Taking To The Skies

A resurgence in spending on manned and unmanned air power across Asia-Pacific is largely being driven by regional and territorial disputes, and the desire to keep up with near neighbours in a regional arms race.

By Peter Antill

The financial crisis of 2008, which sparked a sharp economic recession, forced many states in Europe and North America to cut defence spending in order to deal with budgetary deficits and sovereign debt problems.[1] The picture in Asia, however, has been very different, with defence spending rising since 2000, bar a slight downturn in 2012.[2] While a significant proportion of defence spending goes on naval procurement[3], given the strategic geography of the region, air forces and their associated equipment are seen as an important part of a state's armed forces. But what is driving the current trends in air power procurement across the Asia-Pacific region?

• Economic Imperatives – As the economies in the region expand and trade increases, the importance of maritime trade routes (to the region's continued growth) has increased as well.
• Geostrategic Imperatives – Uncertainty exists as to where exactly the regional distribution of power will be in the coming years. This suspicion, allied to other security concerns, has caused a gradual increase in tension. To make things worse, two additional factors have come into play. The first is the expanding power and ambition of China, an example of which was the declaration in late November 2013 of an air defence identification zone over the disputed Senkaku Islands in the East China Sea.[4] Such incidents still occur today, with China sending four vessels, one of which was an armed coastguard ship and former naval frigate, into Japanese territorial waters around the disputed islands in December 2015.[5] The second is the renewed interest of the United States, which since 2011, has refocused its strategic gaze on the region, partly as a result of Chinese moves.[6]
• Territorial and Border Disputes – The region is rife with territorial and border disputes, many of which go back decades. Examples include the already mentioned Senkaku Islands, but also the Spratly and Paracel Islands, the Kuril Islands, the Arunachal Pradesh/Tibet border, Aksai Chin, between China and



Saab JAS-39C Gripen, Thailand bought 12 Saab JAS 39 Gripen aircraft, as part of an integrated air defence system
(Photo by Oleg V. Belyakov - AirTeamImages)



Despite an offer from Eurofighter Typhoon, Malaysia's Multi-Role Combat Aircraft programme, designed to replace Malaysia's MiG-29 fighters, has shown little progress. *(MoD Crown Copyright SAC Steve Buckley)*

India, the Takeshima Islands, Kashmir, North Borneo, the Korean Peninsula and Scarborough Shoal.[7]

• Protection of Offshore Territory or Installations – The geography of much of the region means that many states have territory, claim territory and/or have offshore installations (such as oil and natural gas) that are geographically separate from the mainland or the main islands. The distances involved mean that the protection of this territory or these facilities is predominantly the task of naval and air forces.

• Regional Arms Race – The increase in tension has led to evidence of "action-reaction dynamics taking hold and influencing regional states' military programmes."[8] This has led to increasing materiel proliferation and "an arms race has emerged in a number of fields as Asia-Pacific states seek to achieve parity with near neighbours."[9]

• Criminal and Terrorist Activity – With around 90% of the world's trade transported by sea, there is continued concern over the threat posed by piracy and its link to the so-called 'ungoverned maritime space'.[10] The region has seen an increase in piracy, especially around the Straits of Malacca and the Indian Ocean, as criminal organisations have shifted operations away from the Gulf of Aden and the Red Sea.

• Humanitarian Aid/Disaster Relief – Both air and maritime forces are "uniquely equipped to provide international aid and rapid response to natural and man-made disasters".[11]

• North Korea – Has a proven ballistic missile capability and a continuing nuclear programme. The range of its missiles is enough to threaten major population centres on all four of the main Japanese islands.[12]

With the rebalancing of US strategic priorities towards the Pacific and the likelihood of increasing US combat power being based in the region, one important factor for states to consider is their interoperability with not only US forces, but other regional forces too. This latter point is important in light of the build-up of Chinese combat power, something that no regional actor can hope to counter individually.

Linked to the above concept is the idea of network-centric warfare, which involves the use of information technology, high-speed data links and networking software to link widely separate personnel, assets and combat units into integrated local- and wide-area networks. This will enable all those who are linked to the network



South Korea, Australia and Japan are all looking to acquire the F-35A *(Photo by AereiMilitari.org)*

to share critical information on a continuous basis in real time and lead to improvements in both combat capability and efficiency.

Any military force, as part of its overall capability needs to have an effective, sustainable and resilient logistic support system in place so it can carry out its operational tasks. This includes a supply chain anchored in the home base. An alternative to this would be to establish foreign basing rights. Assuming that there is the appropriate infrastructure in place, air power can largely transport itself to where it is needed. It can also provide additional air support to ground and naval force operations, as well as a strategic, operational and tactical transport capability.



The Sukhoi Su-35, otherwise known as the Flanker-E *(Photo by Alex Beltyukov)*

BUILD OR BUY

The increases in defence spending, especially over the last five years, are reflective of many Asian states increased outlay on defence equipment, as they look to not only buy new systems, but upgrade and keep older systems in service, invest in new technology and refocus on external rather than internal threats. Currently, Asia contains some of the world's most active armament markets. Present acquisition priorities for air power include upgrades, expeditionary capabilities and air mobility.[13]

With many fleets starting to age, fast-jet acquisitions and upgrades are widespread. Almost half the states in the region acquired such assets in 2015. The largest spenders, such as India and China, have looked to invest in their existing inventories, as well as developing their domestic aerospace industries, with a varying degree of success. Other large spenders, such as South Korea, Australia and Japan, have looked to adopt next-generation technology. All three are looking to acquire F-35A aircraft, and both South Korea and Japan are pursuing indigenous combat aircraft development.[14]

Programmes include:

• **Australia** – The Royal Australian Air Force has benefitted from the introduction of KC-30 in-flight refuelling tankers, F/A-18F fighters, EA-18G Growler electronic attack aircraft, as well as C-17 and C-27J transport aircraft. The Australians have stated they will buy a total of 72 F-35A aircraft and selected a consortium led by Lockheed Martin to provide basic flying training using PC-21 aircraft from 2019 onwards.[15]

• **China** – Both Chengdu and Shenyang



A Pakistan Air Force JF-17 *(Photo by Eric Salard)*



AH-64 Apache attack helicopter *(Copyright Boeing)*

produced additional prototypes of their latest designs (the J-20 and J-31/FC-31 respectively). Chengdu continued to test its J-11D prototype (a development of the Sukhoi Su-27 Flanker) while preparing an upgraded version of the J-10 combat aircraft (the J-10B) to enter service.

Work also continues to address China's comparative weakness in the local design and manufacture of military turbofan engines. Manufacture of the Xian H-6K (a version of the TU-16 Badger) continued at a modest rate, while the People's Liberation Army Air Force (PLAAF) deployed the KJ-500 airborne early warning (AEW) aircraft (a variant of the IL-76) and continued development of the Y-20 transport aircraft.

As well as pursuing more capable combat aircraft, the PLAAF is looking to develop more advanced air-to-air missiles (AAM) and air-to-ground missile systems. Among these are the PL-10 infrared short-range AAM and PL-15 active radar-guided AAM.[16]

• **India** – India is following several different approaches at once, spurred on by the government's 'Make in India' initiative. This includes the upgrading of its Mirage 2000 and Su-30MKI fleets, and despite delays, continuing the development of a fifth-generation fighter with Russia. There was also an agreement between Reliance Defence and Ukraine's Antonov to develop a transport aircraft.

Although it's agreement to buy 126 Rafale aircraft from France to fulfil its Medium Multi-role Combat Aircraft requirement seems to have stalled (due to disagreements over the total cost and offset arrangements), there was an indication in April 2015 that New Delhi wanted to buy 36 Rafale aircraft as a military off-the-shelf purchase. This followed the signing of an inter-governmental agreement by the Indian Prime Minister Narendra Modi and the French President François Hollande and appeared to be an attempt to kick-start the process. However, this too seems to have run into trouble.[17]

• **Indonesia** – Boeing was awarded a $295.8 million contract in January 2015 to supply eight AH-64E Apache attack helicopters, while the Indonesian Armed Forces are looking to acquire (from late 2016 onwards) four CH-47 Chinook helicopters to satisfy a need for a heavy-lift rotary-wing capability. To fulfil a requirement for a replacement to the ageing F-5E Tiger II fleet, the Indonesian MoD chose the Sukhoi Su-35 Flanker-E, ahead of the Eurofighter Typhoon, Saab JAS-39 Gripen, Lockheed Martin F-16 and Dassault Rafale.[18]

• **Japan** is looking to reorganise its airborne early warning and control force, increase the number of aerial refuelling squadrons to two, increase the number of fighter squadrons to 13 and expand the number of fighter aircraft to 280. It is also in the process of upgrading its F-15J fleet and looking to do the same with the F-2 fleet. The acquisition of (up to) 42 F-35 aircraft will allow the Japan Self-Defence Forces to finally retire their F-4J Kai Phantoms, while continuing work on the ATD-X fighter prototype.[19]

• **Malaysia** – The depreciation of the ringgit and the political turbulence that has affected the Malaysian government has made the fate of many current acquisition programmes hard to predict. However, Malaysia has signed a contract with the UK for the Starstreak short-range air defence system and has had the first of four A400-M transport aircraft delivered.The Multi-Role Combat Aircraft programme, designed to replace Malaysia's MiG-29 fighters, has shown little progress recently, despite a number of offers from potential suppliers including Eurofighter, Dassault, Saab, Boeing and possibly Sukhoi.[20]

• **Pakistan** – As relations with the United States continue to improve, the US State Department approved a $952 million arms package that includes AH-1Z attack helicopters and ScanEagle unmanned aerial vehicles (UAVs), while also offering additional F-16 fighters to Pakistan. Indigenously, Pakistan claimed

success with additional testing of the Raad air-launched cruise missile and the first operational use of the Burraq armed UAV against terrorist targets. It also made progress towards rolling out the JF-17 combat aircraft (a joint Sino-Pakistan design) and continued to market it overseas (with the possibility of sales to Sri Lanka, Myanmar and Malaysia), especially as there are plans to retire up to 190 fighters by 2020.[21]

• **Philippines** – Increased investment in additional capability has been handicapped by bureaucracy and the legacy of years of corruption. The United States remains a key provider of equipment and in January agreed to sell Manila two C-130T Hercules transport aircraft that were surplus to US Air Force needs. Future requirements include additional transport aircraft, long-range patrol aircraft, anti-submarine warfare helicopters and combat air support aircraft.[22]

• **Singapore** is looking to offset the expected fall in the number of conscripts available to its armed forces (by up to 30%) over the next few years by investing in unmanned capabilities. It has achieved full operational capability for the Hermes 450 UAV. It is also looking to upgrade its F-16 fleet and has some interest in the F-35. It has also chosen Airbus and Leonardo-Finmeccanica as finalists in its competition to replace its ageing Aerospatiale AS332M Super Puma helicopters.[23]

• **South Korea** continues success in the export sphere with an order for the T-50 Golden Eagle trainer from Thailand and is acquiring 60 FA-50 Fighting Eagles (a combat variant of the T-50) to replace its ageing F-5E Tiger II fighters. It is also developing (along with Indonesia) the KFX next-generation fighter, which suffered a minor setback with the US confirming in late 2015 that it would not transfer key technologies to Seoul.[24]

• **Taiwan** – Of 388 combat jets, around 247 (about 64%) are currently operational and reflect the practice of trying to avoid excessive wear and tear on the aircraft. The country operates a mix of F16A/B (144), Mirage 2000D/E (56), F-CK-1A/B (126) and F-5E/F (30) aircraft, with many of the F-5 and some of the F-CK-1 aircraft being used as trainers. In September 2011, the US government approved a $5.8 billion upgrade package for Taiwan's F-16 fleet, which is due to begin in 2016, while a Taiwanese request to buy F-16C/D aircraft has stalled. It is likely that the country will phase out the Mirage 2000s in the near future due to high running costs. The F-CK-1 fleet is currently undergoing a mid-life update with new radar software, avionics and electronic warfare upgrades.[25]



Indian Air Force SU-30 MKI Lajes *(Photo by 1st Lt. George Tobias)*

• **Thailand** is looking to upgrade its F-5E/F combat aircraft, continue upgrading some of its F-16 fleet to Block 50 standards, and after buying 12 Saab JAS 39 Gripen aircraft, as part of an integrated air defence system, it is hoping to expand that number to 18.[26]

• **Vietnam** has been pushing to improve relations with the West and has signed defence trade agreements with the US, UK, France, as well as Israel and India, so as to not only gain cost-effective acquisitions, but to also support industrial development through technology transfers. It has ordered Airbus C295 and C212-400 transport aircraft and EC225 maritime patrol helicopters. Its primary supplier, however, remains Russia, who is in a good position to provide upgrades to Vietnam's combat aircraft fleet in the next few years.[27]

Air power systems procurement in the Asia-Pacific region has seen steadily increasing levels of expenditure as the region's economies grow. The current and future size of these budgets and how they will be spent, hinge on a number of complex, yet interdependent variables. These include geographic concerns, evolving foreign and defence policies, strategic considerations, international relations, territorial/border disputes, as well as local, regional and global security concerns tied up with such activities as insurgencies, terrorism, piracy, as well as the trafficking of people and drugs. What complicates an already complex picture will be the interaction of the region's three major players, China, India and the US. ■

ABOUT THE AUTHOR

Peter Antill rejoined Cranfield University in June 2009 to undertake research in order to create a defence acquisition body of knowledge as well as several projects aimed at producing a continuous stream of publications over the longer term. This has included various books, journal articles, case studies, conference papers, monographs and chapters in edited publications as well as updating teaching material used by the Centre for Defence Acquisition. Peter graduated from Staffordshire University in 1993 with a BA (Hons) International Relations and followed that with an MSc Strategic Studies from Aberystwyth in 1995 and a PGCE (Post-Compulsory Education) from Oxford Brookes in 2005.

FOOTNOTES

1. International Institute for Strategic Studies. (2016) The Military Balance 2016, Routledge: London, 9 February 2016, located at http://dx.doi.org/10.1080/04597222.2016.1127564, p. 63, as of 10 May 2016.
2. Hofbauer, J., Hermann, P. and Raghavan, S. (2012) Asian Defense Spending 2000-2011, October 2012, Center for Strategic & International Studies, currently located at http://csis.org/files/publication/121005_Berteau_AsianDefenseSpending_Web.pdf, as of 10 May 2016; Op Cit. IISS, 2016, p. 215.
3. See Antill, P. and Young, S. (2013) 'Powering Up Naval Procurement' in Defence Procurement International, Winter 2013-14, pp. 28-35.
4. Branigan, T. (2013) 'Airlines 'Must Warn China' of Flight Plans Over Disputed Islands' in The Guardian, posted 25 November 2013, at http://www.theguardian.com/world/2013/nov/25/china-air-defence-zone-japan-islands-diaoyu-senkaku, as of 20 March 2014.
5. Harding, R. & Clover, C. (2016) 'China steps up incursions around disputed Senkaku Islands' in The Financial Times, posted 21 January 2016 at http://www.ft.com/cms/s/0/adf159d0-c007-11e5-846f-79b0e3d20eaf.html#axzz46T3lijRX, as of 21 April 2016.
6. Sutter, R. et al. (2013) Balancing Acts: The U.S. Rebalance and Asia-Pacific Stability, August 2013, at http://www.gwu.edu/~sigur/assets/docs/BalancingActs_Compiled1.pdf, as of 10 May 2016.
7. Moss, T. (2013) 'History's Long Wars: A Long View of Asia's Territorial Disputes' at thediplomat.com, dated 15 September 2013, located at http://thediplomat.com/2013/09/history-wars-a-long-view-of-asias-territorial-disputes/, as of 10 May 2016; BBC. (2015) 'Q&A: South China Sea Dispute' in BBC News, dated 27 October 2015, located at http://www.bbc.co.uk/news/world-asia-pacific-13748349, as of 21 April 2016; O'Rourke, R. (2016) Maritime Territorial and Exclusive Economic Zone (EEZ) Disputes Involving China – Issues for Congress, Congressional Research Service, 1 April 2016, located at https://www.fas.org/sgp/crs/row/R42784.pdf, as of 21 April 2016.
8. International Institute for Strategic Studies. (2013) The Military Balance 2013, Routledge: London, 14 March 2013, located at DOI: 10.1080/04597222.2013.757002, as of 19 April 2016, p. 245.
9. Anderson, G. (2012) 'Briefing: Asia-Pacific Emerging Markets – Growing and Evolving' in Jane's Defence Weekly, posted 3 July 2012 at www.janes.ihs.com, as of 26 April 2016.
10. Le Mière, C. (2013) 'All at Sea – Illicit Activity Thrives in Ungoverned Maritime Areas' in Jane's Intelligence Review, posted 9 October 2013, at www.janes.ihs.com, as of 10 May 2016.
11. Bellamy, C. (2013) 'Naval Power: Strategic Relevance in the 21st Century' in Jane's Navy International, posted 2 December 2013, at www.janes.ihs.com, as of 10 May 2016.
12. Grevatt, J. et al. (2014) IHS Jane's Navigating the Emerging Markets: Japan, January 2014, at www.janes.ihs.com as of 26 April 2016.
13. Op Cit. IISS, 2016, pp. 215-216.
14. Op Cit. IISS, 2016, pp. 216-217.
15. Ibid. pp. 217-218.
16. Ibid. pp. 223-224.
17. Ibid. pp. 227-228; Hardy, J. (2015) 'Annual Defence Report 2015: Asia Pacific' in Jane's Defence Weekly, posted 4 December 2015, at www.janes.ihs.com, as of 27 April 2016; Bedi, R. (2016) 'Indian Parliamentary Panel 'Distressed' over Delay in Rafale Deal' in Jane's Defence Weekly, posted 5 May 2016, at www.janes.ihs.com, as of 10 May 2016; Grevatt, J. (2016) 'India's Reliance and Antonov Agree to Co-Produce transport Aircraft' in Jane's Defence Industry, posted 1 April 2016 at www.janes.ihs.com, as of 12 May 2016.
18. Op Cit. Hardy, 2015, p. 4.
19. Hardy, J. (2013) 'Major Procurements at the Heart of Japanese Defence Policy' in Jane's Defence Industry, posted 17 December 2013 at www.janes.ihs.com, as of 27 April 2016; Hardy, J. (2014) 'Briefing: Japan's New Dawn' in Jane's Defence Weekly, posted 5 November 2014 at www.janes.ihs.com, as of 27 April 2016.
20. Op Cit. Hardy, 2015, p. 5; Perrett, B. (2015) 'Malaysia Expected to order Fighters in 2016-20' in Aviation Week, posted 13 May 2015 at http://aviationweek.com/awin-only/malaysia-expected-order-fighters-2016-20, as of 12 May 2016.
21. Op Cit. Hardy, 2015, p. 3; Bokhari, F. (2016) 'PAF's Plans to Retire 190 Fighters by 2020 Prompt Talk of Replacements' in Jane's Defence Weekly, posted 17 March 2016 at www.janes.ihs.com, as of 12 May 2016; Fisher Jr., R. (2016) 'DSA 2016: Pakistan Bullish on JF-17 Sales' in Jane's Defence Weekly, posted 20 April 2016 at www.ihm.janes.com , as of 12 May 2016.
22. Op Cit. Hardy, 2015, p. 5.
23. Jennings, G. (2016) 'Singapore Downselects Helicopter Contenders' in Jane's Defence Weekly, posted 5 May 2016 at www.janes.ihs.com, as of 12 May 2016; Op Cit. Hardy, 2015, p. 6.
24. Pryce, P. (2014) 'Mind the Gap: Airpower in the Asia-Pacific Region' webpage, posted 15 October 2014 at http://www.isn.ethz.ch/Digital-Library/Articles/Detail/?id=184372, as of 16 May 2016; Op Cit. Hardy, 2015, pp. 10-11.
25. Thim, M. (2015) 'Taiwan's Fighter Jet Fleet: Inventory and Procurement Options (2015 Update)', posted 13 September 2015 at https://taiwan-in-perspective.com/2015/09/13/taiwans-fighter-jet-fleet-inventory-and-procurement-options-2015-update/, as of 16 May 2016.
26. Pike, J. (2016) 'Royal Thai Air Force – Modernization' webpage, on Globalsecurity.org, last updated 11 February 2016, located at http://www.globalsecurity.org/military/world/thailand/rtaf-modernization.htm, as of 16 May 2016; Keck, Z. (2013) 'Thailand's Air Force: A Leading Power in ASEAN' webpage, The Diplomat, posted 13 September 2013 at http://thediplomat.com/2013/09/thailands-air-force-a-leading-power-in-asean/, as of 16 May 2016; Anon. (2014) 'RTAF F-16 MLU Roll Out Ceremony' webpage, on Defense Studies, posted 31 January 2014 at http://defense-studies.blogspot.co.uk/2014/01/rtaf-f-16-mlu-roll-out-ceremony.html, as of 16 May 2016.
27. Op Cit. Hardy, 2015, p. 6.



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