

# INDIA'S SECURITY CHALLENGES: ROLE OF AEROSPACE POWER

INAUGURAL ADDRESS BY CAS  
12TH SUBROTO MUKERJEE SEMINAR

ARUP RAHA

## INTRODUCTION

Air Chief Mshl SP Tyagi, Air Mshl Vinod Patney, director general, Centre for Air Power Studies (CAPS), serving and retired officers, eminent scholars; distinguished guests, ladies and gentlemen. I am honoured to be amidst such a learned audience, at the inauguration of the 12th Subroto Mukerjee Seminar on “India's Security Challenges: Role of Aerospace Power”.

My compliments to CAPS for its unique and sustained contributions towards promoting awareness in the aerospace domain and organising thought provoking seminars on contemporary issues related to the security challenges of the nation.

## AIR MARSHAL SUBROTO MUKERJEE

I would like to begin by paying tribute to the vision and leadership of Air Mshl Subroto Mukerjee, the first Indian to command a flight, squadron, wing and eventually go on to become the first commander-in-chief and chief of the Air Staff of the Indian Air Force (IAF) at age of just 43. The ingenuity and leadership displayed by him in **saving an army post** from the tribal onslaught in the North-West Frontier Province (NWPF) in 1940, is legendary. He was

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Air Chief Marshal **Arup Raha** PVSM, AVSM, VM, ADC, is the Chief of the Air Staff, Indian Air Force.

responsible for literally nurturing the fledgling IAF and guiding its destiny during its crucial formative years. Much of what we are today is a result of his astute guidance and visionary leadership. Air Mshl Subroto Mukerjee will always find a special place in the heart of every air-warrior.

## **SUBJECT**

The theme of the seminar has been aptly chosen as “India’s Security Challenges: Role of Aerospace Power”.

**Global Security Environment:** Constant churning in geo-politics and geo-economics has thrown up new challenges in the global security scenario. The 9/11 terrorist strikes in the US mainland brought about greater international convergence on security issues and tackling of sub-conventional threats and challenges. New threats have reinforced the need for international cooperation to combat them. It has found expression as GWOT – Global War on Terror. The Arab Spring and Jasmine Revolution have altered the character of regional politics in Northern Africa and West Asia. It has led to regime changes in Egypt, Libya and Tunisia and fuelled instability in the region. The rise of the Islamic State (IS) and unrest in Syria and Iraq have created instability in the Middle East and caught the attention of the entire world. Economics, energy security, national interests as well as religious ideology are shaping views on geo-politics and national and international security. The rise of China, India and the Association of Southeast Asian Nations (ASEAN) has resulted in the shift of the economic centre of gravity and, hence, the strategic centre of gravity, to the Asia-Pacific region.

**India and its Neighbourhood:** India shares 15,100 km of mostly inhospitable land boundaries with six countries and its seventh neighbour, Sri Lanka, is separated by just 25 miles of a shallow water channel. This is a unique challenge for any country, as the dual task of physical security of the borders and maintaining harmonious relations with neighbours is a humongous one.

**External Security Challenges:** Today, the issues range from border disputes, the fallout of the uprisings in West Asia, the rise of the IS,

instability in Afghanistan and Pakistan and the withdrawal of US troops from Afghanistan at a critical phase for the Afghan government. These are major concerns not only for India but the entire world. Additional challenges include ensuring continuous access to space and enhancing the cyber domain, as future wars are likely to be fought silently in these domains. We need to be prepared to deal with them proactively.

**Internal Security Challenges:** In an ever changing security scenario, it is becoming increasingly difficult to separate the internal threats to security from the external ones. The threats to India's internal security emanate from terrorism, insurgencies in the northeast and the Naxalite movement. In fact, in the recent past, Naxalism has emerged as the single biggest threat to India's internal security and has assumed serious and threatening proportions. Economic development in the northeastern region has been slow. Thus, this region remains a weak area in maintaining border sanctity, as also very vulnerable to illegal immigrants and insurgents.

**Composite Threat to Security:** The security challenges faced by India are varied, complex and dynamic. Our most immediate and primary threat is that of terrorism. However, the constant conventional threat to our borders cannot be overlooked. Our national objectives should, therefore, be aimed to avoid conflict through deterrence. Hence, India will have to build capability across the entire spectrum of conflicts—sub-conventional, conventional to non-conventional. Our procurement plans must be in consonance with the aim to possess strategic reach that would serve the ends of military diplomacy and enable force projection within India's strategic area of influence.

## **ROLE OF MILITARY POWER**

In the current security environment, and with the growth of the nation as an economic power, its Human Resource (HR) development, science and technological base, with enhanced Comprehensive National Power (CNP), India will have to play its role in the international arena. We are destined to play a stellar role in ensuring peace and stability in the region, if not the

world. Therefore, we have no option but to invest adequately in developing military power.

**Composition of Military Power:** The factors that influence military force structure planning are, firstly, the threat perception and its mitigation; secondly, national objectives and aspirations. These, in turn, govern the size and composition of the armed forces. For the army, it would determine the number of strike corps; in the case of the navy, the number of aircraft carriers and nuclear submarines; and for the air force, its offensive capability, strike power and other force enhancers.

### **NATIONAL OBJECTIVES**

- Our national policies are enshrined in the form of declarations in the Panchsheel, Non-Aligned Movement (NAM), United Nations (UN), etc.
- India has no territorial ambitions. However, we have hostile borders and border disputes. We have fought several wars on this account.
- Our broad objective is, therefore, to avoid conflicts and deter war. However, deterrence can be achieved through appropriate offensive capability.
- Aerospace power, with its unique attributes of speed, reach, footprint and precision, is the best national instrument for defence and deterrence.

### **ROLE OF AEROSPACE POWER**

The IAF, along with Indian Army and Indian Navy, with their core competencies, including aerospace elements, are poised to contribute in stabilising the region. They provide for enhancing the nation's strategic presence/footprint. Aerospace power will be the first respondent in any contingency, peace or war. Aerospace power in the maritime domain would play an important role in dominating the seas and protection of island territories. While aircraft carriers and Maritime Reconnaissance (MR) assets of the Indian Navy (IN) are being augmented, the shore-based Maritime Air Operations (MAO) by the IAF would provide more teeth in offensive operations.

**IAF Roles:** The IAF has been performing roles in three categories to mitigate national security concerns. These include, i.e. classical roles, peace-time roles and roles in conventional conflict. As a multi-spectrum strategic force, the IAF performs these three classical roles which include:

- **Firstly, Power Projection:** Aircraft such as the SU-30, flight refuelling aircraft, airborne warning and control system, C-17, C-130, etc have enhanced our strategic reach and footprint. Certain capabilities have been aptly demonstrated during the humanitarian aid and disaster relief operations in Yemen and Nepal.
- **Secondly, Credible Deterrence:** A credible IAF with appropriate force levels and precision weapons has been one of the major contributory factors in deterring a major conflict since 1971.
- **Thirdly, Protection:** What often goes unnoticed is the 24x7 air defence provided by the IAF to protect the sovereignty of the nation's air space frontiers. With more than 6,000 civil and 1,500 military flights daily, radars keep churning, and fighter aircraft and helicopters are kept ready for armed action, if required. However, the biggest challenge shall remain the mitigation of unregulated sub-conventional aerial threats which include drones, gliders, microlites, etc. Review of Civil Aviation Requirements (CARs) and procurement of Close in Weapon Systems (CIWS) are underway to meet this evolving challenge.

#### PEACE-TIME ROLES

- **Air Maintenance:** Air maintenance in the northern as well as northeastern sectors is the lifeline of the ground forces securing our borders and the IAF lifts close to 35,000 tonnes annually by fixed and rotary wing aircraft.
- **Infrastructure Creation:** Assistance to the Border Roads Organisation (BRO), Indian Railways and other government agencies is being provided on a routine basis to create infrastructure in remote areas to enhance security.
- **Internal Security:** The needs of the Ministry of Home Affairs (MHA), Election Commission, etc. are being addressed, as and when the contingencies arise.

- **Op Triveni:** Logistics support to paramilitary forces engaged in controlling Left Wing Extremism (LWE) is another major peace-time task being performed by the IAF. Since 2009, the IAF has flown substantial number of sorties to airlift a large numbers of personnel and logistics supplies.

### **CONVENTIONAL CONFLICT: USE OF AEROSPACE POWER**

**Control of the Air:** The primacy of gaining control of the air to wage war successfully along the entire spectrum shall always remain. Control of the air is a critical factor and the conduct of future wars will increasingly depend on the degree of air control. However, modern short and swift wars do not offer the luxury or the time to conduct a protracted counter-air campaign. This has given rise to the concept of dynamic air dominance and increased emphasis on achievement of favourable air situation to allow for the conduct of specific operations. Dynamic targeting is set to assume greater significance in the coming years. All air campaigns will be fought in parallel or simultaneously. The integrated Air Defence (AD) network, Integrated Air Command and Control System (IACCS), Akash Teer and Triguna will ensure efficient air space management, especially in the Tactical Battle Area (TBA).

**Surveillance and Reconnaissance:** The essence of air power is targeting, which in itself is entirely dependent on intelligence. The importance of the peace-time role of surveillance to build strategic databases cannot be overemphasised. While the sensors and means of data analysis and storage have undergone a change, digitisation has offered greater access to large amounts of databases in quicker timeframes. A mix of space-based assets, fighter aircraft, Remotely Piloted Aircraft (RPA) and even helicopters equipped with suitable sensors provide the IAF the necessary data acquisition capability. Tactical reconnaissance is another area where the IAF has made substantial progress with the induction of Electro-Optic/Infra-Red (EO/IR) pods and Synthetic Aperture Radar (SAR) pods for fighter aircraft.

**Precision Targeting:** The advent of Precision Guided Munitions (PGMs) has always been considered as a major turning point in the employment of

air power. Modern short swift wars, with dynamic targets and minimum margin for collateral damage, will demand extensive use of PGMs both in support of ground forces as well as in independent operations in pursuit of strategic effects.

**Air Transported Operations – Rapid Deployment of Troops and Equipment:** Air power will be used effectively for mobilisation through rapid deployment of troops and equipment, be it peace or war. Vertical envelopment at the crucial stages of the ground battle will ensure rapid progress of ground operations. Air maintenance of forward areas as well as ground forces and casualty evacuation are lifelines and crucial morale boosters during actual operations.

## **TECHNOLOGY AND APPLICATION OF AEROSPACE POWER**

Aerospace power requires synergistic integration of air, space and information systems to achieve strategic military objectives. Cutting edge technology in every aspect such as efficient engines, lighter airframes, miniaturisation, smart weapons, radar and stealth technology, navigation and targeting systems, space enabled capabilities for communications and surveillance, accurate position and navigation information, and ballistic missiles have transformed the nature and application of aerospace power in military doctrines over the last century. The space-based satellite programme will provide the Position, Navigation and Time (PNT) and the Indian Regional Navigation Satellite System (IRNSS) capability.

## **ROLE OF AEROSPACE POWER IN FUTURE**

The application of aerospace power would prove to be the **decisive factor** in winning the military campaigns, wherein the response has to be prompt and precise. Hence, one of the major challenges is to remain a contemporary aerospace power with credible response options. In the light of the expanding strategic footprint of a resurgent India, the IAF must possess complementary capabilities to operate effectively and decisively. With this aim in mind, the IAF's transformation plans aim at acquiring multi-

spectrum strategic capability. The capability involves replacement of legacy systems, upgradation of existing systems and platforms and induction of state-of-the-art equipment.

## **CONCLUSION**

I thank CAPS once again for inviting me today to talk about this important subject in this seminar. I am sure seminars like these would help in strengthening our collective strategic mindset. My best wishes to all the participants of this seminar for fruitful deliberations.