

# Asian Air Power Modernises

**Airpower is not just a statement of national prestige. While it still a consideration, air forces in the Asia Pacific region are beginning to look beyond such perceptions and to develop force structures of new and modernised aircraft, backed by force multipliers and increased professionalism and skills amongst their personnel that are enabling them to stand as equals with traditionally more advanced air forces.**

*by Richard Gardner*

**T**he biggest problem in modernising air arms is the huge burden of replacing aircraft with their current equivalents, which invariably cost many times more. Although today's technology can now deliver so much more capability, in order to fully exploit it, air forces must invest in the command and control infrastructure and up-to-date training, to give the operational gains commanders are seeking. Many nations still regard maintaining large numbers of supersonic combat aircraft as essential statements, confirming national status as well as providing a deterrent. This is changing and more attention is being given to making better use of existing assets through upgrades and modernised infrastructure.

For decades, the powerful, combat experienced, Indian Air Force (IAF) has maintained a large modern fleet of military aircraft, comprising a mix of indigenous designs and licence-built and imported aircraft. Most front line aircraft have been of Russian origin, from the MiG-21, through the MiG-23, -27 and -29, to the current Su-30MK. The Sukhoi Su-30MK family represents the best of the current multi-role combat aircraft, and undoubtedly



*The Chinese PLAAF is developing even more capable versions of the J-10 multi-role combat aircraft, seen here in air superiority role*  
© Aerospace International

gives the IAF a platform that can probably outperform almost anything else in the region that it is likely to have to face. Supplementing this Eastern-supplied fighter in the IAF front line is a large fleet of Dassault Mirage 2000H aircraft. India also retains around 100 licence-built and European-built Jaguar (Shamsher) fighter-bombers, which have recently been upgraded with modernised communications and avionics systems.

For more than two decades India has been developing and producing its own home-grown family of military jet aircraft, including trainers and an indigenous lightweight fighter, the LCA Tejas. This was supposed to be followed by a more advanced medium size combat aircraft, but to date, the programme remains largely an aspiration and the replacement of the IAF's MiG-21 fleet is

now going to be met through the selection of a foreign design. Known as the Medium Multi-Role Combat Aircraft, this will be chosen after an intensive evaluation

and competition, which is now taking place. Russia is offering the latest MiG-29 variant, known as the MiG-35, the US is offering both the F/A-18 E/F Super Hornet and the latest F-16C/D Fighting Falcon, while Europe has been offering the Rafale, Typhoon and Gripen. India's naval Sea Harriers have been upgraded with new Israeli radars and are being supplemented by new navalised Mig-29Ks.

Perhaps the biggest breakthrough for Western aircraft suppliers in the Indian military market has been the selection of the Boeing P-8A Poseidon as a maritime patrol platform, to replace Russian-supplied Il-38s and Tu-142s. This is Boeing's first export for the new P-8A aircraft, which will considerably extend India's capability for surveillance and ISTAR well over the whole Indian Ocean. It is believed that the contract covers eight aircraft. India's Dhruv utility helicopter has become a widely used type, and the nation's home aero-

space industry continues to grow, though some projects, such as a new jet military transport, seem unlikely to make it to production, in the face of strong global competition.

Pakistan is a nation that has suffered more than its fair share of internal strife in recent times. With the government under pressure to take firm action against terrorists using the lawless and rugged North West Frontier region as a safe haven for operating into Afghanistan and in Pakistan itself, the Pakistan armed forces have been actively working to destroy the terror training camps and to cut supply routes. The Pakistan Air Force (PAF) has been making maximum use of its helicopter and troop transport aircraft, including AH-1F Cobra attack helicopters and Eurocopter Pumas and Mi-8 Hips and Mi-17s. C-130 Hercules of different variants provide paratroop-dropping capability as well as the ability to supply-drop from the air. The PAF

has long been seeking the latest F-16 C/Ds from the USA, to supplement its Mirage aircraft, and has now ordered 24 to fly alongside Chinese-supplied and jointly produced combat aircraft including the A5C Fantan, the F-7P Skybolt, the JF-17 and the latest J-10. Working closely in cooperation with US forces along the border with Afghanistan, the Pakistan government has sought to exploit US-supplied target intelligence, much of it coming from unmanned air systems and satellites, to take out suspected terrorist cells and camps. Additional air assets

are also being acquired, including a fleet of SAAB 2000 AEW & C surveillance platforms, equipped with the Erieye radar and former US Navy P-3C Orion maritime patrol aircraft. EADS CN-235s are replacing older military transports, and can use short airstrips for forward support. Pakistan is obviously following a difficult defence balancing act keeping close to its traditional Chinese allies and industrial aerospace partners, while expanding its procurement of US aircraft and systems.

Bangladesh has a small air force equipped with MiG-29s and F-7s. The operational status of the MiG-29s is somewhat questionable

### For more than two decades India has been developing and producing its own home-grown family of military jet aircraft

at present, but with little scope for a major new combat aircraft purchase, recent procurement has concentrated on helicopters, which are in much use, especially on humanitarian missions following regular flooding emergencies. The main Russian-built helicopters are Mi-172s, Mi-171s and Mi-17s, with Bell 212s and 206Ls from the West.

Myanmar's defiance of world opinion on human rights matters has isolated it from Western influence, which has resulted in China remaining its main source of military

*The Royal Australian Navy is one of the growing regional users of the Eurocopter NH-90 helicopter*  
© Richard Gardner



equipment, and political support. Combat strength has been boosted with the delivery of 10 MiG-29Bs. These supplement a fleet of Chinese supplied F-7Es and FT-7s, plus A-5M Fantans. Pilatus PC-7s and 9s provide pilot training, with G-7 Galebs, and it is believed that these can also act in the light attack role, supplemented with Russian-designed helicopters.

The Royal Thai Air Force (RTAF) will start replacing its F-5Bs and Es with SAAB JAS-39 Gripens, next year, and the first ex-Swedish Air Force example flew late in 2009. This represents an important leap in capability over the 1960s F-5E/F Tiger IIs. At present the RTAF front line operates 36 F-16 A/B Block 15s. The RTAF has ordered two SAAB 340 Erieye AEW & C patrol aircraft and also operates a large fleet of transport aircraft, including the C-130H Hercules and CN-235 (10 exam-

### The Royal Thai Air Force (RTAF) will start replacing its F-5Bs and Es with SAAB JAS-39 Gripens

ples). It has recently added the first of four ATR 72-500s to its transport fleet, including one VIP aircraft. With the modernisation of the F-16s and purchase of Gripens, Thai air power is a well balanced force, and not overstretched in terms of training and support capacity.

After a decade in which the Royal Malaysian Air Force (RMAF) suffered problems maintaining availability rates in its MiG-29 and Hawk 208 fleets, it is now modernising again. The front-line fleet leader is the Su-30MKM, with 18 aircraft. A mixed fighter fleet also includes eight C/D model F/A-18 Hornets. The RMAF was expecting to extend its Su-30MKM fleet but continuing problems

**SAAB has recently flown the first JAS39 Gripen destined for the Royal Thai Air Force. This was one of a large number of Gripens prepared from stored aircraft formerly ordered by the Swedish Air Force and subsequently made available for export © Saab**



**The Japanese Self Defence Air Force has dispatched two P-3C Orions to Djibouti to assist in a multinational force of warships and aircraft patrolling the Western Indian Ocean to protect commercial shipping from pirate attacks © JSDAF**

have opened up a possible opportunity for Boeing to sell the latest F/A-18 E/F Super Hornet. Malaysia has a long coastline, with growing pirate and smuggling activities to counter and is introducing six new CN-235 Maritime Patrol Aircraft and four King Air 200s. Perhaps the most important new aircraft are four Airbus Military A400Ms. These will provide a huge increase in regional air mobility, carrying more than twice the payload of the existing C-130 Hercules transports. Malaysia as an industrial partner has been anxiously waiting to see if the programme will survive, which now looks much more likely.

Due to its island location at a key Asia Pacific trade crossroads, the Singapore government has recognised the importance of equipping its air force with an effective modern air fleet. Priority modernising the front line has started with the selection of the Boeing F-15 SG as the main multi-role air platform. With advanced multi-tracking AESA radar and a swing-role capability, the F-15SG is the latest version of the Strike Eagle, and is seen as a counter to the potential regional threat from Mig-29s and Su-30s. The RSAF also operates a large fleet of F-16 C/D Block 52 Fighting Falcons and still retains F-5E Tiger IIs. Northrop Grumman E-2C Hawkeye AEW aircraft provide both early warning and airborne command and control.

Singapore is also sensitive to the local threat of piracy and uses Fokker F50 turboprop maritime patrol aircraft, along with smaller twin engine types and a large number of helicopters, including Eurocopter Cougars and Super Pumas. The RSAF now has a 12-strong fleet of Boeing AH-64D Apaches and a similar number of Chinook transport helicopters. With nine older C-130B and H model Hercules in its fleet, Singapore will need to replace these aircraft soon. Likely solutions include the C-130J or the A400M.

Indonesia remains somewhat unstable politically, which has worried neighbours as its air force has small numbers of Su-30s and Su-27s as well as F-16As, F-5E Tiger IIs and Hawk 209 light attack aircraft. Indonesia has a large number of transport and maritime patrol aircraft, including C-130s and home assembled and imported CN-235s and C-212s. More Su-30MKs will be required, though an upgrade and extension to the F-16 fleet may be favoured, even though funding any major upgrade to the front line may prove a challenge. Large numbers of Hawk trainers may need replacing with more advanced types, featuring glass cockpits, though once again upgrades may be more affordable and more likely.

The Republic of Korea Air Force (ROKAF) is one of the best equipped in the region, and is increasingly self-supporting as its home aerospace industry grows, with US help and support. Like Singapore, the ROKAF chose the latest version of the F-15E Strike Eagle for its main air superiority role. The 60 F-15Ks will replace most of the 100+ fleet of ageing F-4D and E fighters, but it has not yet been decided which aircraft will replace the rest. The ROKAF was one of largest users of the Phantom II, though the locally assembled 210 F-16C/D Block 52 Fighting Falcons provide a highly effective air defence and close support capability. From its experience building F-16s, KAI developed the all-new Mach 1.5 T-50 in conjunction with Lockheed



Martin as an advanced trainer, but the light F/A combat version is also due to enter ROKAF service replacing the F-5Es. The service has a mixed fleet of reconnaissance and intelligence gathering aircraft, including Hawker 800s and has selected the Boeing 737-based Wedgtail AEW&C aircraft. The fleet of transport aircraft comprises mostly C-130Hs and CN-235s, but Hercules replacements will be needed over the coming years.

Japan has always maintained an inward-looking, strictly self-defence posture, and so while its own aerospace industry has continued to develop new aircraft, they have made no impact in export markets. Very little has been heard of progress with new Kawasaki jet replacements for its C-1 and C-130 transports and P-3C MR aircraft. With the rise in piracy on the high seas, Japan has deployed two P-3C Orions to Djibouti to help protect its tankers and container ships. After trying unsuccessfully for a decade to lobby the USA to be able to procure F-22 Raptors, interest is now focussing on the F-35 JSF, but a totally new indigenous



**The A400M has been ordered by Malaysia and will be an attractive airlifter if the C-17 ends production © Airbus Military**

design mock-up for an advanced stealthy fighter was revealed, but is unlikely to reach production. Japan's current major front line combat aircraft remains the F-15J Eagle, alongside the co-produced Mitsubishi-Lockheed Martin F-2 (based on the F-16). It also has a large fleet of E-2C Hawkeyes providing AEW,

with Japan's 4 unique Boeing 767-based AWACS. Soon to enter full service will be two KC-767J air-to-air refuelling tankers.

China's vast Peoples' Liberation Army Air Force (PLAAF) requires more descriptive space than is available in this regional overview, however it must be mentioned that

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*The C-295 from EADS in MPA format, equipped with surveillance radar and electro-optical turrets, with Forward Looking Infra-Red, is becoming a popular affordable maritime patrol aircraft and can be armed with torpedoes and missiles © Richard Gardner*



*A difficult act to follow - The RAAF F-111C is about to be phased out and replaced by F/A -18E/F Super Hornets, and later, F-35 JSFs © Richard Gardner*

it is now entering an expansion phase that looks likely to see both greatly increased production of Chinese-developed combat aircraft, such as the J-10 family, and imported and licence-produced Russian designs, such as the Su-30MKK and Su-27SK, also known as the Jian-11. China is developing its own multi-role version with a new engine, avionics and weapons system. An enhanced version of the Su-30, the MKK2, has a much greater potential ISTAR capability and the ability to carry long range Kh-31 anti-ship cruise missiles. The closer relationship with Russia on defence matters has resulted in newer aircraft being offered to replace some of China's oldest operational aircraft, including transports and tankers, as well as fighters. The J-10 was designed to provide an agile air defence platform, able to counter the latest Western combat jets, but it too is also being developed into a multi-role combat platform, with the latest B variant having a more advanced defensive aids suite. China is known to be working on a fifth-generation "stealthy" fighter, but it remains to be seen if this will reach production status.

New Zealand remains committed to maritime patrol, with a fleet of P-3K Orions, and air mobility for its Army, though a transport fleet centred on the C-130H Hercules and Boeing 757. When the time comes to replace

its C-130Hs, the new J model, widely used by Australian and US forces in the region, must be a likely contender. The RNZAF is currently introducing the NH-90 as its new tactical utility helicopter.

The Australian Defence Forces are undertaking a very substantial modernisation programme. While there remains some doubt over just how affordable this will be, the tri-service upgrades will certainly restore many capabilities that will strengthen the nation's defence posture in the region, and will extend the expeditionary mission across a wider area,

**The J-10 was designed to provide an agile air defence platform, able to counter the latest Western combat jets**

when two 27,000 helicopter carriers are completed. The two LHD amphibious warfare ships will introduce large decks, docking facilities and a formidable capability for acting as a command and control centre. This may prove to be an invaluable new regional asset where emergency relief operations are required.

The Royal Australian Air Force (RAAF)

has recently committed to the Lockheed Martin F-35 Joint Strike Fighter programme, with an initial order for fourteen aircraft, for delivery in 2014. Up to 100 aircraft may be needed, but in the meantime the RAAF has ordered 24 of the latest Boeing F/A-18E/F Super Hornets to replace the long-serving GD F-111K strategic strike and reconnaissance aircraft. The last 12 Super Hornets will be wired to accept additional electronic systems and power supplies so that, if required, they could be delivered as Growler electronic warfare variants. In any event this will remain an option for future retrofitting, perhaps when the F-35 takes over as the main combat air platform. The Super Hornets will fly alongside earlier F/A-18 A/Bs and will retain an operational edge in the Southern Hemisphere, especially combined with the new fleets of Boeing Wedgetail AEW&C aircraft and the Airbus A330 air-to-air tanker-transport. Four Boeing C-17 transports have given Australia a boost in strategic air-lift, supplementing the C-130J transports used for long distance as well as tactical transport. Replacing the retired DHC Caribou transports has proved to be difficult, and a mix of Hercules and Beech King Airs are filling the gap. The Alenia C-27 is probably the favoured replacement, but may be too expensive for the time being. AMR

*The KAI T-50 Golden Eagle is currently providing South Korea with a new generation supersonic advanced trainer, and the light combat fighter variant could become an affordable replacement for Asia Pacific operators using elderly F-5s, Mig-21s and A-4 Skyhawks © KAI*

