Indian Aerospace Power

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Modern aerospace power is the only instrument that would give the country an assured capability to project precision fire power at great distances with or without mid-air refuelling and AWACS support and therefore, continues to remain the best instrument for deterrence and instantaneous and calibrated response to emerging threats. Whatever India decides, it cannot but modernise its aerospace power.

According to media reports, India has recently embarked on the most ambitious air power modernisation programme in its entire history. The proposals include the 126 MMRCA for US $10 billion, ten C-17 heavy lift transport aircraft worth $2.4 billion, eight Boeing P8I LRMP (for the Navy) worth $2.1 billion, six Lockheed Martin C-130J for $962 million, six second-hand Sea King helicopters (for the Navy) and a whole host of other equipment including many helicopters for the Indian Army. There are also reports of the Indian Air Force buying some 12 used Mirage-2000 fighters from Qatar. India has also recently inducted the first of three Phalcon AWACS with two more likely to join the force in a few years. The Indian Army and the Air Force (IAF) have been using Searcher and Heron UAVs for some years but India has not so far inducted UCAVs or combat UAVs that have been so effectively used by the US against Taliban targets in Afghanistan and adjoining regions of Pakistan.

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The last time the IAF did so was in the 1979-89 period during which almost all of its current assets were purchased. Beginning with the BAE Jaguar in 1979, the IAF acquired in quick time the MiG-23 (BN&MF), strike and air defence aircraft, the MiG-25, the Mach 3 high altitude strategic reconnaissance aircraft, An-32 medium lift transports, Il-76 heavy lift aircraft, additional Mi-17

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helicopters, Mi-25/35 attack helicopters, Mi-26 super heavy helicopters, Mirage-2000 multi-role fighters, MiG-29 air superiority fighters and the MiG-27 strike aircraft, completing a comprehensive overhaul of its fleet. (In response to the IAF Jaguar Deep Penetration Strike Aircraft (DPSA), Pakistan soon got some 40 F-16 Fighting Falcons from the United States.) The IAF also slowly phased out the Fairchild Packet C-119, the Dakota DC-3, Caribou, Otter, Toofani, Mystere 4A, Gnat, Ajeet and the Hunter and later the Canberra light bomber aircraft as well.

In 1996, it also acquired the Sukhoi 30MKI (Flanker), the modern air superiority fighter roughly comparable to the US F-15. Current estimates are that besides the 50 odd Su-30 aircraft with the IAF, some 140 more have been ordered from Russia and another 140 are to be manufactured by the Hindustan Aeronautics Limited (HAL) under licence. There is, however, some confusion about these figures.

The HAL is also slated to participate with Russia in the development of the Fifth Generation fighter, PAKFA to the extent of 25 per cent. The fighter made its first flight recently (in January 2010) and it is believed that since most development is more or less complete India would again end up manufacturing it under some sort of 'licence' arrangement.

By the turn of the century its flagship fighter programme bore fruit when the LCA, later named Tejas, flew in February 2001. In the last nine years, it has completed most of the flight test work and is due to get its IOC or Initial Operational Clearance by the end of 2010 and begin entering IAF squadrons by 2012. The HAL-made Dhruv light helicopter also started series production around the same time and has recently been exported to Chile.

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only a dozen or less of the much vaunted BAE Hawks Advanced jet Trainers (AJT) have been inducted and in the year or so since they began training operations it is rumoured that spares package of the entire fleet of 66 trainers has been used up.

Following a fatal accident of the HPT-32 basic trainer in July 2009, in which two experienced instructors were killed, the IAF grounded the entire fleet of the HPT-32 and switched to 'all jet training' on Kiran Mk-1 and II trainers. A debate goes on if this is indeed a better way to train its pilots 'ab initio' or should it do so on new basic trainer aircraft. In the meantime, a Request for Proposal (RFP) for some 75 basic trainers has been issued by the government but, given our experience of defence procurement it will take anything from three to five years to actually get these trainers. The IJT or the Intermediate Jet Trainer programme is also lagging behind and the HTT-34 project to produce a turboprop basic trainer roughly in the same class as the Toucano/PC-7 was shelved in the early 1980s. Since the Kirans are already over 30 years old, it is feared that the IAF's training schedule and its operational preparedness would be adversely affected simply because there would be fewer pilots to fly the new aircraft that would be inducted by then. In the early 1960s, in the aftermath of the 1962 War with China, the IAF had used a novel idea of training its pilots at civil flying clubs to accelerate the training process. This or a similar scheme is worth trying again.

The Chinese Air Force officially known as the People's Liberation Army Air Force (PLAAF) currently possesses some 1653 combat capable aircraft (and in addition the PLA Navy has another 290) of which some 30 per cent are current generation including 84 J-10, 116 J-11(Su-27), 97 Su-30MKK, 156 JH/FB-7, 516 J-8, and 540 J-7.

The Pakistan Air Force (PAF) has recently received the first of an additional 18 F-16 of the Block 52 series which in the very near future will take its total to 64; seven JF 17 Thunder (also known as FC-1) fighters from China and has ordered some 36 J-10 (FC-20) fighters and hopes to get even the Super-10 when it is ready. The Super-10 incidentally is an upgraded version of the J-10 with a TVC engine locally made in China. The PAF is also eying the Chinese L-15 supersonic trainer. Pakistan has also ordered eight Erieye AEW&C from Sweden and is to get some S-70 Super Cobra helicopters from the United States to improve its capacity for anti-terror operations. Its current strength is reportedly 383 combat capable aircraft including 41 obsolete Chinese A-5, 129 F-7 PG/MG (improved Chinese version of the MiG-21), nearly 113 vintage Mirage III/V, some 60 plus F-16 fighters and seven FC-1/JF-17 of which some 150 are on order. PAF officials are aiming to finally acquire a whopping 200 FC-1 and 150 J-10s from China in the next decade.

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Not only has China built the first ever Airbus outside Europe but has rolled out a Cessna-162 basic trainer and is planning to produce some 1500 of these aircraft. According to Aviation Week & Space Technology (AWST) Annual Review Resource Book 2009, 'Aircraft Forecasting' Report, China would rank among the major producers of modern fighters in the current decade with the capacity to produce 45 to 48 fighters of the J-10 and J-11 class. This means that the PLAAF would field some 1500 to 2000 modern fighters by 2020.

In addition to some 1500 Short Range Ballistic Missiles (SRBM), China has recently modified some of its land-based Medium Range Ballistic Missiles (MRBM) to carry conventional warheads for use as Anti-Access/Area Denial (A2/AD) strategy. These missiles are capable of hitting moving targets like aircraft carriers on the high seas. China, who has already fielded its own version of the AWACS, intercepted a missile in an 'exoatmospheric' engagement (January 2010) and destroyed a satellite (January 2007). In addition, it recently launched the third of its geo-synchronous Compass-3 satellites in its effort to complete its own satellite navigation system (like the American GPS) comprising 30 medium orbit satellites and three geosynchronous ones.

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In light of the above, India has little choice but to complete its procurement as quickly as possible if the IAF is to be ready to face a conventional conflict. Although India has shown the utmost restraint in its response to terror attacks from across the border, it must always maintain the capacity of launching a punitive strike against Pakistan if and when necessary. It is this capacity that will eventually help deter a terrorist strike or a conventional war. Air power is effective when used like the Mongols and later, the Marathas used their cavalry to harass and strike at their enemies leaving the enemy nothing to react to. But correct targeting is the key to such operations.

India has, however, shown extreme reluctance to use force; perhaps for good reasons. But, the result is that employment of air power is not seen as a useful option giving the enemy a wrong signal that India would never retaliate. Although things have reportedly improved, many Indian thinkers continue to consider the use of air power as escalatory; think it is ineffective in the high mountains and shun it for fear of collateral damage. Given the US experience in Afghanistan, especially the Kunduz incident of last year in which some 100 innocent civilians were killed, air power has taken much flak. In the recent past, however, the Pakistan Air Force (PAF), Saudi Air Force, Yemeni MiG-29 fighters and even the US ship-based helicopters have been used (the last in Southern Somalia) to good effect against Non-State Actors (NSA). In spite of all the developments in precision fire power, it is still difficult to identify insurgents or terrorists operating in small groups. Fast jet combat air power, therefore, is perhaps not always effective against such targets but no one can write its epitaph. Even after a drone has identified a terrorist hideout, a fighter aircraft may be required to finish the task as happened in a recent engagement in the AFPAK region.

Whether it was the Portuguese bombardment of Calicat in 1501 – when Indians saw the first ever use of gunpowder by being at the receiving end – or Babar's artillery and matchlocks in 1526 at Panipat, India found itself without a suitable weapon with which to respond to such devastating fire power.

China's increasing emphasis on anti-ship, cruise and conventional ballistic missiles, both land and sea based, raises new questions of a robust response. The PLAAF may well use these in large numbers in the initial stage of a conflict achieving surprise, selective damage, and economy of effort in a lethal air defence environment. Whether it was the Portuguese bombardment of Calicat in 1501 – when Indians saw the first ever use of gunpowder by being at the receiving end – or Babar's artillery and matchlocks in 1526 at Panipat, India found itself without a suitable weapon with which to respond to such devastating fire power. Modern aerospace power is the only instrument that would give the country an assured capability to project precision fire power at great distances with or without mid-air refuelling and AWACS support and therefore, continues to remain the best instrument for deterrence and instantaneous and calibrated response to emerging threats. Whatever India decides, it cannot but modernise its aerospace power.