence the environment in almost the entire spectrum of conflict.

opened up the space arena. It shattered the concept of the sovereignty of a nation on its air space or territorial waters, and sparked a spurt in the Cold War scenario, engulfing the space domain in its ambit. Today, with the gradual transition to aerospace power, these capabilities provide us communications, position-fixing, navigation, and missile-warning, as well as weather and reconnaissance facilities. The future will see growing dependence on space for facilities which have a crucial impact, as much on military operations as on economic and commercial activities globally.

AEROSPACE POWER

Aerospace power can be defined as “the ability to use platforms operating in or passing through the air and space medium for military purpose”, or “the ability to project military force in the air or space by or from a platform or missile operating above the surface of the earth”. Air platforms are defined as any aircraft, helicopter or unmanned air vehicle. Or simply put, it is “the ability to project power from the air and space to influence the behaviour of people or the course of events.”⁴

The tactical or strategic debate on employment of air power is often misplaced, as air power’s true strength lies in its marvellous versatility. Some of the undisputed attributes of aerospace power are that it encompasses forces drawn from all three Services and is inherently joint in nature. It is influenced by, and, in turn, influences, the land, sea and space environments. Contrary to conventional wisdom, aerospace power cannot win wars, but no modern war can be won without it. Aerospace power has increasingly become the favourite choice for the politicians for

4. <http://en.wikipedia.org/wiki/Airpower>

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Air power blossomed to its full form during World War II under four different scenarios with far-reaching implications:

- The first one which heralded the opening campaign of World War II, was the German concept of *Blitzkrieg* or lightning war. Fast moving armoured columns on the ground, supported by furious air assaults by the *Luftwaffe*, resulted in the swift conquest of half of Europe in a few months, and set the bar for future army-air cooperation.
- The second was the commencement of a new phase in 1940, of strategic bombing in the hope of breaking the enemy's will to fight and bringing the war to an early conclusion. While the bomber offensive certainly caused immense damage to life and property, and also to German morale, whether its impact was enough to shorten the war, remains a hotly debated issue.
- The third comprised the atomic bomb detonations over Hiroshima and Nagasaki in August 1945. Both bombs were delivered by B-29 bomber aircraft, and their destructive power was enough to result in instant capitulation by the Japanese. This heralded a terrifying new capability of air power, and ensured a place for the manned bomber in the armoury of nuclear powers for many decades to come.
- The fourth was the focus and expansion of air transportation. By August 1945, the Air Transportation Command (ATC) had a fleet of 3,700 aircraft operating an aerial network stretching 180,000 miles, reaching virtually everywhere in the world. These activities changed intercontinental air travel from a state of high-risk adventure to a matter of daily routine. At the peak of its operations, ATC aircraft crossed the Atlantic at an average rate of one every thirteen minutes. In the process, the time required to cover distances around the world shrank dramatically, from a matter of weeks to a few days or, within a theatre, to a few hours.

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The war-time experience and modern equipment supported many significant airlift operations in the post-war years. The Berlin Airlift of 1948–49 involved both military and civil aircraft. In 1952, the Civil Reserve Aircraft Fleet (CRAF) became a legal entity. The programme committed funds of several million dollars to ensure that reinforced floors, and cargo decks were built into a specified number of commercial aircraft that would be on call for the air force. During the Gulf War of 1990–91, some 150 CRAF aircraft served military operations, delivering as much as 25 percent of the air cargo and 60 percent of personnel arriving by air.

After World War II, the Vietnam War constituted a watershed for deployment of air power as a tool of a nation's foreign policy, especially in a limited war. In a decade and a half of slowly escalating conflict, the US lost over 8,500 aircraft and helicopters, inflicting its longest sustained "strategic bombing" campaign, wherein it dropped more than eight million tonnes of bombs in nine years. Smart weapons were tried out for the first time. However, less than two years after the end of the Vietnam War, Cambodia, Laos, and South Vietnam were Communist countries. Vietnam demonstrated both the limits of air power and the limits of a strategy dependent on it when trying to achieve conflicting political goals.⁵

It would be difficult to dispute that the application of American air power has had profound effects on the formulation and realisation of American military and political goals.⁶ The advent of precise, all-weather air effects was demonstrated convincingly in the 1991 and 2003 Gulf Wars and appeared

5. Mark Clodfelter, "The Limits of Airpower or the Limits of Strategy: The Air Wars in Vietnam and Their Legacies", *Joint Force Quarterly*, 78, July 1, 2015.

6. Ryan Kuhns, "Judging from Afar: Airpower & American Foreign Policy", March 15, 2015, <https://expattmagazine.wordpress.com/2015/03/15/judging-from-afar-airpower-and-american-foreign-policy/>

to offer a new and attractive alternative to the traditional, land-centric approaches to warfare that had previously dominated military strategy. The prospect of quick and easy victories at very little cost seemed to be a reality, created by the technological superiority of the USA and its allies in the air. However, the long and painful entanglements in counter-insurgency operations in Iraq and Afghanistan that subsequently followed, relegated air capabilities to a supporting role; air mobility and intelligence, surveillance and reconnaissance were the priorities, and the kinetic use of air power was largely confined to close air support or non-decisive, protracted attrition of a decentralised enemy's fielded forces.⁷

The September 11, 2001, attack on the Twin Towers in New York represents the most successful use of strategic bombing in history, wherein air power was aimed at the civilian population and morale in an enemy country. A single morning's air campaign provoked an air war that has yet to end. Almost 15 years later, American bombs and missiles are now landing on targets in not one, but seven largely Muslim countries (Afghanistan, Iraq, Libya, Pakistan, Somalia, Syria, and Yemen)⁸.

Through information dominance, aerospace power is about to set a new benchmark wherein it will be possible to find, fix, track and target anything that moves on the surface of the earth. Real-time cockpit information, directed-energy weapons, space-maneuvring vehicles, space-based radars, and extensive applications of bio and nano-technologies are all just round the corner.

INDIAN EXPERIENCE

On the eve of India's founding, no one could have imagined how successfully it would come to navigate the international system. Many believed that the half-life of this new country would be measured in years, perhaps decades at most. The question of when India would split apart was one of the staples of public discussion going back to Churchill's celebrated remark, "India is a geographical term. It is no more a united

7. Air Commodore Alistair Byford, book review of John Andreas Olsen, ed., *Airpower Reborn: The Strategic Concepts of John Warden and John Boyd* (Naval Institute Press, April 30, 2015).

8. Tom Engelhardt, "Our Post September 11 Fifteen Years War", *Foreign Policy in Focus*, September 13, 2016, <http://fpif.org/post-september-11-fifteen-years-war/>

In fact, the national interest, role, goals and objectives of the armed forces were not quantified. In spite of professing peace and the policy of non-utilisation of military force for power projection to achieve its foreign policy objectives since independence, the country has successfully utilised aerospace power's soft option on four occasions and its hard option on six occasions.

nation than the Equator.”⁹ In the words of noted journalist, Mr BG Verghese, “History was stood on its head in 1950 when India ordained that democracy, with the full panoply of Fundamental Rights would be the instrument and not the outcome of a social and economic revolution.”¹⁰ In one of the greatest feats of modern history, since then, India has built a cohesive nation despite incredible poverty and diversity, prompting Professor John Kenneth Galbraith, former US ambassador to India and a noted economist, to declare that “India is a functioning anarchy.”

The strategic priorities for the emerging India were, firstly, to ensure healthy economic growth. Secondly, it had to ensure that poverty was alleviated and eliminated. Finally, these two priorities had to be achieved through good and effective governance. And to achieve these objectives, the security doctrine spelt out peace with neighbours, limited war, if inevitable, and a ‘no first use’ nuclear doctrine.

INDIAN FOREIGN POLICY AND POWER PROJECTION

Ever since India gained independence in 1947, policy-making in the areas related to defence and foreign affairs has remained the purview of the Government of India. Nehru, all through his 17 years as the prime minister of India, remained the sole master and architect of India's defence and foreign policy. No bureaucrat or fellow politician could interfere in these two areas except Krishna Menon. Non-alignment was the strategic framework – for both foreign policy and defence. The concept of having a formulated

9. Ashley J. Tellis, *Between the Times: India's Predicaments and its Grand Strategy* (Carnegie Endowment for International Peace), December 3, 2012. Available at <http://carnegieendowment.org/2012/12/03/between-times-india-s-predicaments-and-its-grand-strategy-pub-50223>

10. B G Verghese, *First Draft* (Chennai: Tranquebar Press, 2010), p. 36.

national perspective of strategic thinking was fairly ambiguous.¹¹ In fact, the national interest, role, goals and objectives of the armed forces were not quantified. In spite of professing peace and the policy of non-utilisation of military force for power projection to achieve its foreign policy objectives since independence, the country has successfully utilised aerospace power's soft option on four occasions, and, hard option on six occasions.

After 1991, when it was freed from the compulsions of having to avoid competing alliances at all costs, India entered the second phase of its foreign policy evolution. Pursuing a variety of strategic partnerships with more than 30 different countries, India sought to expand specific forms of collaboration that would increase its power and accelerate its rise. The domestic economic reforms unleashed in the very year of the Soviet Union's collapse paved the way for consolidating India's path toward higher growth. From the abysmal 3.5 percent annual growth witnessed until the 1980s, the 1991 reforms accelerated the improving 5.5 percent growth rate to the 7 percent demonstrated since the new millennium.¹² Since then, India has clearly entered a more confident, assertive period in its foreign policy, especially with respect to military diplomacy. We have forged defence agreements with all of the major states of Southeast Asia, going back to the 1990s. Likewise, India has been the mainstay of security in Mauritius and Seychelles since the 1980s. Indian involvement in Central Asian security is also not new, and can be traced back to the days of Taliban rule in Afghanistan in the late 1990s.

Under the changed scenario, the Raksha Mantri's Op Directive to the armed forces, issued around year 2001, not only outlined India's redefined strategic frontiers, but also led to revision of the aerospace, maritime and army doctrines envisaging tasking for Out Of Area Contingencies (OOACs). India has increased the number of countries with which it has defence-specific agreements – from seven to 26 by the end of 2008. Bilateral and multilateral exercises are also an increasing feature of India's expanding defence relations as it seeks to acquire

11. Gautam Sen, *Indian Higher Education: Perception, Policies and Practices*, vol. 1, no. 1, June 2013.

12. Ashley J Tellis "India as a Leading Power", Carnegie Endowment for International Peace, April 4, 2016. Available at <http://carnegieendowment.org/2016/04/04/india-as-leading-power-pub-63185>

While Japan was formally invited to join the Malabar naval exercises as a permanent member, a formal, long-term defence agreement with Australia was inked. And for the first time, a trilateral India-Japan-Australia security dialogue was held in June 2015.

new technologies to transform its military from Cold War era weapons to 21st century capabilities through such opportunities. Regular bilateral exercises like 'Cope India' with the US, 'Indra-Dhanush' with the UK and 'Garuda' with the French—in progress since 2004—are examples of the changed scenario. One can clearly discern that India's interests have changed over the past decade or more, taking it from a position of non-alignment and non-commitment to having specific strategic interests leading it to a path of "poly-alignment."¹³

Since the change of guard at New Delhi in 2014, Indian foreign policy has been aggressively presenting India as a security provider, especially in its neighbourhood. Every time the prime minister has been in the extended neighbourhood, including Japan, South Korea and Vietnam, he has flown India's defence manufacturing flag, renewing or signing new defence cooperation agreements to institutionalise high-level political and bureaucratic interactions, military exercises, military exchanges, and training of personnel. While Japan was formally invited to join the Malabar naval exercises as a permanent member, a formal, long-term defence agreement with Australia was inked. And for the first time, a trilateral India-Japan-Australia security dialogue was held in June 2015. In addition, New Delhi is trying to put in place the coastal surveillance radar system involving Sri Lanka, the Maldives, Mauritius and Seychelles in the Indian Ocean Region (IOR). India is interested in building its own defence industry through collaboration in co-producing specific systems, as well as through the export of its own existing weapon systems. In this regard, India has repeated its interest in buying and possibly co-

13. Brian K. Hedrick, "India's Strategic Defense Transformation: Expanding Global Relationships Summary", November 2009, <http://www.StrategicStudiesInstitute.army.mil/>

producing Japan's Soryu submarine and US-2 amphibious aircraft¹⁴

Today, the contemporary definition of 'national security' has expanded beyond protection of borders. It includes socio-economic factors that influence the well-being of the nation and its diaspora in the extended neighbourhood. In a country as diverse as India, maintaining law and order as part of internal security is a great challenge wherein intermittent spurts of violence may require quick deployment/reallocation of forces within the country at a very short notice. Apart from the primary role, the armed forces will continue to play a crucial role during disaster management. For timely relief efforts in case of natural or

man-made disasters to mitigate the adverse effects of the calamity as also towards rehabilitation, the military machinery will have to keep itself always geared up.

In this respect, during the last decade, we have seen India executing complex humanitarian missions. Be it in the South Asian region post the 2004 tsunami or the recently conducted rescue of 4,000 odd people from Yemen, India continues to grow in power and capacity. With each passing year, the response is getting stronger and more effective. Today, India has emerged as an effective first responder, to be relied upon, in the region stretching all the way from the Gulf of Aden to the Strait of Malacca. Be it Yemen or now Nepal, its performance has not only boosted our foreign policy but India has marked itself into the reckoning as a rising power with the fastest growing economy that can no longer be ignored on the geopolitical stage.¹⁵ The synergy among India's political, diplomatic, intelligence and forces

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14. Kanti Bajpai, "Modi's Foreign Policy How's It Going", *Global Brief*, September 2, 2016. Available at <http://globalbrief.ca/blog/2016/09/02/modi%E2%80%99s-foreign-policy-%E2%80%93-how%E2%80%99s-it-going/>

15. Danvir Singh, "India's Prowess and Disaster Diplomacy", *Issue Net Edition*, April 29, 2015.

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during these rescue operations has, indeed, been refreshing.

Capability enhancement during the last three Five-Year Plans reflects this aspect, with the induction of power-projection platforms such as aircraft carriers, nuclear-powered submarines, long-range combat aircraft with mid-air refuelling capability and landing platform dock ships. Work is also at an advanced stage in development of intercontinental ballistic missiles with a strike range in excess of 5,000 km. As per noted defence analyst, Ashley Tellis, "India is slowly maturing into a conventional great power,"

AEROSPACE POWER: INDIAN EXPERIENCE

The Indian Air Force (IAF), one of the world's oldest continuously-functioning air forces, with roots going back to October 8, 1932, is the world's fourth-largest combat air arm, with a rich historical legacy. It had an excellent track record during World War II in the China-Burma-India (CBI) theatre, the Wars of 1947, 1965, 1971 and the Kargil Ops.

At the commencement of World War II, the IAF comprised a mere 14 officers and 146 airmen. However, during the war, it expanded rapidly to a point where it ended up flying some 16,000 combat sorties in the China-Burma-India theatre, mostly in support of British, Indian and American ground forces. During the fight against the Japanese in the Battle of Kohima, from April 4 to June 22, 1944, and the Battle of Imphal, the army was entirely reliant on supply by air until the road from Dimapur was cleared. By the end of the battle, the air mobility assets had flown 19,000 tonnes of supplies and 12,000 men into Kohima and Imphal, and ferried out 13,000 casualties and 43,000 non-combatants.

In order to open up a new front against the Japanese, President Roosevelt started supplying China through the Lido Road, joining northeast India to Kunming in China. Closure of the land route by the Japanese led to large scale air mobility operations commencing in April 1942 when the Allied

forces started flying the “Hump,” which continued until 1945. Operating from 13 primary bases in Assam and six in China, the air force’s assets grew to 722 aircraft and more than 84,000 personnel by 1945. During the final offensives against the Japanese, there was one transport aircraft taking off every three minutes, with the monthly cargo delivered to China reaching 44,000 tonnes —peaking at 71,000 tonnes in July 1945.¹⁶

In independent India’s first war, air power played a stellar role in the defence of Jammu and Kashmir (J&K). On October 27, 1947, three Dakotas of 12 Squadron airlifted the vanguard of 1 Sikh from Palam to Srinagar. In the next 11 days, the Dakotas had airlifted 3,500 troops. But for this timely airlift and the valiant actions of the IAF and the Indian Army, Srinagar would have been lost. Spectacular flying feats by Wing Commander Mehar Singh helped to shore up many precarious situations during the defence of Leh and Poonch.

Use of military power to achieve Indian foreign policy goals through the use of soft or hard forms of aerospace power since independence makes an interesting study. The salient events since independence are as under:

- Air action was seen during the liberation of Hyderabad during ‘Operation Polo’, lasting five days, in September 1948. Two squadrons of Tempest aircraft were tasked for air support from Pune. On September 2, 1948, based on aerial reconnaissance, well entrenched ambush positions set up along the way to Rajasur were engaged by the Tempests, clearing the route and allowing the land forces to reach and secure Rajasur by the afternoon. On Day 3, September 15, 1948, at the town of Surriapet, air strikes cleared most of the Nizam’s defences.¹⁷
- Due to the local political upheaval in Nepal, the Indian government arranged for the air rescue of King Tribhuvan of Nepal on November 10, 1951. Two Indian planes landed at Gauchar airport and flew back to New Delhi with the royal family. King Tribhuvan was formally welcomed by the Indian prime minister and other high officials. On February 18, 1952, King Tribhuvan returned from India as the monarch of Nepal.¹⁸

16. C. V. Glines, “In Pursuit of Pancho Villa,” *AIR FORCE Magazine*, February 1991.

17. https://en.wikipedia.org/wiki/Indian_annexation_of_Hyderabad

18. https://en.wikipedia.org/wiki/Tribhuvan_of_Nepal

Air power was used in the Mizo district of Nagaland to contain the rebellion by Laldenga on March 2, 1966. A 24-hour curfew was imposed in Aizawl on March 3, and reinforcements were sent for the 1st Assam Rifles (AR) by helicopters. Toofani fighters operating from Kumbhirgram, and Hunter fighters operating from Jorhat, undertook independent missions to escort the troop reinforcements and to suppress the insurgents.

- Under the UN flag, for the first time, an IAF squadron was tasked for operations in Congo on October 9, 1961. Operating a detachment of six Canberra aircraft, the squadron was given the area of responsibility over southern Katanga province, aligned with the Indian ground troops. Extensive air support was provided to stabilise peace in the area of responsibility under the UN mandate, in conjunction with the Indian Army contingent.¹⁹

- Next, air power was utilised during the liberation of Goa, Diu and Daman from the Portuguese occupation. Two air attacks conducted on December 18, 1961, on the Dabolim airport by Canberra aircraft resulted in

destruction of the runway. A third Indian raid was successfully carried out by Hunters, targeting the wireless station at Bambolim with rockets and guns.²⁰

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- Showing the flag by Mirages over Jaffna was accomplished on June 4, 1987, both as a show of force to the Sri Lankan government of symbolic support

19. http://indianairforce.nic.in/show_page.php?pg_id=160

20. https://en.wikipedia.org/wiki/Annexation_of_Goa

21. https://en.wikipedia.org/wiki/March_1966_Mizo_National_Front_uprising

for the Tamil rebels as well as an act to preserve Indian credibility among the country's Tamil population. This was precipitated by the failure of the naval mission in May 1987. The decision was made by the Indian government to carry out an airdrop of humanitarian supplies. The mission consisting of five An-32s, escorted by five Mirage 2000s, was mounted on the evening of June 4, 1987.²²

- It was the phenomenal mobility and fire power of IAF helicopters in Sri Lanka during the Indian Peace-Keeping Force (IPKF) operations that enabled the Indian Army to successfully accomplish its task.²³ During the 30-month operation, more than 70,000 sorties were flown by the IAF's transport and helicopter aircraft to and within Sri Lanka. During the 20 days bitter fighting period, while disarming the Liberation Tigers of Tamil Eelam (LTTE), more than 3,000 tactical transport and assault helicopter sorties were carried out, providing suppressive fire against the militants' strong points and to interdict coastal and clandestine riverine traffic.
- The armed intervention in Maldives through airlift of a para-brigade from Agra to Maldives on November 3, 1988, was the most apt example of execution of the hard option of power projection utilising air power in pursuit of foreign policy goals. President Gayoom asked India for help to subdue an armed revolt at around 0800 hrs. Within 17 hours, on November 3, 1988, the first IL-76, carrying lead elements of the para-brigade had landed at Hulule airport of Maldives – a distance of around 3,000 km.
- The IAF took part in peace-keeping duties in Somalia from October 1, 1993, to December 21, 1994, as part of the Indian contingent supporting UN operations. The third major contribution of the IAF under the UN flag was in Congo which lasted from July 13, 2003 to October 4, 2010. Indian armed helicopters and utility helicopters were based in the Congolese provinces of North Kivu and Ituri, clocking more than 18,000 sorties in the inhospitable terrain of the Democratic Republic of Congo. The fourth contribution was the Indian Aviation Contingent (IAC) with 6 Mi-17 helicopters operating under the United Nations Mission in

22. https://en.wikipedia.org/wiki/Operation_Poomalai

23. Ibid.

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Sudan (UNMIS). The contingent was based at Kadugli airfield and was active from October 2005 to December 2010.²⁴

Today, the IAF is in the process of transformation with the aim of becoming an “aerospace power capable of conducting full-spectrum operations and extending its strategic reach from the Persian Gulf to the Strait of Malacca.” This incredible outreach can be judged by the recent evacuation of over 4,000 Indian nationals and 900 foreign citizens from the war ravaged

Yemen without any casualty or injury. The first Non-combatant Evacuation Operation (NEO) of 176,000 Indians from Kuwait, undertaken in 1991 during the first Gulf War, has emerged as the biggest airlift in history. The rescue and relief operations during the tsunami of 2004 amply demonstrated our capability for a quick and sustained response in our neighbourhood. The IAF has been regularly airlifting mobile hospitals, engineer task forces with special equipment, specialised teams of the National Disaster Relief Force (NDRF), along with tonnes of relief material including blankets, tents, tonnes of food, paramedics, stretchers, and medicines.

The IAF vision is that as the primary custodian of aerospace power, it has to contribute to the national security of a resurgent India. For the past decade, the force has been undergoing frantic modernisation as outlined in the approved Long-Term Integrated Perspective Plan (LTIPP) 2012-27, under implementation, consisting of adding various strike fighters, 4th/5th generation supersonic interceptors, strategic heavy lift transports, medium tactical transports, light transport aircraft, heavy lift and medium-assault helicopters, basic trainers, surface-to-air missiles and an array of sophisticated weaponry, utilising force multipliers such as in-flight refuelling, Airborne Warning and Control System (AWACS), Unmanned Aerial Vehicles (UAVs), for reconnaissance, and

24. http://indianairforce.nic.in/show_page.php?pg_id=271

developing a military satellite in an attempt to make the Indian Air Force of global importance within the next 20 years.

The Indian Air Force has embarked on a well planned expansion drive, building up its air mobility capability from 2,000 tonnes to 5,000 tonnes by the middle of the 14th Five-Year Plan to protect the nation's security interests. The C-130s and C-17s are well entrenched in service. Of the total helicopter holdings of the IAF of around 400, nearly one-half consists of the Mi-8/Mi-17 variants, making India one of the world's largest Mi-8 and Mi-17 operators.

Of these, 150 + comprise the Mi-17 V5 variant, which fall under the armed helicopter category, with substantial firepower, sophisticated avionics and onboard navigation systems and the latest and more powerful engines than the earlier variants. These have onboard weather radar, state-of-the-art autopilot, are equipped with the latest generation night vision devices and, thus, are capable of undertaking all-weather, day-night operations in any kind of terrain. They can carry out an out of ground effect hover at elevations up to 6,000 m and represent a great enhancement in the medium-lift helicopter capability of the IAF. Induction of Chinooks, Dhruvs and Apaches will add further punch to India's helicopter fleet.²⁵

An integrated air command, control and communication system, linking the AWACS, aerostat balloon radars and low-level transportable radars, fighter aircraft and helicopters, reconnaissance and battlefield damage assessment UAVs along with the planned dedicated military satellites for providing a gap-free, comprehensive reconnaissance and air defence system, keeping in mind diverse needs such as communications, has been operationalised with the help of Bharat Sanchar Nigam Limited (BSNL) and Mahanagar Telephone Nigam Limited (MTNL) providing the full gamut

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25. Gp Capt AK Sachdev, "Helicopter Fleet for the IAF", *Indian Defence Review*, vol. 28, issue 2, April-June 2013.

of telecom services, including basic and mobile telephony, broadband and internet services, leased lines, Multi-Purpose Label Switching-Virtual Private Networks (MPLS-VPN) and Very Small Aperture Terminal (VSAT) services. Work has begun on embedding a secure, exclusive pan-India Optical Fibre Cable (OFC) communication network laid over 60,000 km, providing connectivity for the army, air force and navy, and boosting cyber security.

With dedicated service specific satellites in the process of being launched, the Indian Space Research Organisation (ISRO) has been a great contributor in facilitating the growth of the aerospace power segment. Today, India has 33 satellites in orbit around the earth and one in the Martian orbit. These include 12 communications satellites, 7 navigation satellites, 10 earth observation satellites and 4 weather monitoring satellites with day, night and cloud cover surveillance capability, and Cartosat-2, at 0.65m resolution, with a one minute spot video.

TASK AHEAD....

Due to the lack of “air sense” and faith in own air power in the minds of the higher leadership of the country, air power was not utilised offensively during the 1962 war with China. Even today, a narrow view of air power as solely being a provider of support to land and naval forces and homeland air defence is prevalent, with the higher leadership of the country unaware of its fullest potential for achieving strategic effects independently in the pursuit of national goals. There is an urgent need to build up “air sense” and faith in own aerospace power in the minds of the higher leadership of the country for its effective utilisation in the pursuit of foreign policy goals, as is being done by other powerful nations the world over .

To achieve this aim, we need to dispel four widely propagated myths about aerospace power: firstly, that air power is only associated with offensive action; secondly, that it is always escalatory; thirdly, that it is most effective only in conventional warfare; and, lastly, that it seeks to influence the environment on its own, and operates in isolation. There is an urgent need to look beyond recent land-centric campaigns to the wider opportunities offered by modern air power. For too long, air warriors have been guilty of focussing on excellence in delivery rather than on the most imaginative and innovative applications of air

power to achieve the desired strategic outcomes. The challenge before us is to convince the higher leadership of the country that modern air power can offer political decision-makers more and better options, but only if the underlying strategy links the application of air power directly and coherently to the desired end-state, rather than limiting its employment to the battlefield. This calls for stimulating new thinking amongst air warriors that will be necessary to promote the aerospace power renaissance that is required if military force is to remain an effective and useful lever of power projection.²⁶

As India marches towards its rightful place amongst the nations of the world, it is an opportunity for us air warriors to enhance the role of aerospace power in the pursuit of our national interests and perform to expectations with flying colours whenever and wherever we are called upon to do so.

26. Olsen, n. 7.