

Briefing: Japan's new dawn

Tokyo is shrugging off the post-1945 constraints on its military and developing new operational concepts and capabilities in response to China's rise. James Hardy reports

James Hardy

London



JGSDF personnel provide security for a landing team during amphibious insertion training with the US Marine Corps at Exercise 'Iron Fist 2014', held in California in January. (USMC)

1567597

Japan is quietly revolutionising its approach to national security.

The alliance with the United States, which provides nuclear deterrence and conventional offensive strike, remains at the heart of Japanese security policy. However, in place of pacifism - the key feature of Japan's security and economic policy since the end of the Second World War - Tokyo is building a new system to make and implement security policy and a new doctrine governing how its forces are equipped and how they can operate and react in a crisis.

The man leading this revolution is Prime Minister Shinzo Abe, who, since returning to power in 2012 after a five-year hiatus, has made a number of changes reflecting his belief that Tokyo needs to 'normalise' its security policy.

Critics, both in and outside Japan, argue forcefully that Abe is 'remilitarising' Japan for ideological reasons. Abe and his defenders say

these changes are happening within the context of a wider power struggle in Northeast Asia that pits an authoritarian China against a US-led bloc of Western-style democracies.

For Christopher Hughes, professor of International Politics and Japanese Studies at Warwick University, Abe may be "out on the extreme, [but] he is not that detached from broader Japanese opinion" as far as China is concerned. Hughes said Japanese policymakers changed their perception of China in 2010 when the Japan Coast Guard (JCG) arrested a Chinese trawler captain off the disputed Senkaku/Diaoyu islands in the East China Sea after his vessel had rammed JCG ships.

The diplomatic crisis ended when Tokyo released the captain and his crew without charge, but not before Beijing had stopped the export of rare earth metals to Japan and allowed anti-Japanese protests across the country.

"The whole trawler incident sent a psychological message to Japanese policymakers that the Chinese really are serious, that they aren't playing with these issues of territory and they really do want these islands," Hughes told *IHS Jane's*. "I think that penetrated quite deeply into elite policymaking on most parts of the political spectrum."

The opinion polls show that the Japanese public have become very disaffected with China, Hughes added. "They don't want to provoke conflict with China, but I think they have bought the idea that China is a revisionist country and is against the status quo and doesn't respect the rule of law," he said, "so Japan does have to take some steps to guard against it."

The next crisis occurred in September 2012 when then prime minister Yoshihiko Noda (of the now opposition Democrat Party of Japan, or DPJ) authorised the purchase of three of the Senkaku islets from their owner: a private Japanese citizen.



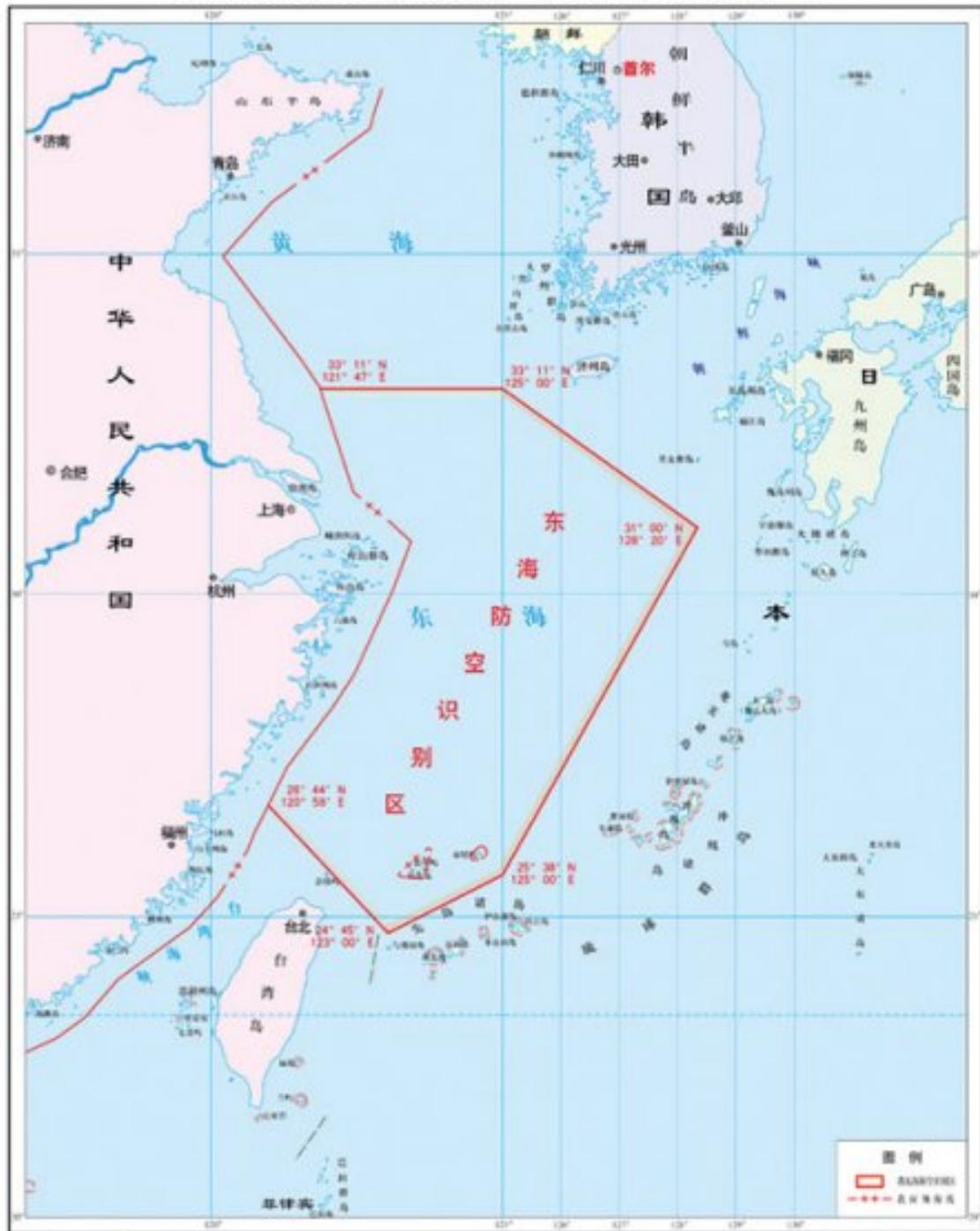
A Japanese fishing boat, bottom, a small Japanese pleasure boat, top centre, and Japan Coast Guard vessels, third and fourth from bottom and top left, sail along with a Chinese marine surveillance ship near the disputed Senkaku/Diaoyu islands in the East China Sea on 23 April 2013. (PA Photos/Kyodo/AP)

1487966

Beijing immediately accused Japan of "changing the status quo" and ignoring a gentlemen's agreement reached during diplomatic normalisation talks in the 1970s to shelve the issue of the islands' sovereignty. China followed the nationalisation of the islets with a campaign of aggressive patrols by maritime paramilitary forces that continues - with some variation in their intensity - to this day.

For Japan, as Hughes noted, Beijing's handling of the dispute has become an example of likely future behaviour in its near seas. For the Abe administration in particular, the dispute has become a key piece of evidence in its campaign to show that Beijing is attempting to change the international order by coercion: a perception reinforced by China's declaration in November 2013 of an air defence identification zone (ADIZ) that covered the Senkaku islands.

东海防空识别区划设示意图



China announced the establishment of an air defence identification zone in November 2013 that includes the Senkaku/Diaoyu islands. (Chinese Ministry of National Defense)

1525726

Dr Alessio Patalano, a Lecturer in War Studies at the Department of War Studies, King's College London, agrees that Chinese behaviour at sea is at the core of Tokyo's new security policy.

"The East China Sea is taking a larger share of the attention in terms of defence of Japan's territory," Patalano told *IHS Jane's*, not least because "the emergence of a more robust Chinese maritime presence does present an important challenge to Japan, in so far as China's intended trajectory at sea might threaten sea lanes crucial to the Japanese economy".

If the Senkakus - and the wider East China Sea - are a flashpoint, then a greater issue is one of strategic competition between an existing and an emerging power in Northeast Asia. In particular, the development of the People's Liberation Army Navy (PLAN) into a 'blue water' force and China's emergence and self-identification as a maritime state have challenged Japan's naval pre-eminence and forced it to reassess its military posture and capabilities.

The two countries' rivalry has also expressed itself in a global public relations battle. China repeatedly refers to Japan's wartime atrocities and Abe's visits to the Yasukuni Shrine, which commemorates Japan's war dead and is controversial for neighbouring states, as well as his revisionist statements on history. Japan responds by comparing its 60-year record as a liberal democracy and responsible global actor with China's attempts "to change the status quo by force or coercion".

Abe has also used Beijing's defence spending increases to deflect attention from his own budget rises. "We have an immediate neighbour whose military expenditure is at least twice as large as Japan's and second only to the US defence budget," Abe said in a speech at the Hudson Institute in New York in September 2013. "The country has increased its military expenditures, hardly transparent, by more than 10% annually since 1989. And, then, my government has increased its defence budget by only 0.8%."

Evolution or revolution in military affairs?

Hughes argues that Abe's defence and security policy is very much part of the "continued, incremental build-up of Japanese capabilities and the systematic dismantlement of many of the post-war constraints on the use of those capabilities" since the end of the Cold War.

However, "what we have seen under Mr Abe is an acceleration of that process", said Hughes. "For me, the most significant change - which is a topping off of this fundamental process - is the change to collective self-defence."

Successive Japanese governments interpreted the Constitution's Article 9 as denying them the right to collective self defence: that is, to use force to aid an ally that is under attack. In briefing documents the Ministry of Foreign Affairs has said collective self-defence "exceeds the limit of use of armed strength as permitted under Article 9 of the Constitution", under which "the Japanese people forever renounce war as a sovereign right of the nation and the threat or use of force as means of settling international disputes".

Under the Yoshida Doctrine (named for post-war Prime Minister Shigeru Yoshida), Japan outsourced national security to the US and instead concentrated its resources on economic rejuvenation - which allowed it to become the world's second-largest economy and a developmental example for other Asian countries, including China.

Nonetheless, squaring the noble aspirations of Article 9 with the reality of Japan's strategic environment has long been an issue for Japanese politicians of all persuasions. As well as renouncing war, Article 9 states that "land, sea, and air forces, as well as other war potential, will never be maintained". The existence of Japan's 245,000-strong Self-Defense Forces (JSDF) is thus seen by most Japanese jurists as unconstitutional.

While Abe's reinterpretation of collective self-defence still requires parliamentary approval, expected later in 2014, "Japan has basically

breached its ban on collective self-defence and that opens the way for Japan to do all kinds of things in support of the United States that it hasn't done before", said Hughes. "It's a really significant, precedent-making event."

Despite this, the revision of collective self-defence outlined by Abe in July falls short of his pre-2012 election pledges to remove Article 9 completely. Cabinet, Ministry of Foreign Affairs, and JSDF officials have suggested to *IHS Jane's* that this shows pragmatism on Abe's part: an assertion that in turn suggests his awareness of deep public support for the Constitution and its peace provisions.

National Security Council

The most notable organisational change of Abe's second tenure has been the formation in December 2013 of the National Security Council (NSC). Headed by a national security advisor (NSA) and supported by its own secretariat, one of its key roles is to host meetings of the prime minister, minister of foreign affairs, minister of defence, and chief cabinet secretary. This is a departure from previous systems and one that seeks to centralise and fast-stream national security policy and implementation within the Japanese political system's executive branch.

The NSC made its first major defence-related decision in late December 2013 when it agreed to provide South Korean troops on peacekeeping duties in South Sudan with 10,000 5.56 mm rounds of ammunition after fighting in the town of Bor, about 200 km north of the capital Juba. JSDF troops on a UN peacekeeping mission in Juba were the closest force equipped with the same calibre rifles.

Abe also created Japan's first National Security Strategy (NSS), which went some way to explaining his administration's views of the "shift in the balance of power" in the Asia-Pacific region. This shift was creating "grey-zone" situations that were "neither pure peacetime nor contingencies over territorial sovereignty and interests", the NSS stated. It added: "There is a risk that these grey-zone situations could further develop into grave situations."

Rather than centralise policy, as the NSC does, at the practical level, the NSS seeks to standardise or join up security policy across all government agencies and departments. As a strategy outline published in 2013 stated, it is "a whole-government approach ... based on the recognition that in order to overcome the challenges and achieve its objectives, Japan needs to effectively utilise its diverse resources and promote comprehensive measures, strengthen the domestic foundation for national security and seek deeper understanding, both at home and abroad, and advance efforts at various levels in a multifaceted and co-ordinated manner".

An early and controversial example of how this might work in practice is what the NSS calls the "strategic utilisation of overseas development aid [ODA]" and the overturning of a de facto ban on military ODA to foreign countries. If agreed, the policy change could allow Japan to provide military equipment to countries such as the Philippines or Vietnam, both of which have shown interest in receiving coastguard vessels from Tokyo and would also be in the market for other maritime platforms and systems. It is perhaps no coincidence that both countries are also engaged in territorial disputes with China.

Export ban lifted

Tied to these developments are new guidelines that formally abolish Japan's self-imposed ban on weapon exports. Tokyo imposed the 'three principles' restricting weapons exports in 1967, prohibiting arms deals with communist bloc countries, states subject to UN sanctions, and countries involved in international conflicts.

The new guidelines remove the ban on dealing with communist countries on the grounds that it was imposed during the Cold War era and is now irrelevant. The guidelines also lift the ban on arms exports to governments involved in international conflicts. (As a treaty ally, the United States has been exempted from this 21 times since 1983, when the government of then prime minister Yasuhiro Nakasone first allowed the transfer of military technology.)

In March 2014 the government exempted exports of Japanese components of the Lockheed Martin F-35 Joint Strike Fighter, despite its potential sale to countries that could fall foul of the international conflict embargo. "The world is moving towards the joint development of defence equipment and Japan could face security issues if it does not participate," then defence minister Itsunori Onodera said in

justification of the move.

The revision of Japan's three principles was under way before Abe took power in December 2012. Nevertheless, he has expedited its adoption and is actively supporting the first possible sale under the new regulations: the purchase by the Indian Navy of ShinMaywa US-2i amphibious search-and-rescue aircraft, negotiations for which are ongoing. The change in export policy will also enable Japan's indigenous defence industry to build on agreements that Tokyo has signed with Australia, France, and the United Kingdom to jointly develop military equipment.



Japan and India have agreed to discuss a deal for the ShinMaywa US-2 amphibian, seen here in Japanese service. (Japan Maritime Self-Defense Force)

1440968

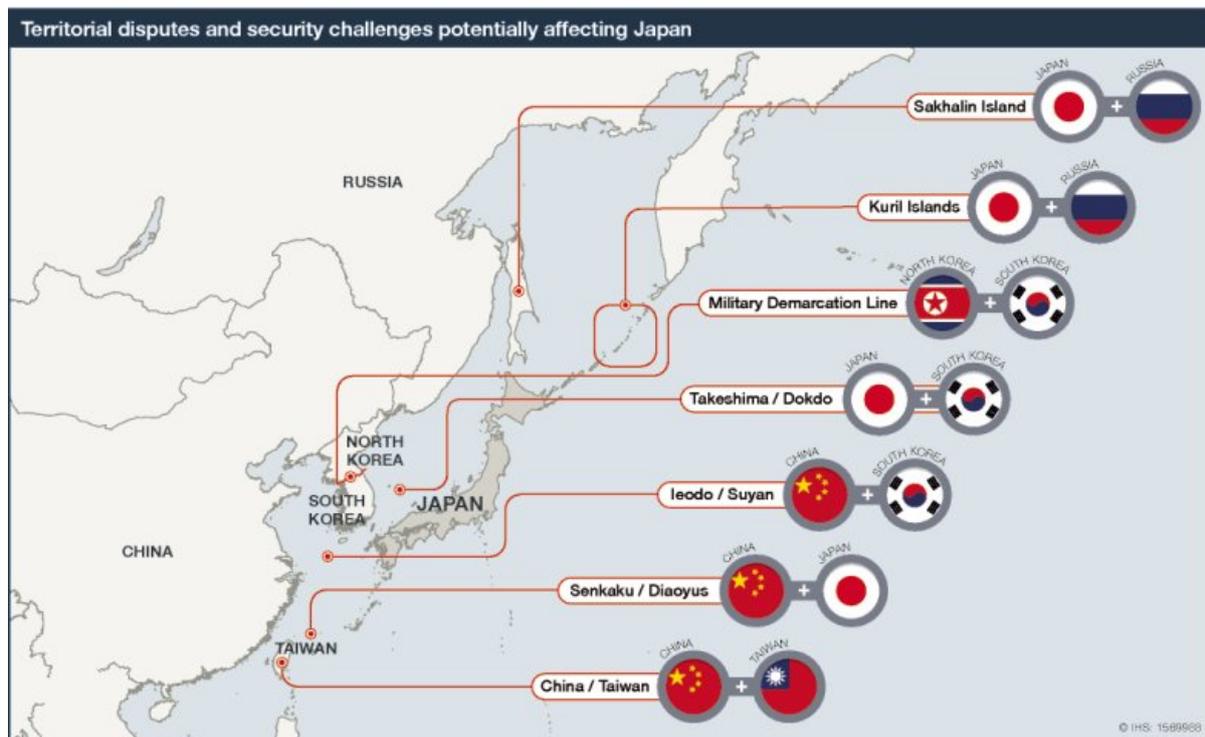
Examples of this emerged in July, when the NSC approved the export to Qatar of a gyro sensor built by Mitsubishi Heavy Industries (MHI) and used in the Raytheon Patriot Advanced Capability-2 (PAC-2) air-defence system. Also in July, defence officials in Tokyo confirmed that Mitsubishi Electric and European missile house MBDA would conduct a joint project to research whether the former's missile seeker technology could enhance the accuracy of MBDA's Meteor beyond-visual-range air-to-air missile (BVRAAM) for use on the F-35.

Perhaps the most notable foreign military sale could be the purchase by Australia of Soryu-class submarines to fulfil Project Sea 1000.

Sources close to the project say discussions to date involve the construction in Japan of 10 of the 4,000-tonne Soryu class at a cost of about AUD25 billion (USD22 billion). When Abe and Australian Prime Minister Tony Abbott met in July to discuss bilateral security and defence co-operation, talks rapidly moved from drive-train technology to the possibility of a full build in Japan.

Operational changes

Even if China's territorial ambitions are the number one strategic issue for Japan, it cannot ignore a host of other potential security problems on its doorstep.



Territorial disputes and strategic challenges that could involve Japan. (IHS)

1569988

Tokyo has unresolved - if currently stable - territorial disputes with Russia and South Korea, while it could also be dragged into conflict over two of the Cold War's greatest geopolitical hangovers: the question of Taiwan's status and the division of the Korean peninsula.

The Korean question is, of course, complicated by Pyongyang's development of nuclear weapons: something that dominated Tokyo's defence outlook through the first decade of this century.

Sugio Takahashi, a senior fellow at the Japanese Ministry of Defense's (MoD's) National Institute for Defense Studies (NIDS), argues that the decision in 2004 to focus on ballistic missile defence (BMD) at the expense of Japan's anti-submarine warfare (ASW) and air-superiority capabilities was short-sighted.

"Considering that maritime and air superiority are indispensable for island defence and that the military balance has subsequently changed with China's rapid strengthening of its maritime and air capabilities, this decision in the 2004 National Defense Program Guidelines (NDPG) to reduce ASW and air superiority capabilities has come to have great significance," he wrote in NIDS' 2014 East Asian Strategic Review.

By contrast, the 2013 Mid-Term Defense Program (MTDP) - the MoD's five-year plan for defence operations and procurements - places "the greatest emphasis on ensuring clear maritime and air superiority", wrote Takahashi. "The average shares of each service in the main equipment procurement costs in the MTDPs from 1991 to 2011 were 39% for the Japan Maritime Self-Defense Force [JMSDF], 35% for the Japan Ground Self-Defense Force [JGSDF], and 26% for the Japan Air Self-Defense Force [JASDF]. In the 2013 MTDP, however, the shares are 40% for the JMSDF, 34% for the JASDF, and 26% for the JGSDF, showing that the shares of the JASDF and JGSDF have been reversed," he concludes.

Based on scramble rates for JASDF aircraft, this came not a moment too soon. Tokyo launched a record 533 interceptions of Russian and Chinese aircraft operating over adjacent waters in the six months to 30 September this year, compared with 308 in the first half of fiscal year (FY) 2013 (April-September 2013). Interceptions in FY 2013 totalled 810: up from 567 in FY 2012 and 425 in FY 2011.

From northeast to southwest

The shift back to maritime and air superiority has been accompanied by the dismantling of Japan's Cold War posture, under which heavy armour and artillery was deployed to its northeastern areas to prevent a Soviet invasion through Hokkaido, and the reinforcing of its defences in the southwestern Nansei island chain, most of which are in Okinawa Prefecture.

These islands - along with Japan's Home Islands - are a major part of the 'first island chain' that China has traditionally viewed as elements of the US containment strategy against it. They are also home to most of the roughly 50,000 US troops based in Japan.

Beyond maritime and air superiority, NIDS' Takahashi argues that the 2010 NDPG's call to establish "continuous and strategic implementation of ISR [intelligence, surveillance, and reconnaissance]" has become even more pressing given the Senkaku/Diaoyu dispute. "The 2013 NDPG recognises that, compared to the time when the 2010 NDPG was formulated, the 'grey' of grey zones is turning to a deeper shade," he wrote.

"Accordingly, the most important constituent of dynamic deterrence [the new doctrine outlined in 2013] was the capacity to conduct continuous ISR activities," he added.

This is reflected in increased spending: the 2013 NDPG promised that at least JPY24.7 trillion (USD240 billion) would be spent on new materiel over the next five years. Spending for the 12 months from 1 April 2014 is to increase by a further JPY131 billion to JPY4.88 trillion: a 2.8% rise over the same period in 2013 and the largest year-on-year increase since 1996, according to NDPG figures.

The extra funds are being spent on capability enhancements that will enhance mobility and ISR around the Nansei Islands: tilt-rotor aircraft, high-altitude long-endurance (HALE) unmanned aerial vehicles (UAVs), amphibious assault vehicles, and other capability enhancements across all three military services. The MoD added that it could make further purchases to build a "highly effective and integrated defence capability" if it can realise savings of JPY7 trillion.

"The geographic shift from the archipelago's northeast to the southwest articulated in the NDPG 2010 and confirmed in 2013 represented the biggest change in Japan's defence posture," said Patalano. "It required [Japanese officials] to consider important changes both in the structure of the military posture [increasing the mobility and flexibility of the armed forces], as well as the need to acquire new amphibious and strategic lift capabilities."

Air developments

The JASDF is reorganising some airborne early warning and control groups into squadrons and converting one air reconnaissance squadron into a fighter squadron to give it 13 fighter squadrons.

It is doubling its aerial-refuelling capability to two squadrons - possibly via upgrades to Lockheed Martin C-130H transport aircraft - and increasing its fighter fleet from 260 to 280 aircraft. In addition, it plans to continue radar and weapon upgrades to its Mitsubishi-Boeing F-15J multirole fighter fleet and to start an upgrade programme for its F-16-based Mitsubishi/Lockheed Martin F-2 air-superiority fighter.

The arrival of up to 42 F-35s (see box) will allow the retirement of Japan's McDonnell Douglas/Mitsubishi F-4EJ Kai Phantoms, while the MoD's Technical Research and Development Institute (TRDI) and MHI are close to holding the first flight of the Advanced Technology Demonstrator-X (ATD-X) fighter prototype, also known as 'Shinshin', meaning 'Spirit of the heart'.



The ATD-X fighter is being built by Mitsubishi Heavy Industries in co-operation with the Japanese MoD's Technical Research and Development Institute. (TRDI)

1526627

The ATD-X has been designed to be a stealthy air-superiority fighter with enhanced manoeuvrability. The MoD will use it to research advanced technologies and system integration, after which it plans to produce a 'sixth-generation' fighter encompassing i3 (informed, intelligent and instantaneous) concepts and counter-stealth capabilities.

The NDPGs commit Japan to improving persistent ISR around the Nansei Islands. The JASDF's role in this will likely involve purchasing three Northrop Grumman RQ-4 Global Hawk systems, although it is not clear which version. Given the maritime environment in which the systems will be operating, it is possible that Tokyo may opt for the MQ-4C Triton variant.

Land developments

The JGSDF will reduce its heavy armour and artillery from about 700 main battle tanks (MBTs) and 600 howitzers to about 300 MBTs and 300 howitzers, as well as cut the number of regional units from eight divisions to five and six brigades to two.

In the regional units' place the JGSDF will stand up three rapid-deployment divisions, four rapid-deployment brigades, one airborne brigade, one helicopter brigade, and one amphibious rapid-deployment brigade.



JMSDF and US Navy LCACs simulate a beach-front assault on Red Beach at Camp Pendleton, California, during the 'Dawn Blitz 2013' amphibious exercise on 24 June 2013. (US Navy)

1516212

The amphibious rapid-deployment brigade is being stood up and is based on the Sasebo-based 600-man Western Army Infantry Regiment, which MoD officials expect to comprise 3,000 troops within five years.

The force took part in its first joint landing drill on an uninhabited island in the Nansei island chain in May: the latest in a series of exercises intended to demonstrate Japanese resolve in the East China Sea. The MoD plans to equip it with 52 amphibious assault vehicles, which are likely to be based on the US Marine Corps' BAE Systems AAV7A1. Although the platform is no longer in production in the United States, Tokyo has bought four AAV7/Reliability and Maintainability/Rebuild to Standard vehicles for evaluation and testing.

Patalano, who recently visited the Western Army Infantry Regiment, said that, based on "reports from the first exercises conducted with the United States on amphibious operations, the implementation of the change has been rather successful, although of course the scale of the new capabilities is relatively small".



The Maneuver Combat Vehicle has been designed to give greater strategic mobility than an MBT. (Kyodo/PA)

1513584

Further acquisitions for the JGSDf include 99 Maneuver Combat Vehicles (MCVs) (*see box*). Industry sources also told *IHS Jane's* that Japan may buy more Boeing AH-64 Apache attack helicopters, which proved their value in maritime operations when British Army Apaches flew from UK Royal Navy ships in the 2011 Libya campaign. The JGSDf will also increase its number of coastal anti-ship missile batteries and medium-range surface-to-air missile sites.

The JGSDf's role in ISR in the Nansei islands involves upgrades to some land-based radars and their deployment to new areas. This includes Yonaguni Island, which is the country's westernmost land mass and the closest of the Nansei islands to the Senkakus. A government briefing paper also suggested that Japan may upgrade its military capabilities in its Pacific islands, including Iwojima (Iwojima).

Sea developments

The JMSDF is increasing its combined destroyer and frigate fleet from 47 to 54 ships and adding another two ships to its fleet of six Aegis ballistic missile defence system-equipped destroyers (*see box*). It also plans to purchase 10 Kawasaki P-1 maritime patrol aircraft, 26 Sikorsky-Mitsubishi SH-60K patrol helicopters, and five more AgustaWestland MCH101 minesweeping and transport helicopters. The JMSDF is also increasing its submarine fleet from 16 to 22 boats through upgrades to older platforms and service-life extensions.

In September the JMSDF began sea trials of first-of-class helicopter carrier JS *Izumo* (DDH 183). The 248 m-long vessel, which displaces 24,000 tonnes at full load, is the largest Japanese military ship built since the Second World War and can carry up to 14 helicopters. *Izumo* and its as yet-unnamed sister ship (DDH 184) will replace the JMSDF's two Shirane-class destroyers, inducted in 1980 and 1981.

Described by Japan Marine United as an "evolution" of the two 18,290-tonne Hyuga-class helicopter carriers that entered service in

2009 and 2011, *Izumo* is not fitted with torpedoes, although its defensive armament will include two SeaRAM (Mk 15 Mod 31) short-range surface-to-air missile launchers and two Phalanx Block IA six-barrel close-in weapon systems. An OQQ-22 bow-mounted sonar is also installed.



Japan is planning to refit its three Osumi-class tank landing ships, including JS Shimokita (LST-4002), as part of its National Defense Program Guidelines. (JMSDF)

1525807

The JMSDF is also upgrading its three Osumi-class amphibious assault ships so they can embark Bell-Boeing MV-22 Ospreys; the MoD plans to buy 17 of the tilt-rotor aircraft. The Osumi-class upgrades also include applying heat-resistant paint to the flight deck, which could make it possible for US Marine Corps F-35Bs to land and take off from the vessels.

In line with the focus on ISR, the JMSDF will also look to deploy fixed-wing and rotary-wing UAVs from its surface combatants.

Next steps for the alliance

Japan's ability to manage the strategic challenges outlined above, of course, depends on maintaining the US alliance and building strategic ties with like-minded countries. As noted, the relaxation of defence export regulations is one element of that, but clues on future plans may be divined from an interim report on revising the guidelines for the bilateral security relationship that was published in early October.

The guidelines, which were last amended in 1997, provide the "general framework and policy direction" of the bilateral relationship under the terms of the US-Japan Security Treaty. Both sides have committed to signing updated guidelines by the end of the year.

The report describes "a more expansive partnership [that] would require enhanced capabilities and greater shared responsibilities".

For NIDS' Takahashi, one vital change to the US-Japanese security relationship would be the formation of a permanent joint command.

"Considering that a permanent structure for command and control exists in NATO and the US-Republic of Korea alliance, it is desirable to establish a permanent co-ordination structure in the US-Japan alliance," he wrote.

Hughes said the report's call for more integration of US-Japanese planning illustrates that the US and Japan "are beginning to dump to old geographical definitions of the scope of the alliance". "In the 1990s they tried hard to keep the guidelines limited to around Taiwan and the Korean peninsula; now we are seeing a dumping of these concepts and just talking about types of scenarios," he said.

"So, although the bulk of US-Japan co-operation is going to remain to be in East Asia, you can see on the horizon co-operation potentially stretching out again," said Hughes. "The way is clear for this alliance to be stronger in East Asia, but also to serve US global military ends."

James Hardy is the Asia-Pacific Editor of IHS Jane's Defence Weekly, based in London

LAND PROCUREMENTSLand-platform procurement, often the poorer sibling in JSDF investment, continues to shift to more strategically mobile capabilities, notably the Maneuver Combat Vehicle (MCV) family of vehicles. The Type 10 main battle tank (MBT) continues to see minimal interest from the JGSDF, with an overall procurement objective of just 97 vehicles that is a far cry from original plans for more than 500.

In 2013 the Technical Research & Development Institute (TRDI) unveiled the fourth MCV prototype. Fitted with a wheeled 105 mm gun, the platform is being designed to meet JGSDF requirements for a new armoured fighting vehicle with a high level of strategic mobility and firepower that can be rapidly deployed by air, land, or sea.

The JGSDF currently deploys the 105 mm-armed Type 74 tracked self-propelled howitzer and 120 mm-armed Type 90 and Type 10 MBTs, but these cannot be used in all types of terrain and can only be transported over long distances by heavy equipment transporters. MHI will manufacture the MCV, with the first units expected to enter JGSDF service in 2016 after a testing programme through 2014 and 2015.

Despite recent indications, Japan is yet to commit to the procurement or indigenous production of an amphibious assault vehicle: a capability critical to the standing up of a marine corps-style force. Japan has bought four US-manufactured AAV7A1s for evaluation, but as this platform is out of production it will either have to buy refurbished vehicles from the US Marine Corps or develop an indigenous answer to this capability gap.

Jon Hawkes is a Senior Land Forces Analyst at IHS Aerospace, Defence and Security

Jon Hawkes
London

AIR PROCUREMENTSThe JASDF's most important recent aircraft procurement has been the acquisition of 42 Lockheed Martin F-35A Lightning IIs under its F-X fighter requirement to replace the F-4EJ. The contract is estimated at JPY1.6 trillion over 20 years, including spare parts and training. A relatively high unit price - estimated at JPY14 billion in FY 2013 - reflects domestic involvement in manufacture from MHI (final assembly and checkout), IHI Corporation (engine parts), and Mitsubishi Electric Corporation (radar components).

Contracts for the first four US-built airframes were released in October, with initial deliveries expected in 2016. Earlier in 2014 then defence minister Itsunori Onodera said Japan will consider buying additional aircraft should the cost come down as a result of increasing production volumes.

In justifying its selection of the F-35, the JASDF said it was needed against 'fifth-generation' fighters being developed by regional adversaries such as Russia and China. The latter's posture towards island territories under dispute with Japan has also driven other key aircraft programmes.

The December 2013 MTDP included funding for 17 Bell-Boeing V-22 Osprey tilt-rotor aircraft. These could be deployed aboard the JMSDF's refurbished Osumi LHDs, enhancing their amphibious assault capability.

A budget request published in August also asked for JPY58.8 billion for new airborne early-warning aircraft to replace the Northrop Grumman E-2C Hawkeye fleet. A selection is expected between the E-2D Advanced Hawkeye, an unspecified Boeing type, and an indigenous development based on the Kawasaki Heavy Industries (KHI) P-1 MPA airframe.

Charles Hollosi is a Senior Aviation Analyst at IHS Aerospace, Defence and Security

Charles Hollosi

SEA PROCUREMENTSThe JMSDF is addressing concerns over China's modernisation of its submarines by increasing the force's anti-submarine warfare capabilities. This includes efforts to grow the size of the submarine fleet from 16 to 22 boats, the addition of two large Izumo-class helicopter carriers optimised for ASW operations to complement the existing pair of Hyuga-class flaptors, procurement of KHI's P-1 maritime patrol aircraft, development of a new maritime helicopter from FY 2015 to succeed the licence-built SH-60K helicopters, and procurement of improved version of the Akizuki-class destroyer.

The first Improved Akizuki-class ship, also called the 25DD class, was authorised in FY 2013 and is expected to be completed around 2017. A second has been authorised, with further units expected to replace the Asagiri-class destroyers. However, procurement is taking a break in FY 2015/16 to accommodate a new pair of Aegis-equipped destroyers.

Defence ministry documents described the 25DD class as designed to provide escort to the Aegis-equipped BMD-tasked destroyers while bringing

ASW, anti-air warfare, and anti-surface warfare capabilities to the destroyer flotillas.

Modifications for the new class will include a novel propulsion system for a JMSDF surface combatant in the shape of a combined gas turbine electric and gas turbine (COGLAG) plant designed to reduce fuel consumption at lower speeds and expected to contribute to a reduced underwater acoustic signature. This is to be paired with an improved combat system suite for the underwater domain, possibly to feature multi-static processing.

Alex Pape is a Senior Naval Analyst at IHS Aerospace, Defence and Security

Alex Pape

London

MISSILE PROCUREMENTS Japan is in the process of modernising its missile inventory to better face growing threats from Chinese and Russian ship-based and ballistic missiles.

In order to meet potential threats at sea, the JGSDF is due to deploy the Type 12 anti-ship missile in the coastal defence role. The Type 12's 150 km range is a step up from the in-service Type 88 missile and it also has greater accuracy due to the addition of mid-course GPS guidance.

The Type 12 will provide greater deterrence against ships operating off the Japanese coast and MoD sources have said Tokyo may deploy batteries in Okinawa Prefecture to deter Chinese attempts to take the disputed Senkaku/Diaoyu Islands.

The JMSDF is also expected to deploy a sea-launched variant of the Type 12, which will replace the Type 90 SSM.

Despite the return to pre-eminence of air and maritime superiority discussed above, BMD continues to be a priority. Japan is looking to bolster its ground-based missile defence capabilities to complement its SM-3/Aegis destroyers. It has expressed an interest in procuring the Aegis Ashore system, which would feature ground-based SM-3 Block IIA interceptors and would provide additional upper-tier missile-defence coverage and complement the lower-tier coverage provided by Patriot PAC-3 systems.

Ben Goodlad is a Senior Weapons Analyst at IHS Aerospace, Defence and Security

Ben Goodlad

London

Copyright © IHS Global Limited, 2014