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Japan's Blunt Stance Riles China, S. Korea

By PAUL KALLENDER-UMEZU

TOKYO — For the first time, Japan has criticized China over its military buildup in a move that has garnered swift reaction from regional powers and continued Tokyo's march toward a more assertive

Japan's move, codified in a white paper released last week, also raises questions about Tokyo's alliance with Washington amid tense relations with China, experts said.

Fast and furious was the regional response to last week's document, in which Japan openly sounded the alarm about China's military buildup and motives. Japan argues that by providing such a blunt assessment, it is acting in the best interests of the region. This change in tack sets the scene for larger changes in Japanese defense policy, analysts said, although just how large remains to be seen.



Strong Words: In a white paper released last week, the administration of Japanese Prime Minister Shinzo Abe accused China of "engaging in dangerous acts that could give rise to an emergency situation."

On July 9, as part of its annual defense white paper, Japan accused China of "rapidly expanding and intensifying its maritime activities ... engaging in dangerous acts that could give rise to an emergency situation," and attempting "to change the status quo by force, based on its own assertion," calling China's actions "incompatible with international law."

In the paper, Japan for the first time called out China on specifics. For example, Japan suggested that the deployment of China's first aircraft carrier, the Liaoning, and the bolstering of its submarine force are attempts to thwart adversaries' operations. The report also referred to "dangerous" actions, such as a January incident in which a Chinese vessel locked its fire-control radar on a Maritime Self-Defense Force destroyer.

Boiling the blood between China and Japan is a dispute over a handful of uninhabited islands in the See JAPAN PAPER, Page 8

Pentagon's Top Buyer Targets Cost Growth

By MARCUS WEISGERBER

WASHINGTON — A data-driven review of big-ticket Pentagon programs going back 20 years shows that, no matter the platform or type of contract, the majority of developmental programs exceeded their planned budgets by 30 percent, a number that the Pentagon's top weapons buyer says he wants to bring down.

"I don't think it's unusual for a development program to overrun by 10 to 20 percent," Frank Kendall, undersecretary for acquisition, logistics and technology, told Defense News during a July 12 interview. "If we could get the average down from about 30 percent to 20 percent or 10 percent, I'd be very happy. But I want to avoid things that overrun by 200, 300 or 400 percent."

Raytheon showed the least cost growth of the five major US Defense Department prime contractors, according to the report, "Performance of the Defense Acquisition System."

A team of analysts within the DoD's acquisition directorate compiled the data into the 126-page report over the past year. Kendall plans to update the report annually and release it in the spring. Additional data and analysis will be added within future updates of the report.

The study looked primarily at major acquisition programs since DoD collects the most data on

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Africa On the **Cusp of Vehicle**

By OSCAR NKALA

Spending Spree

BULAWAYO, Zimbabwe — African countries are expected to spend up to US \$20 billion on armored vehicles over the next decade, according to industry analysts and business executives, as governments battle a growing number of heavily armed transnational terrorist groups.

Specifically, nations in the Horn of Africa, Sahel-Magreb and West Africa are expected to invest in force protection equipment, ex-



Armor Interest: DCD Protected Mobility, the South-African builder of the Husky mine detection vehicle, is among a list of firms now marketing its vehicles to African nations.

The experts made their forecast ahead of the Armoured Vehicles Africa conference in London the first week of July, which came as

renowned armored vehicle manufacturers from Italy, Serbia, South Africa, the United Arab Emirates, See AFRICA VEHICLES, Page 8

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nBrief

Sequestration Could Chop \$33B from DoD Investments

By MARCUS WEISGERBER

WASHINGTON — The Pentagon might be forced to cut up to 20 percent of its procurement and research-and-development budget should federal spending caps remain in place through 2014, US Defense Secretary Chuck Hagel told lawmakers on July 10.

Hagel, in an eight-page letter to the Senate Armed Services Committee chairman, Sen. Carl Levin, D-Mich., and its ranking member, Sen. James Inhofe, R-Okla., lobbied against sequestration caps, which would cut \$52 billion from DoD's \$527 billion 2014 budget request.

"I strongly oppose cuts of that magnitude because, if they remain in place for FY 2014 and beyond, the size, readiness and technological superiority of our military will be reduced, placing at much greater risk the country's ability to meet our current national security commitments," Hagel wrote. "This outcome is unacceptable as it would limit the country's options in the event of a major new national security contingency.

The Defense Department had to cut about \$37 billion from its 2013 budget due to sequestration. The cuts have curtailed military training and prompted furloughs of hundreds of thousands of DoD civilian employees. As mandated by the Budget Control Act, Pentagon officials chopped about 10 percent from each budget account in 2013 due to sequestration. Military personnel accounts are exempt.

These cuts are "severely damaging military readiness," Hagel said. This will continue, he said, even if DoD has the flexibility to tailor spending cuts in 2014.

The difficulty of substantially reducing military personnel funding in FY 2014 would likely require disproportionately large cuts in the department's investment accounts — assuming flexibility in implementing changes, cuts of 15 to 20 percent would be common," Hagel said. "The resulting marked slowdown in modernization would reduce our long-term, critically important and historic technological superiority and undermine our Better Buying Power initiatives."

The investment accounts are the



Making His Point: US Defense Secretary Chuck Hagel has warned Congress that procurement, research and defense could take big hits if sequestration caps remain.

combination of procurement and research-and-development coffers. DoD has requested \$166.8 billion in procurement and R&D for 2014. A 15 percent cut amounts to \$25 billion and a 20 percent cut is more than \$33 billion.

Immediate reaction to the letter was muted. The House is focused on energy and water legislation, and an immigration reform bill recently sent over by the Senate. The upper chamber is plodding toward action on a student loan bill.

Still, some members took quick notice of Hagel's letter.

The ranking member of the House Armed Services Committee, Rep. Adam Smith, D-Wash., said in a statement that Hagel's letter shows Congress should kill the planned cuts.

"Secretary Hagel's letter to Sens. Levin and Inhofe echoes that sentiment regarding sequestration's impact on defense, and it points out that, if Congress does not act, sequestration will continue to damage military readiness," Smith said.

Inhofe indicated he wanted more specifics from Pentagon brass, adding the letter shows a "hollow" military is being created.

"While I would have liked more details, Secretary Hagel's response makes clear that the devastation of sequester budget cuts will only be amplified beyond what we have experienced thus far," Inhofe said.

"As I predicted, sequestration is leading to the hollowing out of our military, and if the Department of Defense's sequestration is not averted for future years, we will move beyond furloughs and programmatic reductions to firing personnel and canceling our critical weapons programs."

John T. Bennett contributed to this report.

On DefenseNews.com

Nuke Reduction Limits

The US House has approved a plan that would limit President Barack Obama's ability to shrink the US nuclear arsenal without congressional approval, with its sponsor claiming the White House intends to ignore the Constitution.

An amendment to an energy and water bill by House Armed Services Committee member Rep. Mike Turner, Ohio, a hawkish Republican, would cut off funds for any atomic weapons reductions the White House might pursue unless it first sought Senate approval "according to the Constitutional structures the framers intended." he wrote in a "dear colleagues letter" to other members.

The best from our blog, blogs.defensenews.com/intercepts

Rise of the Robots

While it might not be as epic as a UAV taking off and landing on an aircraft carrier, this week at Fort Benning, Ga., teams of American, German and Turkish developers will take turns using their own controllers to drive each other's ground robots around the Maneuver Battle Lab.

The event is part of a larger NATO program to design interoperable unmanned ground vehicle systems and controllers.

The event comes just days after throwable robot maker ReconRobotics announced that it has sold more than



@OpallRome

#IDF general just told me [US Sen.] John McCain's call to halt US aid to #Egypt is bad news for Israel. "We expect a man like him to be more savvy.'

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FOR THE RECORD

F-16s for Egypt

The United States is pressing ahead with plans to deliver four F-16 fighter jets to Egypt despite the ouster of President Mohammed Morsi, a US official said, according to Agence France-Presse.

"It's still the status quo," the official said.

President Barack Obama's administration has said it is examining whether the military takeover constitutes a coup, which under US law would force Washington to freeze any aid to Egypt.

The F-16s are part of an arms deal with Egypt that calls for the supply of 20 of the fighters.

UK Trident Base Dispute

Britain's leaders are examining proposals to claim sovereignty over the military base in Scotland that houses its Trident nuclear submarines if the Scottish people vote for independence next year, the Guardian newspaper reported.

The Scottish National Party, which leads the Scottish Parliament, has promised to get rid of all nuclear weapons if it secures a "yes" vote in the independence referendum scheduled for September 2014.

Britain's government is therefore considering designating as sovereign territory the Faslane base on Gare Loch in Argyll and Bute, allowing the Trident fleet to maintain access to the open seas via the Firth of Clyde.

Russia To Deploy Typewriters

In the wake of recent US spy scandals, Russia's Federal Guard Service has decided to revert to using more typewriters and paper

documents, Izvestia reported, according to USA TODAY.

The service, which protects Russia's top officials and Kremlin communications, recently ordered 20 Triumph Adler typewriters, the Russian newspaper reported.

"After the scandal with the spread of secret documents by WikiLeaks, the revelations of Edward Snowden, reports of listening to Dmitry Medvedev during his visit to the G-20 summit in London, the practice of creating paper documents will increase," an unidentified source with the guard service told Izvestia.

One key reason for using typewriters is that each creates a unique "signature" that can be traced, the newspaper says.

Israel Tests 5,000-Km Missile

Israel on July 12 staged what it said was a planned test of a rocket propulsion system at a military base on the Mediterranean coast.

Israeli media, citing analysts, said the test appeared to be a version of the Jericho ballistic missile with a range of at least 5,000 kilometers, easily capable of hitting arch-foe Iran.

"The scheduled test was preplanned by Israel's Ministry of Defense and was carried out as expected," the MoD said in a brief statement.

In January 2008, Israel successfully test-fired a long-range ballistic missile, days after warning "all options" were open to prevent Iran from obtaining an atomic weapon.

Israel's Jericho ground-toground missile is believed to be capable of carrying a nuclear, chemical or biological warhead.

Israel was last believed to have tested the missile's propulsion system in November 2011. \square

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WorldNews

Despite Failures, US Insists Missile Defense on Track

By PAUL McLEARY and JOHN T. BENNETT

WASHINGTON — It will "likely be several months" before the Missile Defense Agency (MDA) knows what went wrong during the failed July 5 test of its Ground-based Midcourse Defense (GMD) system, an MDA spokesman has told Defense News. In the meantime, the failure drew a mixed response from law-makers and fresh doubts from experts skeptical of the program.

Despite three consecutive failed missile intercept tests over the past three years — the last success was in 2008 — the Pentagon and MDA insist that they're pushing forward with a spring 2014 test on an upgraded system, the same system that was responsible for the last two failures. Despite having never been tested successfully, this new "kill vehicle" is slated to be a key part of the missile defense enterprise.

The basics of the story are simple enough. On July 5, a GMD system launched from Vandenberg Air Force Base, Calif., but failed to intercept a long-range target missile launched from the Kwajalein Atoll in the Pacific Ocean.

But the specifics are a little more complicated. While the \$214 million test marked the third time since 2010 that GMD system failed, the two 2010 tests and the 2013 test

were actually for slightly different exoatmospheric kill vehicles.

The older version of the Raytheon-built kill vehicle, dubbed Capability Enhancement-I (CE-I) is the one that failed this month after successfully completing three tests in 2006, 2007 and 2008. The two unsuccessful 2010 tests were of the upgraded CE-II kill vehicle. The CE-II has never been tested successfully, even though it has been installed on 10 of the 30 GMD systems deployed in California and Alaska, and is tapped to be on the 14 new interceptors that the Pentagon plans to install along the West Coast by 2018.

MDA spokesman Richard Lehner confirmed that the spring 2014CE-II test is still on.

The latest failure has garnered a mixed reaction in Congress and spurred a group of GOP lawmakers to write a letter to Defense Secretary Chuck Hagel accusing the Obama administration of putting the GMD program "on life support."

The group, led by Senate Armed Services Committee Ranking Member Sen. James Inhofe, R-Okla., and House Armed Services Committee Chairman Rep. Howard "Buck" McKeon, R-Calif., want MDA brass to report back with "an action plan to resolve the cause of the failure of the recent missile defense test, conduct a new intercept

test of that system, and ... provide a clear roadmap for the development and fielding of a next-generation kill vehicle."

The Republicans said "it is already clear that President Obama's decision to drastically cut funding for the GMD program since he came to office ... has drained funding available to conduct needed tests of this system," the Republicans wrote.

In 2008, funding for GMD was approximately \$2 billion, "whereas by 2012, GMD was reduced to just half that total and continues to decline over the next five years," the lawmakers wrote. "Such funding cuts have touched every facet of the GMD program, including its maintenance."

The lawmakers note the Pentagon, "at the prompting of Congress," is developing a new kill vehicle for its fleet of ground-based interceptor missiles.

"Regardless of the causes of the recent flight test failures, we encourage you to make the development and deployment of a new kill vehicle one of your highest priorities," the quartet wrote.

Elsewhere on the Hill, Sen. Carl Levin, D-Mich., chairman of the Senate Armed Services Committee, said on July 10 that "I've got plenty of concerns about the whole program."

Other key defense-focused law-



US MISSILE DEFENSE AGENCY

makers told Defense News last week that the underlying missile interceptor technology is sound, adding that existing interceptors like the CE-II should do the job.

"I don't think we need to put the brakes on anything," said House Armed Services Committee Ranking Member Rep. Adam Smith, D-Wash. "We need a missile defense system. Rogue actors, from North Korea to Iran, are developing missiles. We need to improve our missile technology.

"We need to figure out what went wrong and fix it," he said.

Some Republican lawmakers have also pushed for more interceptors on the East Coast, a move that Levin opposes.

"I think the East Coast proposal should not proceed until a number of other things have happened," Levin said. "Number one, until there's a requirement for it; and number two, until there's an environmental assessment, which has **Questions Raised:** The Missile Defense Agency conducted a successful launch test Jan. 26 of a three-stage Groundbased Interceptor, but recent test failures have renewed debate over the program.

not yet been made but is required by law."

While the overall GMD program is managed by Boeing, Raytheon makes the kill vehicles, which separate from the rocket in flight and slams into the target in what's known as a hit-to-kill mission.

A Boeing spokesperson said in an email that "we will continue to analyze test data alongside our customer to better understand the outcome of this test," while MDA's Lehner added that "we continue to work closely with our industry partners as part of the failure review."

Raytheon referred all questions to MDA.

The Pentagon showed no weakening of support for the program.

Spokesman George Little told reporters on July 8 that "our faith in our missile defense program remains strong, and every healthy organization takes stock of mishaps when they occur and that's what we're doing now."

Still, some analysts aren't convinced.

"If you go back and look at the test record, it's actually getting worse," said Philip Coyle, former associate director for national security and international affairs in the Obama White House's Office of Science and Technology.

Now with the Center for Arms Control and Non-Proliferation, Coyle said that since 1999, eight out of 15 GMD tests have worked, "and since 2010, zero have worked, so their test record is actually getting worse with time not better with time." □

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COST GROWTH

From Page

"I put [the report] out with the idea in part that it would stimulate a lot of thought, and maybe dispel a few myths, and be a basis for a lot of more productive discussions that are based on how we are doing and what we can do to improve," Kendall said.

"Over the years, our net performance has not changed very much, despite all the efforts at acquisition reform," he said. "There's a little bit of an indication we're getting better, but it's not dramatic and there's a lot [of] scatter in the data."

The goal of the report is to "confront our own performance, try to understand it as thoroughly as we can and learn from it, and figure out what works and what doesn't and where we should focus our efforts to improve," Kendall said.

Jacques Gansler, who served as the Penta-

gon's acquisition chief during President Clinton's second term in the late 1990s, said the report is "really an important first step," and the next step involves getting responses.

"It's a real first cut at analysis, but there's still a lot to be done," Gansler said.

Kendall said he was most surprised that programs experienced similar cost growth under both fixed-price and cost-plus contract types.

"It could tell us that we're using the right contract for the job that we're doing," he said. "It could also tell us that we're not applying fixed price the way it should be applied."

A more in-depth analysis will be done to better understand this trend, Kendall said.

"We should not be seeing large cost growth on those [types of] contracts," he said.

Between 1992 and 2011, DoD development programs exceeded their planned budgets by an average of 30 percent, Kendall said.

DoD historically does a much better job

projecting production costs than development costs, Kendall added.

As for contractors, Boeing developmental programs showed the most schedule growth, when compared with Lockheed Martin, Northrop Grumman, General Dynamics and Raytheon.

The information shows DoD has a difficult time purchasing and developing new helicopters. Between 1997 and 2011, 10 of 13 of its helicopter programs experienced cost growth at least 15 percent above original estimates.

Kendall said these programs need to be examined individually to determine the cause.

The Bell-Boeing V-22 Osprey tilt-rotor, Boeing-Sikorsky Comanche, Bell armed reconnaissance helicopter and Lockheed Martin VH-71 Presidential Helicopter Program collectively experienced tens of billions of dollars in development cost increases. The V-22 was the only one of these four to enter production.

Poor performance in the way contracts were set up and managed was identified as the cause of cost growth in 10 of 18 DoD programs where prices climbed more than 30 percent above the original estimate. Five of those 18 programs had unrealistic cost and schedule estimates, according to the report.

"The single most important factor in program success is the strength of the management team on the industry side and on the government side," Kendall said. "Good managers, good chief engineers, good contracting people, good program managers on both sides will set up a program for success and they will manage it for success. All the process controls in the world can't make up for poor management."

Kendall hopes acquisition workforce professionalism initiatives in his Better Buying Power 2.0 acquisition reform effort will help improve these management issues. \Box

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NORLD NEWS

IDF Artillery Corps Revamps for New Roles, Missions

Fire2025 Plan Accents Standoff, Precision Strike

By BARBARA OPALL-ROM

TEL AVIV — Israel's Artillery Corps is revamping weaponry, doctrine and institutional culture to transition from a supporting actor in maneuvering war to a center-stage performer of precision, standoff attack.

No longer the saturation-centric force that fired off 170,000 rounds to little effect in the 2006 Lebanon War, today's Artillery Corps aspires to "one-shot, one-target" accuracy. It is transforming itself, officers and industry experts here said, for network-enabled roles and missions, including targeted killings and even urban war.

"Artillery comes in mass, but the future, the not-too-distant future, is one shot, one target," said Brig. Gen. Roy Riftin, the Israel Defense Forces' (IDF) chief artillery offi-

New weapons, an expanding digital C4 network that links artillery to armor and infantry, and upgrades to existing inventory are driving new doctrine, operational concepts and a rewritten mission statement.

"Artillery comes in mass, but the future, the not-too-distant future, is one shot, one target."

Brig. Gen. Roy Riftin IDF's chief artillery officer

With network-enabled UAVs to replace traditional fire control officers to direct fire from increasingly accurate guns and extended-range rockets, Israel's Artillery Corps is positioning itself to share in operations formerly reserved for airpower.

"It shouldn't be only the Air Force or, to a much lesser extent, the Navy, that destroys targets from standoff range," an Army officer said.

In addition to precision standoff attacks against fixed targets, the Ground Force officer said combined arms warfare will soon be able to deal with time-sensitive moving targets some 40 kilometers away.

"Because our firepower is so significant, we can allow ourselves to take on additional missions, such as targets of opportunity," said the IDF's chief gunner. "These targets pop up quickly and then disappear. But if I'm fast enough and precise enough, we can effectively destroy them with the first round or the first rocket."

The corps' proposed mission statement and accompanying doctrine will be presented to IDF brass this month in the run-up to General Staff deliberations on its latest five-year spending plan, dubbed Teuza (valor). It is expected to relegate its traditional close-support mission for maneuvering forces to second-tier status while accenting destroying enemy targets through precision standoff attack.

In parallel, the corps is finalizing what it calls Fire2025, a strategic investment plan for firepower that is precise yet flexible for use across the operational spectrum. The Artillery Corps and Israel's Ground Forces Command are lobbying to include key elements of Fire2025 in the IDF's Teuza spending plan for 2014-2018.

Top priorities include:

- A new acquisition program to replace 50-year-old M109 howitzer guns.
- Precision guidance kits for its inventory of 155mm shells
- A new vehicle-mounted tactical radar to be co-located with its autonomous Keshet recoil mortar system.
- Replacing cluster munitions with a unitary charge, GPS-guided dispersion munition for launch from the M270 Multiple Launch Rocket System (MLRS).
- Additional Elbit Systems-developed Skyrider tactical UAVs to expand from battalion- to brigadelevel "eves in the sky."
- New, environmentally friendly smoke shells to replace current 155mm shells containing elements of legally permissible, yet imagedamaging, phosphorus.

But given prescribed budget cuts and projected institutional resistance from the Air Force and Navy, industry executives said the Army should expect an uphill slog.

"If we can detect the exact location of targets, add smart fuses that precisely navigate regular [155mm] projectiles and a new generation of longer artillery tubes, then you'll be looking at a real revolution in the fires arena," said retired Brig. Gen. Shmuel Yachin, a former defense research and development director who coordinates land systems programs



Night Fire: Israeli forces, above, fire the 120mm Keshet recoil mortar system, part of the Artillery Corps' evolution into a networked precision attack unit able to even engage in urban warfare.



at Israel Aerospace Industries (IAI).

IAI and Jerusalem-based BAE Systems Rokar are competing to equip standard 155mm shells with precision navigation kits.

IAI's Top Gun is in advanced fullscale development, while Rokar has conducted "dozens of firing tests" on its Silver Bullet, a company source here said.

Digital Fire Support Officer (FSO)

After almost three years of nearly continuous tactical UAV operations, the corps is embracing the concept — co-developed by Elbit and the IDF's Ground Forces Command — of digital FSOs to designate targets for infantry, armor and its own fire battalions.

First tested last spring with the corps' Golan Brigade, the digital FSO concept is envisioned as yet

another layer of the Elbit-developed Tsayad Digital Army Network.

Initial results from those tests are being applied to developing rules of engagement, military and industry sources here said.

"Instead of sending in fire control officers, we send Skyrider, our eye in the sky, which knows how to create targets and also to direct fire," said Boaz Cohen, Elbit's vice president for land and C4 systems.

"Once we gain connectivity, through the [network], among all ground force elements, it means every tank in the arena can also serve as a kind of digital FSO. If the tank sees the target first, it just pushes the data backward to the battery, which will quickly close the loop with one-shot accuracy," said Cohen, a brigade commander in the IDF reserves.

Dan Peretz, vice president for research and development and business development at Israel Military Industries (IMI), said the IDF can achieve Global Positioning System accuracy at relatively low cost through kit upgrades to existing weaponry.

"The combination of GPS accuracy and network-linked sensors creates flat earth during the day and at night. It gives them the ability to change their role in the fight," he said.

Riftin said he hopes to implement the digital FSO concept before his term ends in 2015.

Even before then, the corps expects to deploy environmentally friendly "good old gray smokers," under development at IMI, an officer here said.

The new smoke rounds will supplement those containing elements of white phosphorus "that are acceptable under international law, but didn't photograph well" during their extensive use in the December 2008-January 2009 Cast Lead war in Gaza.

And by 2014, the IDF Artillery Corps expects to deploy its first battalion of the Romach (Lance), a precision, MLRS-launched rocket equally suitable against single buildings or open areas.

Maneuvering Firepower

By the end of next year, the corps hopes to receive four prototypes of Humvee-mounted tactical radars, developed by Elta Systems, to be co-located with the 120mm Keshet recoil mortar system made by Elbit.

The new system will operate akin to the US Army's AN/TPQ-48 radar, which was deemed unsuitable for IDF requirements, sources here said. Once integrated into the IDF's digital network, the system will provide protection to maneuvering forces, perhaps even in urban battles.

Cohen of Elbit said his company is developing a specific application to connect the Keshet system, also known as Cardom, into the digital network. Once all of the building blocks are in place, he said the system would be able to deliver fire from any battlefield platform or sensor.

"Anyone who has a target will be able to distribute the information to the Keshet mortar system, and the target will be acquired in seconds," Cohen said.

The IDF's top brass has not yet decided if the Keshet maneuvering system will belong to the Artillery Corps or the infantry. \square

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JAPAN PAPER

East China Sea that China calls the Diaoyu and Japan the Senkaku. The dispute recently became more heated after Japan bought several of the islets from their private owners, leading to pushback from China.

In fact, Chinese vessels mounted 41 "intrusions" into Japanese-controlled waters, according to the Japanese Coast Guard, while the white paper notes that Japanese fighter jets were scrambled more than 300 times in the year leading up to March.

'Hyping' the Threat

Reaction from China and South Korea was as swift as it was angry. China accused Japan of "hyping the so-called China threat and creating regional tensions to mislead international opinion," said Chinese Foreign Ministry spokeswoman Hua Chunying.

Meanwhile, the white paper riled the South Korean government, as the two countries are at loggerheads over ownership over another two tiny islets, the Liancourt Rocks, which Japan calls Takeshima and South Korea calls Dokdo.

Seoul strongly objects to a clause in the report claiming the rocks for Japan, and "sternly" urged Japan to remove it and refrain from such claims in future, the country's Foreign Ministry said in a statement on its website.

The paper also deleted previous references to Japan focusing on "diplomatic efforts" to secure "peace," and mentioned the Dawn Blitz amphibious exercises last month in Southern California which involved the US Marine Corps' 1st Marine Expeditionary Brigade, Japan's Maritime Self Defense Force and units from Canada and New Zealand.

Dong Wang, director of the School of International Studies at Peking University, told Defense News he "wasn't surprised" by the white paper.

"I just think Japan should reduce their rhetoric and paranoia about China a little bit," he said. "But of course, it is unsurprising at all that Japan's military and the government would have every incentive to portray China as the aggressive party and itself as the innocent, which, of course, is merely a reflection of the Japanese government's positions.

Japan's Stance

Analysts said the white paper is preparing the ground for a more muscular defense posture promoted by Prime Minister Shinzo Abe, who is seeking to create a force to protect Japan's southern island chain and introduce pre-emptive strike capability. Abe also wants to change Japan's constitution to allow it to exercise the right to collective self-defense, which is currently difficult under Article 9 of Japan's US-imposed "peace" constitution.

Those efforts will be formally announced in new National Defense Program Guidelines (NDPG), Japan's five-year defense policy, which the Abe administration has fast-tracked to be announced by the end of this year.

Narushige Michshita, director of the Security and International Studies Program at the National Graduate Institute for Policy Studies, called the white paper's new clarity and bluntness both necessary and stabilizing.

WORLD NEWS

By putting its cards on the table, Japan can clear up misconceptions of its motives and even change the debate about Japan-China relations, he said.

"First of all, this is a politically led process," he said. "Second, in terms of threat perception, we are facing a quantum leap in terms of the threats facing Japan. I feel we are being more honest.

"Is this a good thing or a bad thing?" he asked. "It's a good thing. By revealing our concerns, we are showing the Japanese people and the international community that we understand our situation.

The second thing is that we are sending a positive signal to China. Before, we were vague. Now we are saying: 'If you behave irresponsibly, then you have a bad name. We are becoming more transparent and responsible," he said.

Relationship With the US

One key question is whether the changes will enhance the US-Japan security alliance, which has been strained by the regional tensions even while the US military copes with the huge demands of sequestration, said Takashi Kawakami, deputy director and professor of the Institute of World Studies at Takushoku University.

A key element of the security guarantee is Article 5, which commits the US to defend Japan should hostilities break out. The least Japan can do is make things easier for the US, he said.

"This white paper is necessary. This is the first time Japan honestly opened up. If we don't defend ourselves, we cannot expect the US to aid Japan under Article 5. Kawakami said.

"And the language is moderate. The US is facing sequestration and budget cutting and urging us to institute the right of collective defense, and we are saying we need limited amphibious force," he said. "It is the language of a normal country.'

This new clarity — at least on paper — is largely welcomed by the US, particularly the attention the report gives to the primacy of the security alliance, said a US official deeply familiar with Japan-US issues.

But it also comes at a time when both partners are navigating their own deeper waters in the relationship. The US encourages Japan to do more to defend itself, but that requires statesmanship, the official said, referring to a string of issues Abe has run into with his more strident brand of nationalism and political rhetoric that is ratcheting up tensions.

"A more capable ally is a good thing. The white paper is sensible, the official said. "As it notes, our alliance is essential, so [Abel has to act more of a statesman and watch what he says if Japan is to move successfully to the center. He seems unable to bite his tongue. That is a distraction, and also undercuts support for Japan in Washington.

Japan's new stance also reflects deeper fears that the US is growing weary of what is seen as Japan getting its defense on the cheap, with the US wanting Japan to take on more military responsibility.

The key test now is whether Ja-

pan will find the money to make changes.

"Japan has effectively received \$80 billion in free defense yearly for decades," the official said. "This isn't just about buying hardware. It's about funding training and operations. Ultimately, without cash, the white paper will be creating a child's Christmas wish list."

Christopher Hughes, a professor of international politics and Japanese studies at Britain's Warwick University, agreed that the new frankness is a signal to China that Japan does not intend to be intimidated by China's activities.

"[Japan] has shifted to talking about China's military modernization as something potentially dangerous." Hughes said, "It is a sign of Japan's determination not to be coerced by China. Both China and the US would be well advised to take note of the tone.

"If this presages change in Japanese defense policy, the answer is yes," said Alessio Patalano, a naval expert and lecturer in war studies at Kings College London. He was asked if the white paper marks a move toward a more assertive foreign policy.

The white paper will presage more spending for the next fiveyear NDPG, which will see investment in a limited amphibious force, perhaps more submarines and the acquisition of Tomahawk cruise missiles.

"But these new acquisitions will consolidate current doctrines, force structures and overall posture, rather than revolutionize them." Patalano said. □

Wendell Minnick in Taipei contributed.

AFRICA VEHICLES

Germany, Czech Republic, China and Britain scramble to snap up deals in Africa, as evidenced by recent acquisitions and moves by some companies to set up manufacturing plants in Africa.

Kenya, meanwhile, announced a US \$700 million defense budget, which includes acquiring more and better-protected armored military vehicles in the 2013-'14 fiscal year; spending will go up to \$800 million in the 2015-'16 budget.

Ivor Ichikowitz, chairman of South African-based armored military vehicle manufacturer Paramount Group, said the company sees high potential for market growth and will strive to meet the demand.

He said that while some countries in the Horn, North and West Africa are buying highly mobile, well-protected and heavily armed armored military vehicles for counterterrorism operations, many in sub-Saharan Africa — where the threat of terrorism is much lower - are seeking lightly armed, well-protected, high mobility infantry fighting, transport and logistics vehicles.

Rob King, managing director with South Africa-based DCD Protected Mobility, said because of increasing demand, the company is interested in business prospects in Africa in the next decade.

'We are excited about prospects in Africa. Armored vehicle local content is 40 to 60 percent and more for logistics vehicles, King said.

DCD won international acclaim in the armored vehicle category when it unveiled the sturdy Husky mine detection vehicle, of which the US Army bought 1,700 for use in Afghanistan.

However, with the US Army pulling out of Afghanistan, DCD has shifted its focus back to Africa. The company recently commissioned a new 100 million rand (US \$10 million) plant to manufacture armored cars at Isando outside Johannesburg, and pledged to remain among the leading suppliers to the growing African market.

In addition to the Husky clearance vehicle, DCD produces light and heavily armed variants of the Springbuck and Mountain Lion armored personnel carriers, most of which have been sold to the Nigerian Army and police forces. It also produces mine-resistant, ambush-protected versions of the Springbuck IV, which are widely used by Nigerian security forces.

However, the largest armored vehicle market remains in North and northwestern Africa, where countries are battling Islamist insurgencies that rely on heavy bombs and improvised explosives.

This year, Libya has ordered 300 BDRM and BVP-1 armored vehicles from the Czech Republic. The supply agreement includes the refurbishment of a further 300 variants of the heavily armored BDRM vehicles already in service with the Libyan Army.

In April, Libya received a total of 69 armored cars, with 20 Puma armored fighting vehicles coming from Italy and 49 Jordanian-made NIMR armored vehicles from the United Arab Emirates (UAE). Libyan Prime Minister Ali Zeidan said last week that the country needs more heavily armed, high mobility armored cars for border security, rapid response, force protection, logistics, mine detection and VIP transport operations.

Due to its protracted counterterrorism war, Algeria remains one of the larger armored vehicle markets. In 2011, the country ordered 54 Fuchs armored vehicles worth \$248 million from Germany, and it is set to receive a further 1,200 of the same vehicle over the next 10 years.

Sensing the high potential for market growth in North Africa, UAE-based armored vehicle and defense equipment maker Tawazun Holdings last year signed an agreement with the Algerian government to set up a factory to jointly produce NIMR armored vehicles in Algiers.

NIMR Automotive, a subsidiary of Tawazun, intends to produce four-wheel and sixwheel variants of the armored vehicle. The company has received orders for 1,800 vehicles from North African and Middle Eastern

Meanwhile, international defense consulting firm Frost & Sullivan has predicted a massive growth in African and Middle Eastern defense markets driven by defense modernization programs and the procurement of advanced defense platforms.

The report, titled "The Middle East and Africa Defence Market Assessment," said the defense market earned revenues of \$29.67 billion in 2012 and estimates this will reach \$45.49 billion in 2021.

Saudi Arabia and the UAE in particular are looking to develop their military capabilities in the light of civil unrest and international









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SPECIAL REPORT

IVILITARY LOGISTICS

July 15, 2013 www.defensenews.com



New Strategy: New M2A2 and M3A3 Bradleys are loaded onto railcars at Pier 8 in Busan, South Korea. Equipment and troops will be redistributed through a complex logistics chain as the US "pivots" to the Asia-Pacific.

US Pacific Shift Carries Heavy Logistics Price Tag

By PAUL McLEARY

WASHINGTON — A year and a half after the Obama administration released its latest National Security Strategy calling for a "rebalancing" of US strategic focus from the Middle East to the Pacific, the broad outlines of what that shift may look like are coming into view.

What the military is discovering is that the shifting of troops and material across the globe, and then

finding them homes, shelter and storage space, is complex and won't come cheap.

To take one example for which some preliminary figures are available, it's estimated that moving approximately 9,000 Marines from Okinawa and spreading them out to several other locations in the region, as plans call for, would cost about \$12 billion, according to Defense Department figures.

The plan is to shift roughly 4,800

Marines to Guam, 2,700 to Hawaii and 2,500 to Australia, with others coming back to the US mainland.

But a Government Accountability Office report published on June 11 warns that the Pentagon "has not developed an integrated master plan for its current realignment plan, and it has not developed a strategy to support the development and oversight of the Japanese construction projects associated with other realignment initiatives."

While the Marines continue to address that logistics dilemma, the Navy is well into the planning phase of positioning 60 percent of its ships to the Asia-Pacific region

by 2020. This includes not only adding a fourth forward-deployed submarine to Guam in 2015 and four littoral combat ships staged in Singapore, but also more maritime patrol aircraft and transferring Fire Scout UAVs and other electronic surveillance aircraft from Afghanistan.

The Navy also is shifting assets from Europe. It will base four destroyers in Rota, Spain, which will provide a ballistic-missile defense capability for Europe. That mission had been performed by a complement of 10 destroyers that rotated from the US to the Mediterranean, but six of those ships will be shifted to the Pacific.

The Air Force also will shift capacity from Afghanistan to the Asia-Pacific, including B-1 bombers, MQ-9 Reapers, U-2 spy planes and Global Hawk UAVs.

For its part, the Army already has about 91,000 soldiers and civilians assigned to the Asia-Pacific, which man and support eight brigade combat teams, 12 batteries of Patriot missiles and other enablers.

An Army report released in early July that spells out its equipping priorities from 2013 to 2016 admits that due to the wars in Iraq and Afghanistan, "there is a significant portion of our gear that is in the wrong place for the future, given See US PACIFIC, Page 16

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Arctic Terrain Poses Severe Challenge to Canadian Plans

By DAVID PUGLIESE

VICTORIA, British Columbia — Logistics challenges are limiting Canada's ambitious Arctic military plans for building installations and resupplying forces in its vast, harsh northern region.

Since 2006, the Canadian government has emphasized that it intends to greatly boost its military presence in the Arctic because the oil, gas and mineral resources there are critical to economic growth.

"Canada has a choice when it comes to defending our sovereignty over the Arctic — we either use it or lose it," Conservative Party Prime Minister Stephen Harper said in July 2007.

Since then, his government has announced the creation of an Army response force that could travel to the region at short notice, proposed establishment of a naval installation in the north and an Arctic training center, and developed plans to purchase new aircraft to transport troops and equipment. But Canadian military officers have discovered that the logistics of operating in the Arctic rival or surpass the challenges of operations in austere war zones such as Afghanistan.

Army commander Lt. Gen. Peter Devlin warned in January that the high cost of logistics in the Arctic was forcing him to scale back on training in the region.

"Recent northern exercises and operations highlight the fact that conduct of these activities can cost "It is harder to sustain operations in our High Arctic than it is to sustain operations in Kandahar or Kabul because in the Arctic, it's what you bring."

Gen. Walter Natynczyk Canada's former defense chief

from five to seven times more than if they were conducted in Southern Canada," Devlin wrote in a document titled, "Programme Assessment 2013-14 Canadian Army." That 14-page report, signed by Devlin on Jan. 31, was obtained by Defense News.

"The Army will have to limit /reduce the scope of its activities in the North, thus directly impacting on Canada's ability to exercise Arctic sovereignty," Devlin, who retires July 18, wrote in the assessment.

Defense analyst Martin Shadwick said the logistics issue is hindering the military's Arctic strategy.

"The distances to travel up there are enormous, and the Canadian Forces has to transport in everything they need," said Shadwick, a strategic studies professor at York University in Toronto.

Canada's northern region con-

sists of more than 1.5 million square miles—larger than India—but there are fewer than 120,000 people.

Logistics and the high cost of moving building material into the north is also driving the Canadian government's decision to scale back on a proposed naval facility at Nanisivik, Nunavut. The government proposed a CAN \$100 million (US \$98 million) upgrade to an existing deep-water port at a former mining site. That has been greatly scaled back, and plans now involve only a refueling station open for just the summer months. The station is expected to be operational by 2016.

The Royal Canadian Air Force had also looked to expand Resolute Bay in Nunavut, potentially transforming it into a key base for Arctic operations. That would have involved the construction of a 3,000-meter paved runway, hangars, fuel installations and other infrastructure. But the Air Force confirmed last year that proposal would not proceed.

"In the Arctic, you are dealing with a lot of competition for the small number of workers there as well as high building costs because all material has to be shipped in," Shadwick said. "You also have a very short building season because of the weather."

Last year, Canada's then-defense chief, Gen. Walter Natynczyk, accompanied US Army Gen. Charles Jacoby, commander of Northern Command, to the Arctic as part of a tour to highlight the challenges of



CANADIAN FORCES

Remote Access: Crew members of a Canadian Forces CC-130 Hercules aircraft drop supplies from the plane's ramp during a search-andrescue training scenario as part of Operation Nunalivut 2012, held in Nunavut, the country's largest and northernmost territory.

operating in Canada's northern climate. Shortly before he retired in December, Natynczyk acknowledged that supporting missions in the Arctic was tougher than in war zones.

"We are challenged more by operating in our own domain than in operating around the world," the country's top military commander told the House of Commons defense committee on Nov. 3.

"It is harder to sustain operations in our High Arctic than it is to sustain operations in Kandahar or Kabul because in the Arctic, it's what you bring."

Shadwick said it is difficult to see a solution to Canada's logistics problem in the north. Costs of transporting equipment over the vast expanse show no sign of decreasing, and it is difficult to use technology to replicate Arctic training conditions.

"You can't wire simulators for snow," he said.

Shadwick said one tactic the Canadian Army tried this year is to train in snow and cold conditions in the midnorthern areas of the country, closer to Canada's urban centers

But Shadwick said such training does not deal with Canada's desire to have more of an actual presence in the Arctic with installations and personnel.

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Experts: Bureaucracy Blocks Integrated Logistics Agency in India

By VIVEK RAGHUVANSHI

NEW DELHI — Although many Indian defense officials have urged the development of a centralized agency to integrate the logistics structures of the Army, Navy and Air Force, service rivalries and refusal to include private companies in the provision of logistics services have stymied progress.

Ministry of Defence sources said the MoD bureaucracy does not favor expanding access to private companies to cater to the military's logistics needs, and would rather keep that activity within government-owned entities.

"There is no doubt a crying need for establishing a national or joint military logistics system that will ensure economy as well as efficiency, but organizational politics and lack of firm direction from the top is preventing such a structure from emerging so far," said Rahul Bhonsle, a retired Army brigadier general and defense analyst.

A senior Army official, however, said the military services favor an expanded corporate presence to provide for logistics needs, and support outsourcing their non-core logistics functions to private-sector companies. The official said the MoD bureaucracy has resisted these steps because of pressure from state-owned defense companies, which enjoy a near monopoly in weapons and equipment production, the official said.

Centralization of power within the MoD bureaucracy has delayed acquisition of spares and delivery to field repair bases, the official said. About 70 percent of the Army's weaponry and equipment is obtained from overseas, causing excessive delays that adversely affect the repair and maintenance

of essential equipment, the official said.

Service officials should have the authority to procure essential equipment directly from the original equipment manufacturers, an Air Force official said, and equipment that can be acquired locally would save time and money.

But the MoD bureaucracy will not easily cede authority, said Mahindra Singh, a retired Army major general.

"Whereas the service chiefs are responsible for the logistics of their own service, they have very limited financial powers because all of the powers are ultimately with the bureaucrats in MoD, who are not directly associated with the logistics work performed in the field." Singh said.

As such, the bureaucrats will never give away their financial authority to buy weapons and equipment, which is an essential part of managing logistics and the supply chain, Singh said.

Even domestic defense companies have approached the MoD on occasion, urging the inclusion of local industry in logistics-related repairs and maintenance, said an executive of the Federation of Indian Chambers

of Commerce and Industry, the lobbying arm of the domestic defense industry. The Army possesses advanced equipment, but local repair facilities are not adequate, the Army official said. So the service is forced to depend heavily on the MoD for spares and other gear.

Including local industry in this kind of support will ensure maintenance is attended to more quickly and at cheaper rates, the Army official said.

"In times of a futuristic war, the entire country, along with its civilian infrastructure and industries, will have to be mobilized for logistics support, and India is currently not preparing for such a situation," Singh said.

Bhonsle, however, said mobilization of the entire country is theoretically possible, and regulations exist to achieve this. But no national mobilization exercise has taken place since the 1970s, during the war for the liberation of Bangladesh.

"While sectoral exercises have been held, these are not adequate to test the efficiency of the system," Bhonsle said. \Box

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Turks Task Procurement Office With Life-cycle Management

By BURAK EGE BEKDIL

ANKARA — Turkey's defense industry planners are pushing to "professionalize" military logistics by putting life-cycle management into the hands of the country's procurement office, a move the government hopes will boost efficiency and maximize savings in running logistical programs.

"I must admit that we never had a fully professional logistical management system before. We worked hard in studying various examples of how countries with advance systems operate, and devised a hybrid system," one senior procurement official said.

A Defense Ministry official said, "Our studies revealed that if logistical management is handled by the military end users there is seri-

ous risk of rising costs and inefficiency."

As a first step in reshuffling the system, a special logistical management unit was formed last year within the procurement agency, the Undersecretariat for Defense Industries (SSM).

"The idea is that SSM, which runs billions of dollars worth of programs, also manages the life-cycle management for major, if not all, modernization and acquisition programs," the procurement official said.

Under the new system, SSM would announce new logistical contracts as part of major procurements, he said.

"These logistical management contracts could involve major programs like the AEW&C and Meltem II," he said.

Recently, Turkish Defense Minister Ismet Yilmaz announced that major delays in a multibillion-dollar program for the purchase of four airborne early warning and control (AEW&C) aircraft from Boeing were due to the company's failure in developing the system as well as other uncontrolled events within the program.

Under a July 23, 2003, contract, priced at more than US \$1.6 billion, Boeing was to develop and deliver four AEW&C aircraft to the Turkish Air Force in 2008. The program involved the delivery of the 737-700 airframe, ground radar and control systems, ground control segments for mission crew training, mission support and maintenance support.

Major programs such as these require careful logistical manage-

ment, he said.

Another example of a complex program requiring close oversight is Meltem II.

At the beginning of this year, Thales delivered to the Turkish military the first maritime surveillance aircraft equipped with its AMOSCOS mission system under the Meltem II program.

Thales is the prime contractor for the program, which calls for the delivery of six maritime patrol aircraft for the Turkish Navy and three maritime surveillance aircraft for the Turkish Coast Guard, all based on modified CASA CN-235 platforms. The program includes the provision of additional maritime patrol systems to the Turkish Navy, to be integrated on ATR 72 aircraft.

Under the new logistical management plan, the procurement official said, local prime contractors would be asked to sign logistical management contracts with SSM on behalf of all system suppliers.

"This is a system used commonly in the United States," he said. "Basically, we want SSM to deal with a single entity in running logistics programs instead of several companies. We will expect the prime contractors to then deal with their subcontractors."

An aviation official said that as part of the new system, SSM could sign a separate logistical management subcontract with Turkish Aerospace Industries (TAI) for the country's first indigenous basic trainer aircraft, the Hurkus.

"This contract will involve logistical work only, and TAI will be tasked with the life-cycle management for the Hurkus," the official said. "I think, here, the system will be similar to how logistical support work will be handled in the F-35 [Joint Strike Fighter] program."

The Hurkus has been going through a final round of tests before it makes its maiden flight in August.

The first prototype successfully went through engine tests in February, the second is being tested for static durability and cabin pressure, the third is being assembled, and the fourth will be tested for metal fatigue.

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Australia Decides What To Keep, Donate or Dispose

By NIGEL PITTAWAY

MELBOURNE, Australia — As Australian forces leave Afghanistan, military logisticians must determine what equipment to bring home, what to donate to Afghan or remaining coalition forces, and what to dispose of in situ.

In a speech to the Land Warfare Conference in October, "From Broomsticks to Blast Gauges," then-Defence Minister for Materiel Jason Clare outlined the task ahead. Announcing that the drawdown would occur over the following 12-15 months and be completed by the end of 2013, Clare said, "There are still big challenges in front of us. As we draw down, we will have to bring equipment home [and] this is a massive logistical exercise in its own right."

Clare revealed that a logistics team had been working on the task since the beginning of 2012.

"We have around [AUS] \$2.8 billion (US \$2.57 billion) worth of materiel in Afghanistan. This includes around 1,600 accommodation modules, 600 shipping containers, 350 vehicles and around 3,500 computers," he said.

"Some equipment will be flown out on C-130s and C-17 heavy lift aircraft [but] the vast majority will be shipped using commercial freight arrangements."

Equipment to be returned includes the Army's Bushmaster protected mobility vehicles, personal body armor, counter rocket, artillery and mortar systems, and some of the relocatable hardened structures, but some items are likely to be placed into storage on arrival home.

An Australian Defence Forces (ADF) spokesperson said that while the majority of equipment will be returned to Australia,

some counter-roadside bomb items acquired under Australia's rapid acquisition process have not been identified as necessary because a replacement capability has been found or because the item was acquired to counter an Afghanistan-specific threat.

"The force protection of all ADF and Australian government personnel remains our highest priority; therefore, Defence will not discuss the specific capabilities that will remain in Afghanistan for operational security reasons," the spokesperson said.

"The capabilities that do remain behind may be transferred to the Afghan National Security Forces or to the United Nations to assist in humanitarian operations."

The cost of itemizing, cleaning, packing and shipping equipment home is reported to be about \$230 million.

"The task of redeployment and remediation of the equipment and sites that have supported the ADF in Afghanistan over the past 11 years is highly complex," explained the spokesperson.

"Afghanistan is a land-locked country requiring long lines of communication [through a variety of modes including air and sea], which makes the redeployment of equipment and vehicles challenging. This is also occurring in a time frame when many other nations are also withdrawing, which puts pressure on transport contractors and egress routes [and] therefore planning needs to be highly coordinated with coalition forces and other agencies.

"Another challenge is ensuring the management of equipment flow from the Middle East area of operations meets Australian quarantine requirements and is synchronized with the capacities of our logistic agencies to receive this equipment back into



US ARM

Weapon Decisions: Australian light armored vehicles drive through Tangi Valley, Afghanistan. Australian logistics experts are shaping strategy to decide the fate of such gear as Australia begins withdrawing from the country.

the national inventory."

The Australian Defence Force has a multiphase Military Integrated Logistics Information System (MILIS) project underway in response to lessons learned from recent deployments such as Afghanistan, but also in the wake of a report by the Australian National Audit Office that highlighted the challenges of providing logistics support across more than 100 different logistics information systems in a high-tempo operational environment.

Known as Joint Project 2077, the MILIS system has delivered products and upgraded existing systems to provide an integrated solution to the ADF's logistics requirements.

The most recent phase delivered a radio frequency identification tracking system, which helps track items as they move through Defence Department and contractor-operated cargo and logistics

systems

In the next phase is a \$200 million project to enhance the ADF's capability to deploy logistics.

"Phase 3 will enhance the ADF Logistics Information and Communications Technology deployable capability by extending the reach of critical core functions to units on operations and delivering an integrated intransit cargo visibility system. This will be achieved through full integration with the core transactional system of the MILIS, including a standardized user interface," said the Defence Department spokesperson.

The phase is at the pre-initiation stage of the acquisition process so details are unavailable, but a decision is expected in the 2015-18 time frame, with initial operating capability to follow between 2017 and 2020. □

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16 July 15, 2013



Nordic Logistics Collaboration Stalls

By GERARD O'DWYER

HELSINKI — Efforts at crossborder collaboration to improve efficiencies and cut costs of Nordic military logistics are stalled as recent initiatives have failed to produce expected results.

NORDEFCO, the Nordic Defense Cooperation agency, following a military chiefs meeting here May 12-14, found that many of the cooperation proposals investigated did not meet established cost and efficiency criteria.

That meeting set down plans to review or discontinue certain forms of cooperation, including joint logistics initiatives outlined under NORDEFCO's Nordic Joint Logistics Support Concept.

The details of what this will mean for military logistics collaboration in the long term will be further evaluated when NORDEFCO chiefs meet in the fall.

"Discontinuing cooperation groups that are found to be inadvisable was discussed at the meeting. At least for the present, joint Nordic logistics arrangements have been discontinued. If there are not enough savings, or practical gains cannot be seen, then functions will be terminated," said Finnish Col. Arto-Pekka Nurminen, NORDEFCO's secretary-general. Finland holds the NORDEFCO chair this year.

NORDEFCO was established in 2009 to pursue practical and money-saving forms of closer cooperation among the militaries of Sweden, Denmark, Norway and Finland.

The possibility that certain areas of cooperation could be discontinued had already been flagged when Nordic defense force commanders met here in April.

However, Nurminen signaled that collaboration in the area of logistics would remain under review, and the door is not closed to developing joint cooperation projects on a case-by-case basis.

NORDEFCO's project evaluation on developing closer collaboration in logistics had operated under the umbrella Cooperation Area Logistics Support And Maintenance (CA-L&M).

Eight proposals were considered, including development of a common, sustainable logistics approach for C-130J Hercules aircraft. That concept would have been based largely on a performance-based logistics working model and the establishment of a joint Nordic pool of C-130J aircraft spare parts supported by a "Repair and Replace" program

The CA-LS&M evaluation was extended to explore the possibility of launching a project to base all regulations on European Aviation Safety Agency standards; the development of a cooperative system that would enable the use of "partner nation" aircraft facilities to carry out aircraft maintenance; and the establishment of inter-Nordic technical teams.

The evaluation sought to estimate how much value could be gained by greater availability of tactical support aircraft and lower potential operating costs.

"What is becoming clear from NORDEF-CO's activities is that ... projects must prove themselves in terms of their money-saving abilities and how they can fit into improving overall defense capabilities, domestically and regionally," said Peter Lundgren, a Stockholm-based political analyst.

The CA-LS&M evaluation also examined if

the combined leverage of four Nordic militaries could extract better prices and deals on spare parts and services from contractors. The potential for running common technical teams was also examined in a support role for joint international operations.

"There were always going to be challenges in reaching unity on positions regarding C-130J-based logistics cooperation," Lundgren said. "All four militaries operate different systems for acquiring and maintaining C-130J aircraft, including third party restrictions.

"Denmark acquired its four-aircraft C-130J system directly from Lockheed Martin, complete with a maintenance and spare parts supply agreement," he said. "Norway bought its four C-130J Hercules aircraft under a Foreign Military Sales agreement with the US government. All this reduces the potential for cooperation, as under purchase contracts Lockheed lays down strict third party access to documentation and spare parts."

Nordic logistics collaboration and resource sharing regarding the C-130J would have required extensive, early-stage negotiations with the US government and Lockheed, as well as other possible stakeholders and contractors, Lundgren said.

Limited logistics cooperation, including the Logistics Coordination Project 2012 linked to the operation in Afghanistan, have been run intermittently among Nordic militaries. The Logistics Coordination Project 2012 established the template for joint tactical air support intended as the basis for a generic Nordic Logistic Concept for future operations.

This Nordic Logistic Concept was followed in November by the signing of a letter

of intent among the four Nordic nations to establish a Nordic Tactical Air Transport (NTAT) system. The system would pursue cost-reducing initiatives such as the pooling of aircraft capacities, command and control, joint training and common sustainment.

The NTAT also focused on promoting exchange of information on planned procurements, allowing the four nations to exploit common development, procurement and maintenance programs.

Although the original plans for joint logistics cooperation are on hold, NORDEFCO continues to explore logistics collaboration in other niche areas.

One is the proposed Task Force 2020 project, which is examining a common approach to the development of a Nordic Battalion task force that would comprise C4IS and logistics.

Nordic militaries are correct to focus on areas of cooperation that have the highest potential to reduce costs and directly improve national and regional defense capabilities, said defense-political analyst Thorvald Stoltenberg, a former Norwegian government minister in defense and foreign affairs in the 1980s and 1990s.

"It's wise to pursue projects that can actually strengthen the combined defense capability of all Nordic nations," Stoltenberg said. "Finding cost savings is important, but so too is producing concrete cooperation that elevates defense capabilities at both national and regional levels. There is potential for future cooperation in logistics, but only if there is sufficient common ground and the savings found are sustainable." □

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US PACIFIC

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the adjustments to regionally aligned forces and redesigned units."

The logistical challenges in getting that gear from the Middle East to the Pacific — or back to the United States — "will be one of the essential elements in our equipping guidance," the paper said.

One large-scale money-saving project that the Army and Marines are working on is the divestiture of thousands of hulking mine-resistant, ambush-protected (MRAP) vehicles taking up parking spots in government depots.

The Army has said it will divest 13,000 MRAPs from its 21,000-vehicle fleet, putting about 4,000 of the blast-resistant vehicles in long-term storage and pre-positioned stocks, while keeping 4,000 in regular Army formations.

Likewise, the Marines have said they plan to retain about 1,200 MRAPs while they scrap or sell off about 2,680 others in the coming years.

The DoD has spent about \$50 billion on buying and maintaining

MRAPs since 2007.

This massive political and military rebalance effort comes as requirements from the Middle East are slowing down, but remain a key area of operations for US forces.

At an April 25 event focused on the Army's role in the Pacific, the chief of staff for strategic plans and policy on the Pentagon's Joint Staff offered an honest — if somewhat uncomfortable — assessment of the strategic landscape.

"We've been consumed by that arc of instability from Morocco to Pakistan for the last 10 years," Rear Adm. Robert Thomas said. And while the senior staffs at the Pentagon are dutifully discussing how they are rebalancing to the Pacific, "I suspect, though, for the next five years, just as the last 10 years, we will have this constant pull into the" Middle East.

Over the next several years, he continued, "I think that you're going to continue to talk about a rebalance to Asia, and you're going to do some preparatory work in the environment, but the lion's share of the emphasis will still be in that arc of instability."

The needs of Central Command

(CENTCOM) and Pacific Command (PACOM) are obviously different: While CENTCOM continues to deal with the political and social unrest caused by the Arab Spring, a bloodletting in Syria that is drawing in all manner of regional actors and an Iranian regime that continues to defy the international community with its nuclear program, PACOM is focusing on reviving atrophied militaryto-military contacts while offering a host of advisory and humanitarian assistance to Asian allies.

Thomas offered a warning on this count as well. Competition for resources will stir in the halls of the Pentagon between the Pacific and Central commands, he said.

"If we think that this is going to be at all a clean break and not a competitive environment for forces between two very capable and influential COCOMs, we're mistaken."

Speaking at the same event, Lt. Gen. Robert Brown, commanding general of the US Army's I Corps, which has been aligned to the Asia-Pacific, said PACOM has already been assigned three Stryker brigades, two of which are based at Joint Base Lewis-McChord in

Washington state.

Highlighting the shift, Brown said that just three months after returning home from Afghanistan, the 3rd Stryker Brigade Combat Team, 2nd Infantry Division had already traveled to the Philippines for a training mission with Filipino forces for Joint Exercise Balikatan in April.

While Brown said the Army is working with allies in the region on counter-roadside bombs and intelligence-sharing capabilities, the most likely mission he envisions for US forces "is humanitarian assistance and disaster response — that's the most likely thing we'll respond to"

While humanitarian missions in the Pacific area have traditionally been a Navy mission, Brown boasted of I Corps' capability to assume some of the burden.

"I can have as few as a dozen folks on a plane within hours, or I can have five C-17s worth," he said. "One of our huge advantages as I Corps is we're extremely well located strategically, we have three deepwater ports" 12 miles away from Fort Lewis, as well as 52 C-17s.

Brown's staff has been working

on setting up joint task forces with military staffs in the region, which he said are focused on "enabling partner capacity," as well as intelligence support "that we're already providing."

This jibes with what the Australian Army's Maj. Gen. Rick Burr—who, in an unusual move, was named deputy commander of US Army Pacific in 2012—told Defense News when he assumed command in February.

Burr also brought up the primacy of the logistics-heavy humanitarian mission, and the Army's desire to play more of a role in assisting in disaster relief in the Pacific.

While "the potential for anything to happen at any time is very real, particularly with natural disasters ... being prepared to respond to any crisis that could happen at short notice is clearly the most pressing issue at the moment."

Now planners just have to figure out how to move all of these assets across the globe while automatic budget cuts outlined under the sequestration plan are beginning to take large bites out of DoD budgets. \square

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USN Eyes C-2, H-60 Replacement Programs

By CHRISTOPHER P. CAVAS

WASHINGTON — The Sikorsky H-60 Seahawk helicopter and Northrop Grumman C-2 Greyhound carrier-on-board delivery (COD) plane are longtime stalwarts of US Navy operations. The 35 Greyhounds constantly shuttle passengers and cargo to and from the fleet's aircraft carriers, while some 460 H-60s of various models carry out a wide range of missions.

Both aircraft types will become due for replacement, and the way ahead for each has yet to be determined.

The newest C-2A dates from 1990, and the service is planning to award a replacement contract in 2016. Among the contenders are an updated version of the C-2A from Northrop, and a COD version of the Bell-Boeing MV-22 Osprey tilt-rotor aircraft.

"Frankly, we're looking at tilt-rotors as a potential option to replace the COD in the future. It's a pretty versatile capability," Rear Adm. Bill Moran, the US Navy's director of air warfare at the Pentagon, said during a recent interview.

While the flexibility of a tilt-rotor is attractive, the Osprev has its issues.

'We're concerned about its range, about [the lack of a] pressurized cabin, those sorts of things," Moran said. "But there may be ways to mitigate those effects if we have to.

So we are looking at it very hard. We just did an MUA, Military Utility Assessment, on the [carrier] Harry S. Truman with the MV-22s to see early on if that capability could operate inside the busy deck cycle in the carrier environment without disrupting that deck cycle.'

The flying portion of the assessment was completed in June.

"We did crawl, walk, run phases," Moran said. The crawl phase was to determine if the MV-22 could safely approach, land and take off from the carrier, which was operating with a relatively clear flight deck. For the walk phase, "the carrier was busy, but not stressed.

The final cycle, he said, "was a very stressed environment where we had to fit in the MV-22 to act like a COD.'

Final results of the MUA are still being compiled.

Naval Air Systems Command (NAVAIR) also is performing structural assessments of all active C-2As.

"We need to see what is the art of the possible," Moran said. "Not just re-winging them, upgrading those aircraft to carry us much further into the future. And kind of balancing the costs with the effectiveness of both, determining whether we need to change the way we are doing it."

The 35 aircraft should keep flying until the

mid-2020s, Moran said. "Right now is our opportunity to evaluate what we need to do, how much money we want to put towards remanufacturing the wings and the fuselage and the cockpit of the current COD fleet, or do we go with a production line V-22 option? Or do we look at something completely different? We're looking at all of those options."

H-60 Replacement

The time frame to determine the follow-on for the fleet's H-60 helicopters is further off, but far more complex. Key missions for the aircraft, according to a request for information for a capabilities-based assessment issued in April, include surface warfare, deep and shallow water anti-submarine warfare. mine warfare, special warfare and combat search and rescue, logistics support, medical evacuation and humanitarian assistance and disaster relief.

The Navy is steadily replacing its SH-60B, SH-60F and HH-60H models with new MH-60R and MH-60S models, but procurement for the R and S production lines will end after 2016. After that, the H-60, based like the C-2A — on a design first developed in the 1970s, will need a replacement.

Led by the Army, the Pentagon has been working on a service-wide future vertical lift effort, a partnership among all of the military services and industry. Within that, the Navy's program to replace the MH-60Rs and MH-60Ss is dubbed the Maritime Helicopter,

"We are putting our own MH-XX papers through the system, getting that started today to develop what we think are going to be the capability gaps for that, and the kind of technologies we would like to see," Moran said. The effort is in its earliest stages.

Another airframe that will need to be replaced is Sikorsky's MH-53E Sea Dragon mine-hunting helicopter. The Marine Corps is developing a new MH-53K model to replace its existing fleet of heavy-lift helos. But the Navy is not planning to invest in the K model.

"Right now, we are not planning to replace those [Sea Dragons]," Moran said. "We are looking at other capabilities. We think there is a path to more unmanned capability to solve the countermine and mine detection' missions.

The Navy and Marines, through the director of expeditionary warfare, are developing a roadmap for airborne mine detection.

"There is a lot of promise to what they are doing, both in the unmanned surface vehicle and unmanned undersurface vehicles," Moran said. "But we are not developing a new heavy-lift capability." \square

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The Battle Over Global Hawk

Will Congress Let USAF Send the \$200 Million Planes to Boneyard?

By ARAM ROSTON

WASHINGTON — June is the start of the rainy season in the South Pacific, six months of storms that come in fast and unpredictable. And when the wind starts blowing, that takes its toll on US intelligencegathering far off in North Korea.

A substantial amount of the intel on the Hermit Kingdom comes from the three massive Global Hawk surveillance UAVs based at Andersen Air Force Base, Guam. Because of special flight restrictions, the Global Hawks can't fly over thunderstorms, nor, without a way to see the clouds ahead, can they go around them. So whenever a hint of bad weather arose on the route Global Hawk was assigned last year from Guam, the missions were canceled. Last year, the unmanned planes were grounded for an entire month, says a source with knowledge of the operation.

This susceptibility to South Pacific cyclones is adding new energy to the political hurricane raging in Washington over the future of the expensive unmanned aircraft.

It's been a year and a half since the Air Force said it no longer needs the Global Hawk.

The service argued that the planes, each built for more than \$200 million, don't do their jobs as well as the time-tested U-2 manned spy plane. So the Air Force wants to take the entire fleet of 18 Global Hawks and park them in the "bone-yard" — the aircraft storage facility at Davis-Monthan Air Force Base, Ariz.

Now the battle lines are forming in what may be an epic contracting war. On the one side, swinging hard, is Global Hawk-maker Northrop Grumman. It has some powerful arguments, and it has members of Congress who say the Air Force needs to fall in line. On the other side is the Air Force, fighting to keep the U-2, which was built by Lockheed Martin.

'Essential to National Security'

At 70,000 feet, a U-2 pilot flying northwest along the boundary of North Korean airspace can turn his head to the right, and through the visor of his spacesuit he will see the silhouette of Earth's curvature. Then he will see a silent green phosphorescent flash before the sky suddenly goes dark.

They call that flash "the termina-

tor." Until just two years ago, the U-2 program itself — the workhorse of high-altitude ISR for 60 years — was due to be terminated,

For a time, the Global Hawk vs. U-2 debate revolved around age. The U-2, its critics said, was of a different era, before UAVs. After all, any pilot flying the U-2 now wasn't even born when the program started back in 1955.

But now, as one Air Force pilot points out, "This is not your grand-father's U-2." For example, today's U-2S jets have pressurized cockpits, although the pilots still wear spacesuits in case anything goes wrong.

If the U-2 is the aging champion, then in the other corner of the ring is the upstart Global Hawk. The autonomous plane can fly for 32 hours straight when conditions are right. That's far longer than the U-2, though not as high and with a smaller payload.

Ironically, the now-costly Global Hawk program was birthed during the cutbacks of the Clinton years. Initially pitched as a \$35 million aircraft, costs ballooned over the years by 284 percent, according to the Congressional Research Service. Much of that was due to the Air Force's shifting requirements. (It's now estimated at about \$220 million per plane including development costs.)

The Air Force, for a time, was the Global Hawk's biggest cheerleader, although the history has been complex and sometimes contradictory.

In early 2011, for example, the Defense Department's director of operational test and evaluation said "the system was not operationally effective for conducting near-continuous, persistent ISR operations."

Then, in June 2011, shortly before the Global Hawk was fielded, Air Force officials certified the project as "essential to national security." It was meant to ensure that Congress continued to fund the program, but the proclamation would begin to haunt the service just months later.

Reversing course

In January 2012, the Air Force announced a drastic turnaround: It would terminate the Global Hawk program.

It provoked a firestorm — and a



SENIOR AIRMAN NICHELLE ANDERSON/AIR FORCE

Endangered?: The Global Hawk UAV has provided high-altitude, long-endurance ISR for the Air Force since the late 1990s, but the service says it no longer needs them.

heavy public advocacy campaign on Capitol Hill by those who support the plane. Like many major modern weapons, its subcontractors are widely distributed across the United States, ensuring a broad base of political support.

Experts were confounded that the Air Force had changed its mind so quickly. And Congress put its foot down.

In the 2013 National Defense Authorization Act signed this year, Congress told the Air Force it would have to fly the Global Hawks it had already — 16 plus two under construction — through 2014.

And to make sure no Global Hawk went on to the boneyard, the act was specific: No money "may be obligated or expended to retire, prepare to retire, or place in storage an RQ-4 Block 30 Global Hawk unmanned aircraft system."

Meanwhile, the 2013 Defense Appropriations Act went further. The service had resisted ordering new planes, on the assumption that by the time they were delivered, they'd be going right to the boneyard. Now the Air Force was told to go order three of the planes that had previously been budgeted for in 2012.

But the Air Force has resisted. As another officer said, "Why are they making us spend money on something we don't want or need?"

That attitude has irked some Northrop Grumman supporters on Capitol Hill.

In May, Rep. James Moran, D-Va., and Rep. Buck McKeon, R-Calif., wrote a stinging letter to Defense Secretary Chuck Hagel demanding that the Air Force do what it was told.

"The Air Force has continued to ignore clear Congressional intent," they said.

And the House Armed Services Committee in June voted for a new defense authorization bill that would force the Air Force to use the Global Hawks until 2016.

Chasing solutions

There is much disagreement on how much it would cost to upgrade the Global Hawk Block 30s, where there are shortfalls that need addressing. Take the sensors. The Air Force reported to Congress that "upgrades to the GH Block 30 to achieve parity with the U-2 program require an expenditure of approximately \$855 million."

It might not be able to fly as high, but at least it could photograph as clearly.

Northrop Grumman's defenders, eager to get the Air Force to change its mind, say the service is way off the mark. The company has offered to put better cameras on the Global Hawk for just \$48 million.

"We've looked at that and we've addressed it," said Tom Vice, Northrop Grumman's president of Aerospace Systems. "We looked at how to open up our architecture. We've offered a firm fixed-price offer to the US Air Force to integrate the SYERS sensors onto Global Hawk. And that would cost the Air Force only 6 percent of what the Air Force believed it would cost to upgrade the current Block 30 cameras. Guaranteed price; no risk to the government."

Northrop Grumman's \$48 million versus the Air Force \$855 million is an unresolved discrepancy, for the moment. One reason it can work: The company wants to simply remove the cameras from the competition — essentially cannibalizing the U-2.

As for the Global Hawk's getting grounded in places like Guam, where it can't be relied on during the rainy season, the plane's supporters say that's the Air Force's fault in the first place because of onerous restrictions. Supporters argue that requiring the plane to fly

10,000 feet over clouds, and limiting it to one route was the problem that caused it to be grounded excessively.

Now it's been given alternative routes, which supporters say will cut back on canceled missions.

The difficulty has been that Global Hawk is unmanned, without "sense and avoid" technology to meet air traffic requirements. Normally, a pilot could see the clouds and steer around them, but without a pilot, the Global Hawk can't do that.

Northrop Grumman has told the Air Force it can put "weather diversion" cameras in the Guam-based Global Hawks. That way, the operators back at base will be able to see the clouds and reroute, just as they could if the pilot was flying.

The company pitched the idea to the Air Force, offering to install the cameras for \$7 million.

Bias against drones?

There are some analysts who believe that in spite of the Global Hawk's shortfalls, the Air Force is making a mistake.

"However you cut it, I think there is a good case for Global Hawk Block 30," says Mark Gunzinger of the Center for Strategic and Budgetary Assessments. "The reasons cited for retiring the Block 30s don't stand up under scrutiny. It's worth questioning."

But if the Air Force is really being disingenuous in terminating the Global Hawk, as its critics say, what would be the motive? That's where the Northrop Grumman defenders are having a difficult time.

Is it, perhaps, a lingering bias against drones, a preference for the swaggering days of the piloted plane? At a House hearing in May where he castigated the Air Force for its decision on Global Hawk, Moran said as much: "The U-2, as you know, has a pilot. And I suspect that's the real issue — the pilotless versus the piloted craft, even though the U-2 has been around longer than even some of the members of this subcommittee have been alive."

Air Force Chief of Staff Gen. Mark Welsh protested. "Pilot being in the airplane had absolutely nothing to do with it. I couldn't care less. We want the platform that will do the best job of accomplishing the mission assigned — manned or unmanned — and we've said that all along," Welsh said at a May 9 House Appropriations defense subcommittee hearing

And after all, the Air Force has hundreds of unmanned planes and continues to develop new ones. It's a hard to argue that the service simply doesn't like unmanned aviation any more. \square

From the July issue of C4ISR Journal.





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Afghanistan Pullout: US Army's \$30B Task

By MICHELLE TAN

SAN ANTONIO — The US Army is on track to bring home more than \$30 billion in equipment from Afghanistan by its December 2014 deadline, according to the top logistician in charge of the complex effort.

And they're going to leave \$7 billion in gear behind.

"We are very confident we have the proper processes and procedures in place to get our equipment out of Afghanistan and back home," said Maj. Gen. Kurt Stein, commanding general of the 1st Theater Sustainment Command (TSC).

In the past 15 months, the 1st TSC has led the effort to sort, pack, move and ship home the thousands of pieces of equipment that have accumulated in Afghanistan over more than a decade of fighting. In that time, the US has brought home about 32,000 vehicles, Stein said.

Current plans will cut almost in half the U.S. troop presence by February — from about 60,000 to about 34,000 troops.

He has the experience — he served as the senior logistician during the Iraq drawdown,

"Many folks don't really have an understanding of the challenges we have in Afghanistan," he said. "It was hard in Iraq, but it's really hard in Afghanistan.

During the drawdown in Iraq, troops could drive their equipment to Kuwait. There, the equipment was sorted and decisions were made about whether it should be saved, sent home or turned into scrap.

"We don't have a Kuwait in Afghanistan," Stein said. "It's a landlocked country."

Afghanistan also doesn't have the roads and infrastructure that Iraq does, and the fighting in Afghanistan is still heated, he

The US plans to keep or ship home about 76 percent of the equipment. The remaining 24 percent will be divested in theater, officials said.

What Gets Scrapped

The Army conducts a detailed cost analysis to determine what equipment is worth shipping home, what could be transferred to the Afghan security forces, and what should be scrapped, Stein said.

A new shipping container, or conex, costs \$3,500 to \$3,800 to buy but about \$12,000 to ship back to the US, Stein said.

"It doesn't make any sense," he said. "What we're doing in that situation is we're scrapping the containers, and now we sell the scrap metal to the local Afghans. It's good for them, it's good for us.'

To do this, the 1st TSC and the Defense Logistics Agency have expanded the military's ability to turn equipment into scrap, moving scrapping capability from Kandahar Airfield and Bagram Airfield to eight locations across the country.

Other items, such as desks and generators, are transferred to the Afghans, he said.

"Those types of things are not being scrapped unless they're unserviceable beyond repair," he said.

Mobile teams of experts embed with deployed units to go through every piece of equipment to determine what should be saved or scrapped, and work with units to transfer items to the Afghans.

This streamlines the process and makes it faster and more efficient, Stein said.

The Army will not leave any "junk" behind, Stein said.

"We're scrapping it in Afghanistan, and it's all based on cost analysis — what makes sense to ship and what doesn't," he said.

The military also is making progress and saving money - on how it's getting equipment out of Afghanistan, Stein said.

Last summer, about 80 percent of the equipment was being flown out of Afghanistan, either straight back to the US or to neighboring countries for shipment back home.

Now, about 80 percent of the equipment is being moved by ground to ports nearby. Most of the convoys are moving through Pakistan, using the reopened route known as the Pakistan Ground Lines of Communica-

The route had been closed to US and NATO supply convoys after a November 2011 friendly fire NATO airstrike that killed Pakistani troops.

The ability to move equipment by ground is a "tremendous cost savings to our taxpayers," Stein said.

Sensitive items are still being flown out of the country, he said.

Now that the initial retrograde push is completed, the Army is dependent on the ongoing drawdown to determine how much equipment it can move and when, Stein said.

"We're very dependent on units as they come home and aren't backfilled," he said. "It's clearly a combat operation still, and we're very well connected to [battlefield commanders]. They're the ones fighting the fight, and I'm sustaining the fight and retrograding the excess materiel.

There is an "overall, comprehensive" plan to scale down operations in Afghanistan, Stein said.

"[Post exchanges], cleaners, dining facilities. The number of soldiers is going down. so should the number of people supporting soldiers in Afghanistan."□

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Study Attacks FBI on 'Old School'

Model of Chinese Spy Tactics

By WENDELL MINNICK

TAIPEI — A new study challenges "old school" core beliefs about Chinese espionage tactics, techniques and procedures, calling many "outdated proverbs and shibboleths" concocted by the FBI.

The charges are made in a new book, "Chinese Industrial Espionage: Technology Acquisition and Military Modernization," by William Hannas, James Mulvenon and Anna Puglisi.

Though numerous former FBI officials are named, no one gets more of a stomping than the FBI's former chief China analyst, Paul Moore, who is often quoted by the media on Chinese espionage activities.

"I seem to have been chosen by the authors as a sort of straw man they can knock down as a means of discrediting the 'old school' way of looking at China and intelligence — i.e., that China has a markedly different approach to intelligence than the Soviets or the Western services," Moore told Defense News. "The book uses rather strong language to discredit my conclusions."

Moore is identified by the book as one of the propagators of the "thousand grains of sand" theory and the idea that Chinese "do not spy the way God intended."

Many of Moore's ideas are central to David Wise's recent book, "Tiger Trap: America's Secret Spy War With China." A chapter is dedicated to the grains of sand

theory.

If sand were secrets, the theory suggests that rather than use advanced satellite technology to spy on a beach and then send CIA agents at night to surreptitiously scoop up buckets of sand for analysis, the Chinese would send a thousand sunbathers to a beach with each bringing back a few grains of sand. These grains would be brought together for analysis to form a mosaic on the properties of the sand.

According to the study, the "thousand grains of sand" theory uses "faulty logic and mischaracterization of Chinese bureaucratic behavior, suggesting that they may have arisen from attempts to reduce our own cognitive dissonance in the face of key missing data."

Moore said "the book certainly sounds interesting, especially the blather about 'cognitive dissonance.' "

"I seem to be going through what I think of as a phase of trying to answer authors who can't understand how I could have been so stupid and why I didn't apply 2005 case data to studies I wrote in 1980 or 1985, or even in 1995," Moore said.

"In the 15 years since I last worked for the FBI, I have noted many changes in some areas of China's overall intelligence effort, the most striking being a very large increase in conventional-style military collection operations," Moore said. "I find this situation very interesting, in particular be-

cause it is quite obvious that US [counterintelligence] has found ways to severely compromise Chinese operational security in the military area."

Moore said the sand analogy is not his idea but came up during an international conference in 1984 by an unidentified speaker. People at the time thought it was a clever way of highlighting differences in collection methodologies and normally referred to it as the "beach analogy," he said. "The analogy somehow came to be associated with me, probably because there were very few other people working on PRC [People's Republic of China] intelligence from a theoretical point of view."

Moore said the "analogy is not about grains of sand or about somehow piecing thousands or millions of such grains into a mosaic of some sort," and the analogy "does not say that China dispatches sunbathers to the beach with instructions to get some sand; rather, it allows them to spend time at the beach."

He said the real idea behind the analogy is that a very large portion of China's intelligence collection "naturally piggy-backs on the fact that China has a huge number of intelligence consumers who are intensely interested in visiting any place that will advance their studies, careers or work." On their own initiative, "they will individually or in small groups try to, as the Brits put it, 'hoover up' any interesting information they come across and carry it away with them."

The collectors do not collect intelligence "one grain of sand" at a time. Instead, they tend to collect things in "consumer-sized chunks, precisely because they are consumers collecting for their own narrow interests" often resulting in the collection of a very large intelligence product.

Other "old school" concepts rejected by the study are that China does not pay for secrets or use traditional tradecraft or only recruits "good people." The study called these tenets "hoary chestnuts" and points to numerous cases in which China used honey traps, bribery and people of ill repute. Numerous cases are cited as evidence that Moore and other former FBI CI officials are wrong about their conclusions.

In 2008, Ian Clement, the deputy mayor of London, was drugged by an attractive woman he met at a party in Beijing. After passing out, she went through his room, collecting information from his briefcase, and downloaded material from his BlackBerry. Nothing was taken from his wallet.

Former CIA translator Larry Wu-Tai Chin, who committed suicide in a prison after being convicted of spying for China, was a womanizer who "gambled tens of thousands of dollars in Las Vegas," was paid an unknown amount of money by China, and was charged with assault after fondling a young girl in his apartment building.

In 2004, a Japanese code clerk in Tokyo committed suicide after Chinese intelligence attempted to blackmail him over an affair with a "bar worker."

Moore said that as he read the portion of the book critical of him, he found himself "growing more and more irritated by the book's basic apples-and-oranges approach." For example, his position that, "as a rule, China does not pay

for intelligence" was "refuted by the fact that the [Ministry of State Security] had paid its CIA spy, Larry Wu-Tai Chin, several hundred thousand dollars for his services and information."

The problem with this approach is that the component of the MSS that ran Chin "is very small but incredibly aggressive; and the methodologies used are simply not applicable to the rest of China's intelligence practice."

Other money-for-information examples cited by the authors came from Chinese military operational intelligence, which has its own set of practices and characteristics, not anywhere near as aggressive as the MSS offensive CI component, "but still much more aggressive and 'conventional' (like the Soviet approach) than the rest of Chinese intelligence," Moore said.

The authors conclude that Chinese intelligence operations use a "layered approach to intelligence collection," ranging from traditional espionage to sophisticated cyberattacks. This "multi-level approach is clearly even more challenging for US counter-intelligence than the traditional model where intelligence services maintain exclusive control over operations."

Moore feels the crux of the problem is that the authors do not understand that "my writings and news interviews were about Chinese intelligence practices vis-avis the US national laboratories, not every dark corner of PRC espionage activity." Regarding labs and similar targets, "there is a notable lack of observed direction and control from the MSS or other services, money normally does not change hands, there is a very striking occurrence of 'good people doing bad things,' and so on." □

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Despite Talks, No End in Sight for Indo-Chinese Border Dispute

By VIVEK RAGHUVANSHI

NEW DELHI — Even as India and China hold talks to resolve their boundary dispute, analysts here said Beijing will keep the issue from being solved as it looks to gain leverage while pursuing expansion in the region.

Indian Defence Minister A.K. Antony discussed the issue with his Chinese counterpart, Gen. Chang Wanquan, during Antony's official visit to Beijing July 4-7. The goal is to create a formal mechanism to improve security at the border pending the final settlement of the territorial dispute between the two countries, an official with the Indian Defence Ministry said.

China claims 92,000 square kilometers of territory India considers its own, and the border between the two countries is defined by a 4,056-kilometer Line of Actual Control (LAC), which is marked neither on the

ground nor on agreed-upon maps.

Both countries have been building infrastructure and acquiring weapons and equipment along their borders.

Sources in the MoD said China has moved new long-range missiles closer to the border with India and has contingency plans ready to shift airborne forces at short notice to the region.

The issue of China's militarization was also discussed during talks between the two defense ministers, said the source, who gave no further details.

The joint statement at the end of Antony's visit, issued by the Indian MoD, said peace along the border is "an important guarantor for the growth and development of bilateral cooperation."

"The ministers emphasized the importance of enhancing mutual trust and understanding between the two militaries," the statement said. "They reviewed the working of agreements and protocols dealing with the maintenance of peace and tranquility and directed that it be further strengthened. Appreciating that border defense cooperation would make a significant contribution in this regard, they agreed on an early conclusion of negotiations for the Border Defence Cooperation agreement between the two governments."

Despite the ongoing diplomatic initiative, analysts and senior MoD officials agree the boundary dispute won't be resolved soon.

"It appears that China has not really made up its mind on resolution of the border dispute, seen from the lack of progress after 16 rounds of discussions between special representatives," said Arun Sahgal, director of The Forum Strategic Initiative think tank. "[China] is, however, concerned by the fact that India is rising out of its stupor and has started taking steps to upgrade both infrastructure and defense capability. Beijing will keep the boundary line delineation issue hanging till such time it sees as a positive leverage."

Even as India prepares for a potential battle with China, the possibility of anything happening in the near future appears remote, analysts said.

"India and China are both strategically unprepared for war. The two Asian giants are presently on the catch-up curve from developing to developed countries," defense analyst Rahul Bhonsle said. "The overall national strategies appear to be to maintain the status quo till comprehensive national power reaches a level where surplus can be invested in war making. This stage may be decades away." \Box

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MIDDLE EAST

Crash Cripples Israeli Fighter Fleet

By BARBARA OPALL-ROME

TEL AVIV — Israel's frontline fighter jet force could remain crippled for weeks, if not months, due to delays in recovering key parts of a Pratt & Whitney-powered F-16I from deep waters off Israel's Mediterranean coast following a July 7 crash.

An Israel Air Force (IAF) source said recovery of the F100-PW-229-powered aircraft is essential for determining the cause of the crash that prompted a force-wide grounding of F-16I and F-15I fighters, all powered by the same US-made engine. Both aviators survived the crash.

But after nearly a weeklong search by Israel Navy divers and robotic system operators, defense officials are mulling options for "external assistance" in locating key parts of the F-16I Sufa (Storm) and its engine in up to 500-meter-deep waters.

Sources say options include requests to the US Navy or other friendly nations with advanced recovery capabilities, or commercial firms experienced in eastern Mediterranean operations in support of Israel's offshore energy sector.

Either way, sources here say recovery options could take weeks prior to launching a formal investigation into the July 7 crash.

Meanwhile, extensive diagnostic testing and debriefing of the pilot and weapon system officer who survived the crash appear to have ruled out human error, the IAF source said. The two-man crew appears to have been "compliant" with operational regulations and safety procedures when the engine stalled 25 minutes into a "routine flight in a designated training area," in international waters some 50 kilometers off the Israeli coast, the source said.

"We're doing as much as we can through a diagnostic process of elimination, but the Air



AGENCE FRANCE-PRESSE

Grounded: An Israeli F-16I fighter, similar to these at the Nevatim air base near Beersheva, crashed off of Israel's coast July 7. The country has grounded its F-16Is and F-15Is until investigators determine the cause of the crash.

Force commander is demanding a high level of confidence in the technology before he can start easing grounding restrictions," the source said of Maj. Gen. Amir Eshel, who ordered halts in all but "absolutely essential operational missions."

The source added that the IAF routinely trains in areas that could pose "a serious problem" — beyond obvious dangers to crew and air assets — should another crash occur. "We don't have the privilege of conducting all of our exercises in safe places," he said.

A spokeswoman for the US Air Force said she was unaware of any efforts to ground US F-16s, and an answer on the F-15s' situation was not given by presstime. The US jets fly with the same engines as the Israeli F-15s and F-16s.

Both the pilot and the weapon system officer were rescued by the IAF's 669 unit, but the estimated US \$50 million aircraft, part of a 102-aircraft acquisition first fielded a decade ago, was

deemed a total loss

A retired senior IAF general said an investigation could take months, or even years. Nevertheless, he expressed confidence in Eshel's management of the current crisis.

"He knows you don't just ground assets indefinitely; that you must determine the minimum conditions needed to start returning these planes to flight," the former officer told Defense News.

Pratt & Whitney spokesman Matthew Bates said analysis of the flight data recorder would begin once the equipment is recovered. "Pratt & Whitney is cooperating fully with the IAF to investigate the cause of the crash," he said.

He added that the company's family of F-100 engines, including the PW-229 powering Israel's frontline fighter fleet, has accumulated more than 24 million flight hours in 22 countries over nearly four decades. \Box

Aaron Mehta in Washington contributed to this report.

FUROPE

NATO Steps Up Cyber Defense Efforts

By JULIAN HALE

MONS, Belgium — NATO's Communications and Information Agency will recruit six cyber defense experts in the coming months to help deal with cyberattacks on NATO systems. This action is part of NATO's effort to move toward full operational capability by the end of October, meaning improved protection of 55 NATO sites across the world.

A NATO official said he regretted the term "full operational capability," as he argued that NATO's cyber defense policy has been modernized but that further improvements are still needed.

A big part of this effort is the Mons-based NATO Computer Incident Response Capability (NCIRC), which costs €58 million (US \$74.5 million).

The NCIRC is housed in the NATO Information Assurance Operations Centre, whose task is to look after NATO-owned systems
— not systems in NATO countries.

In comments to journalists during a visit to the NCIRC, Ian West, director of the NCIRC Technical Centre, said "the number and sophistication of attacks is growing. In a worst-case scenario, [an attack] could lead to loss of life, e.g., if intelligence information regarding an ambush does not get through as a result of the attack."

As many as nine out of 10 inbound emails to NATO are stopped because they are suspicious. Many are probes against NATO systems that are generally harmless but could be precursors to an attack.

NATO systems receive an estimated 147 million "suspicious events" per day. Technology systems winnow that to a more manageable number of serious cases, which are then dealt with by the cyber experts.

In 2012, there were 2,500 confirmed serious cases (around 200

to 300 cases per month). Many attacks are automated.

The NCIRC operates on a 24/7 basis, which is important because an attack coming from the Far East, for example, might hit the NATO networks in Europe in the middle of the night.

"The most important thing is to stop the attack," West said. In addition, NATO may carry out forensic analysis of the malicious code but does not go after the attackers. If it needs law enforcement assistance, it calls on the host nation of the attacker.

A forensic analyst from the cyber defense team can identify a specific group behind a malicious software attack through the signature left by the attackers. However, specific attribution, such as where attacks are launched from and by whom, is difficult. This forensic analysis information is shared with NATO allies so they can update their defenses.

Computer systems at NATO sites — along with those used to direct artillery fire or found in vehicles on NATO missions — are protected. However, for equipment provided by a NATO country, ultimate responsibility lies with the NATO country in question as it owns the equipment.

In addition to monitoring and protecting NATO networks, staff in Mons can be called on to form rapid reaction teams. A team could be drawn from the staff of 130 as it needs to have the flexibility to respond to a wide range of attacks. These cyber experts may act online or visit NATO sites, depending on the type of support needed.

Asked if NATO carried out offensive cyber defense activities, West said "cyber defense is purely defensive. NATO is not doing anything offensive or active defense. It is completely passive defense."

Organized crime, cyber espionage and hacktivism are the three main aims behind the attacks.

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TechWatch

A Network in the Sky

New Data Link Enables Stealthy Comms

By AARON MEHTA

WASHINGTON — Pentagon officials have long identified the F-35 joint strike fighter as key to the future of America's defense, in large part due to stealth capabilities that should allow the plane to travel in contested environments that older fighters would struggle to penetrate.

The problem is, these planes need to talk to each other without sacrificing stealth. To tackle that problem, the F-35 has incorporated Northrop Grumman's Multifunction Advanced Data Link (MADL), a system that's undergoing testing in the California

MADL is a digital waveform designed for secure transmission of voice and data between F-35s, with the potential of linking F-35s to ground stations or other aircraft, Northrop said.

Think of the system as a computer. The communications, navigation and identification (CNI) system on an F-35 can manage 27 different waveforms, including MADL. The data comes through the antenna, is turned into digitized bits, and is crunched by the onboard systems to get the relevant information to the pilots.

The system will be included in the 2B software package that the US Marine Corps' F-35B jump-jet variant and the US Air Force's F-35A conventional version will use when they reach initial operating capability

in 2015 and 2016, respectively. It also will be included in all international versions of the jet. The US Navy's F-35C carrier variant is expected to reach IOC in 2019 with the block 3F software, which will incorporate MADL and other capabilities.

What makes MADL more than just a communications tool is its ability to connect with other planes and automatically share situational awareness data between fighters. The more planes in the network the greater the data shared and the more comprehensive a picture is formed.

Picture a group of jets flying in formation. The pilot farthest to the right will have a different situational awareness picture than the pilot on the left. But once they're networked, all the information is automatically shared among the pilots.

Prior to takeoff, planes would be designated with partners to form the network. When a plane gets within range, the network is automatically created.

"Like on your computer, your network into the local area, we're building that network in the sky and it's keeping up with all the dynamics and spatial changes," said Bob Gough, director of CNI technology and programs at Northrop. "MADL has the smarts to keep up with all of that and keep the network in place so they can share the same

Gough declined to say how close jets need to be to trigger the network link, but did say



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Secure Transmissions: Using the Multifunction Advanced Data Link, stealthy F-35s like these would be able to communicate with each other without sacrificing stealth.

tests have shown "very fast" acquisition times once within range.

Live flight system tests at Edwards Air Force Base, Calif., began late last year and have continued throughout this year. Initially, the tests involved networking a pair of planes, but recently, test pilots began regularly flying four-plane networks. Those tests are proceeding smoothly, said Joe DellaVedova, a spokesman for the Pentagon's F-35 Joint Program Office.

"MADL testing is performing as planned," Della Vedova wrote in an email. "Development of the advanced data link is currently tracking to deliver the phased capability expected by the end of development."

The system is designed for plane-to-plane communications only, something Gough expects to continue in the near term. But he did not rule out experimenting with data transfer to other terminals.

"We have postulated MADL terminals on ships and we have built a MADL test ground station, so it could be done," he said. "But it's more about the logistics of where F-35s will be flying and how close to the ground they would be. It would be mission-scenario dependent, but it's all technically possible."

In the long term, Northrop hopes to expand the technology to other fifth-generation planes. That's not a new idea; in 2008, MADL was slated to go on the F-22 Raptor fighter and B-2 bomber. But it never went on those jets, something the former Air Force chief of staff, Gen. Norton Schwartz, blamed on the technology's lack of maturity during congressional testimony in 2009.

"We believe as the flight test program matures, it will be more likely" to end up on other platforms, Gough said.

That could include using MADL to communicate between fifth-generation fighters like the JSF and fourth-generation fighters, such as an F-16. Gough said he hopes to begin research on fifth-to-fourth generation data transfers "as soon as" next year. \square

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X-47B Successfully Lands on Carrier

By CHRISTOPHER P. CAVAS

ABOARD USS GEORGE H. W. BUSH -It worked so smoothly, it was hard

to tell it was so ... well, hard. The Northrop Grumman X-47B,

an aircraft designed to prove that unmanned jets could operate from aircraft carriers, completed its primary mission July 10 when it successfully landed on board a US carrier at sea.

"You saw the future today," Navy Secretary Ray Mabus said after the landing — or "trap" — which took place along the Atlantic seaboard about 100 miles off the coast of the Delmarva Peninsula. "This is the first of the next generation of naval aircraft.

The biggest piece of news is that there was no news," he declared. "On the whole, you saw sailors do what sailors do on a carrier at sea."

Those, at least, were reactions



Sticking the Landing: The X-47B touches down on the aircraft carrier USS George H.W. Bush in the second of two successful landings carried out July 10.

after the first two landings. A planned third landing, however, was waved off after a technical problem was discovered, perhaps emphasizing the special nature of

The X-47B, which had taken off from the Navy's air test center at Patuxent River, Md., flew to Bush flanked by a pair of F/A-18 Super Hornet chase planes.

After one programmed pass over the ship, the aircraft circled around in the traditional racetrack carrier approach pattern though seemingly a bit wider than usual — then came straight in to catch the carrier's No. 3 wire, just as engineers had planned.

Other than the absence of a cockpit, pilots and aircrew, it all seemed rather routine, but the engineering to get to this point was anything but.

'What you saw today was a miraculous technological feat," Adm. Jonathan Greenert, chief of naval operations, told a group of reporters flown out to Bush. "It was as-

After landing, the aircraft was positioned on a catapult, launched and came around again to repeat

It was a more extensive routine than when the little tailless plane similar to a baby B-2 stealth bomber but about the size of a Super Hornet — was launched for the first time at sea on May 14

The second landing was also successful, if just a tad off the opti-- catching the No. 2, or

After another launch, engineers from Naval Air Systems Command planned a third landing, but it was

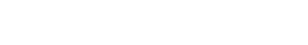
"On the third approach to Bush, the X-47B aircraft self-detected a navigation computer anomaly that required the air vehicle to transit to the assigned shore-based divert landing site, Wallops Island Air Field," Cmdr. Ryan Perry, a Navy spokesman at the Pentagon, wrote in an email later that day. "X-47B navigated to and landed without incident.'

Only two X-47B aircraft have been built, and there are no plans to acquire any more. The concept and engineering demonstrator program will likely finish its flight program and be closed down in a few months, as the Navy transitions to a new program to develop an operational unmanned carrierbased jet.

That program, the Unmanned Carrier-Launched Airborne Surveillance and Strike effort, is expected to lead an operational squadron by 2019, Mabus said. \square

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BizWatch

Turkish Firms May Lose Contracts After Egypt Ouster

By BURAK EGE BEKDIL

ANKARA — Turkey's emerging strategic alliance with Egypt's Islamist administration has come to an abrupt halt, and Turkish officials and industry fear losing future contracts as Ankara becomes a vocal opponent of those who carried out the ouster in Cairo.

Turkish Prime Minister Recep Tayyip Erdogan on July 5 condemned the military intervention that toppled Egyptian President Mohammed Morsi, and chastised the West for failing to brand the action a coup.

"No matter where they are ... coups are bad," Erdogan said in televised remarks. "Coups are clearly enemies of democracy.'

Erdogan also lashed out at the West for shying away from calling the military intervention a coup, and welcomed the African Union's decision to suspend Egypt over the Army's take-

Egypt's Foreign Ministry on July 9 summoned Turkey's ambassador to Cairo, Huseyin Avni Botsali, to "express the Egyptian government's concerns over Turkish interference in Egypt's internal affairs.'

An Arab diplomat here said he expected "difficult times" in Turkish-Egyptian relations, which could disrupt economic relations unless the two nations pursue a pragmatic line.

"Apparently, Erdogan is deeply annoyed by the military intervention and he does not hide it. I don't think he could easily switch to a friendly track with Cairo before democracy is fully restored," the diplomat said.

Morsi belongs to the Muslim Brotherhood movement, which Erdogan views as a major ideological ally in the region.

Only six weeks before the ouster, Turkey in May granted Egypt a US \$250 million loan to finance Turkish-Egyptian joint defense projects. The loan, the first of its kind, was intended to boost defense cooperation and Turkish exports of defense equipment.

"The Turkish industry, with the help of a looming alliance between Erdogan and Morsi, has been meticulously penetrating the Egyptian market since the fall of [former Egyptian President Hosni] Mubarak, especially after Morsi won the presidential elections in June 2012," a London-based Turkey specialist said. "With Egypt's new rulers now carefully noting down Erdogan's hostile statements, I would think future contracts are being seriously jeopar-

One procurement official familiar with defense exports said: "This is going to be a period of political uncertainboth in Egypt and in Turkish-Egyptian relations. It is true that the political relations with Egypt worked as a lubricant for defense deals, although the Turkish industry at the same time successfully produced what the Egyptian Army needed. Honestly, I am not sure how we will progress under the circumstances.'

An aviation company executive said he hoped negotiations for deals would progress as normal, although he expressed suspicion. "Egypt was a looming market for a wide range of Turkish defense systems," he said. "It is difficult to judge how much of their interest in the Turkish industry was politically motivated. We hope [Turkey's] political relations with the new regime don't turn tense."

Egypt had expressed interest in buying the new Anka medium-altitude, long-endurance UAV built by Turkish Aerospace Industries. The potential sale of six to 10 Anka systems to Egypt was discussed during Erdogan's visit to Cairo in November.

Before that, Ankara had approved the sale to Egypt of six multirole tactical platform-20 fast-intervention craft produced by the privately owned Yonca-Onuk shipyards. Under this deal, three boats would be constructed in Istanbul and the others in Egypt's Alexandria shipyard under Turkish

A defense industry source said other contracts with Egypt could include various models of armored vehicles, corvettes, basic trainer aircraft and, in the longer run, attack helicopters, which Turkey is building with the Italian-British AgustaWestland, as well as utility helicopters TAI will jointly produce with US-based Sikorsky

Although some Turkish businessmen voiced optimism after the ouster, the Turkish-Egyptian trade in general could be a victim of Egypt's political instability. Zuhal Mansfield, chairwoman of the Turkish-Egyptian Business Council, said, "Ongoing projects with Egypt, civilian or otherwise, will con-

About 250 Turkish companies have a portfolio of \$2 billion in investments in Egypt and \$4 billion in exports. These figures exclude defense business. \square

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A Royal Australian Air Force Hawk 127 takes off.

RANDOM NOTES

Hawk Fleet Upgrade

The Royal Australian Air Force (RAAF) is boosting its aircrew training capabilities in a deal that will see BAE Systems upgrade its Hawk Mk127 jet trainers and CAE build three new simulators.

BAE said in a statement that the aircraft's upgrade, along with the full-mission simulators and other RAAF aircrew and ground crew training and support, is worth \$90 million (US \$134.1 million). The simulators and other training elements account for about a third of the overall cost of the program to date, a BAE spokeswoman said.

She said the \$90 million also includes fitting two Hawks with the upgrade package for flight tests and service clearances, and the supply of modification kits and other equipment for the fleet's remaining 31 aircraft. The actual installation of equipment on the remaining 31 aircraft will be subject to a further contract, she said.

Australia announced last year it was getting the upgrade underway with a £15.5 million contract with BAE.

Next-Gen Jammer

The US Navy awarded a \$279.4 million contract on

July 8 that will transform how the service executes its airborne electronic attack (AEA) mission, Naval Air Systems Command said. NAVAIR awarded Raytheon the contract to conduct the Next Generation Jammer technology development phase.

The 22-month phase is the next step in transitioning mature components into testable subsystems, as well as developing a preliminary design for the new jamming pods for the EA-18G Growler AEA aircraft, the Pentagon's only tactical AEA platform.

The jammer will replace the ALQ-99 tactical jamming system and will bring increased jamming capability to the Navy and other services in strike warfare, antiaccess/area-denial and irregular warfare scenarios. The goal is to deliver this capability in fiscal 2020.

Antenna for B-2

In a demonstration conducted May 23, Northrop Grumman said it proved that a new active electronically scanned array antenna it has developed for the US Air Force's B-2 stealth bomber can establish and maintain communications services with an on-orbit Air Force advanced extremely high frequency (AEHF) communications satellite. The de-

ON THE MOVE

JTG, Vienna, Va., said that Ahmed Shehata has been appointed president. Founder Muriel Jerome-O'Keeffe will continue as CEO

Global Integrated Security said it has appointed Dean **Popps** as a board director. Popps was the acting assistant secretary of the US Army for acquisition, logistics and technology in the administrations of presidents George W. Bush and Barack Obama, and concurrently was the Army acquisition executive responsible for the Army's workforce.

He also was a member of the US Defense Department's Coalition Provisional Authority in Baghdad. Popps serves as a counsel to the law firm Fluet Huber-+Hoang in Alexandria, Va., and is a senior adviser to defense industry clients.

Lockheed Martin said Gerry $\textbf{Fasano} \ \text{has been named vice}$ president of strategy and business development for the company's Information Systems and Global Solutions business. He will remain the general manager for the Valley Forge, Pa., operation. He succeeds Paul Lemmo, who was named senior vice president of corporate strategy and business

development.

Yitzhak Gat is back at Rafael as chairman of the stateowned Israeli firm's board of directors. Gat, a retired Israel Air Force brigadier general, was Rafael's CEO from 1992 to 1998. He has held senior executive positions at Elisra, part of Elbit Systems. Gat replaces llan Biran, who concluded his six-vearterm last month.

SAIC said Mark Schultz has been named general counsel for the Technical Services and Information Technology segment. He will become executive vice president and general counsel for the company to be named

SAIC following the company's planned separation into two independent, publicly traded companies. He was the chief legal and risk officer and corporate secretary for MWH Global.

Communications, Rockville, Md., has named Matthew Hein as its new CEO, succeeding Gil Limonchik. Hein was a vice president in Houlihan Lokey's Aerospace, Defense, Government Services investment banking division. \square

Compiled by Michele Savage.

Send personnel news to onthemove@defensenews.com.



Northrop Grumman engineers measure the radio frequency power levels of the transmit array of the new antenna prior to conducting a







mo included the antenna, a Navy Multi-band Terminal and the satellite.

Northrop is the Air Force's prime contractor for the B-2. An EHF satellite communications system would allow the long-range bomber to send and receive battlefield information much faster than its current system, the company said.

ADEPT for LCS

Mikros Systems said it has been awarded a \$2.8 million contract to deliver new condition-based maintenance capabilities for radars and electronic systems aboard the US Navy's littoral combat ships (LCS).

This new contract will extend Adaptive Diagnostic Electronic Portable Test-set system capabilities to deliver the ADEPT Distance Support Sensor Suite to the

"This new project will complete the initial ADEPT engineering efforts on LCS, which began in 2012," said Henry Silcock, chief technology officer for Mikros. "The ADEPT Distance Support Sensor Suite on LCS will provide a complete and integrated data collection, diagnostics, prognostics and data transfer solution for four key combat systems on both variants of the

Protector Support

Kongsberg signed a frame contract with the French Ministry of Defense for repair, overhaul and logistic support for Protector remote weapon stations to the French Army, the Norwegian company said.

The contract is valued at about 100 million Norwegian kroner (US \$16 million).

Supporting Estonian Ships

Thales UK has signed a contract with the Estonian Defence Forces to provide an additional four years of technical support and maintenance to two former Royal Navy mine countermeasures vessels serving with the Estonian fleet, the company said.

The two former Sandownclass vessels are now named Admiral Cowan and Sakala. As part of a program to return them to service, Thales originally signed a contract in 2006 to provide operational support to the ships in service and upgrades to Thales UK's Sonar 2093 system. This new contract extends the support program until December 2016.

CO Monitoring for Subs

Analox Military Systems has signed a contract with the Norwegian Defense Logistics Organisation to supply the Norwegian Navy with two carbon monoxide monitoring systems for each of its six Ula-class submarines, the UK-based company said.

AMS will undertake the development, manufacture, installation and commissioning of the system, with the first to be delivered in February. AMS is working with Hakon Rygh, its Norwegian distributor, on the contract's installation and commissioning phase.

Engineering Support

The US Navy's Naval Sea Systems Command, Surface Warfare Center, Port Hueneme Division, has awarded TASC a task order to provide engineering and technical support for its rotating surveillance radar systems, the Chantilly, Va.-based company said.

TASC will be the prime contractor on the task order, valued at \$37.9 million over one base and two option

X-ray Screeners

American Science and Engineering said it has received orders for two Z Portal multiview X-ray screening systems for two separate Middle East government agencies. In both cases, the systems will be used to scan vehicles and trucks to detect explosive threats and contraband, said the US company, which did not identify the countries.

Payload Delivered

Lockheed Martin has delivered the third of four highelliptical earth orbit satellite payloads contracted by the US Air Force as part of the Space Based Infrared System (SBIRS), the US company said.

The SBIRS team is led by the Infrared Space Systems Directorate at the US Air Force Space and Missile Systems Center, Lockheed is the SBIRS prime contrac-

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Commentary

EDITORIAL

DEFENSE SPENDING

DoD's Budget Straitjacket

he leaders of the US Senate Armed Services Committee asked Defense Secretary Chuck Hagel two months ago to explain what would happen if sequestration became permanent.

Hagel responded last week with the same scenario laid out by his predecessor: cutting another \$52 billion from defense in 2014 — and again in each of the coming eight years — will devastate US combat capabilities.

Readiness is already decaying, Hagel said, with non-essential training suspended, maintenance postponed and new equipment programs cut.

Such deep cuts will hollow out the world's best military, he added, begging lawmakers to scrap sequestration, set aside parochial interests and cut unnecessary programs and bases as he requested in his 2014 budget.

He's right. Inflexible cuts are already damaging military capabilities, damage that will only worsen over time.

But Hagel's letter was devoid of the findings of his Strategic Choices and Management Review that he launched upon taking office as a way of mapping the impact of sequestration, identifying necessary tradeoffs and considering structural reforms.

The review was completed more than a month ago and briefed to President Barack Obama last week.

What's more vexing is that Hagel failed to call for flexibility to make his cuts strategically, saving that won't make a difference; it's the magnitude of the cuts that are unacceptable.

That's simply not credible.

First, a succession of defense leaders has repeatedly said more and smarter cuts can be made if they have the ability to make hard choices themselves, rather than accepting arbitrary, across-the-board

Second, more than half of the defense budget is for personnel and personnel-related expenses that

must be reformed to free resources and pay for capability and new weapons.

There remains plenty of waste in the Pentagon budget

Only weeks ago, Pentagon Comptroller Robert Hale said roughly 700,000 civilian contractors work for the Pentagon in addition to 800,000 civilians, who together outnumber the nation's 1.4 million active-duty troops.

Clearly, there's room to slash the Defense Department's bloated overhead structure.

The problem is, the White House wants to deny flexibility in making cuts so that the damage will enable the administration to use defense as a bargaining chip to compel Republicans to end sequestration.

It's an exercise in futility, and it's time to stop playing politics with national security. The administration would be wise to abandon its contradictory approach: It wants defense reform, but continues to keep DoD in a straitjacket, without the flexibility to make the best moves to get there.

Sequestration — or the cuts it is driving — is here to stay because of political gridlock; and the end of two wars and the open spigot of defense spending means the Pentagon cannot escape cuts.

Allowing such dumb cuts to undermine military capabilities, though, is a grave mistake. Giving the Pentagon hard budget targets and the flexibility and authority to make thoughtful cuts must become a

If the White House and lawmakers fail to lead, then it's up to the senior military officers to craft and widely market honest recommendations that deliver maximum capability for available resources, including targeted personnel reforms.

What's at stake is America's ability to protect itself, its interests and its allies and to shape global events.

LETTERS

Not the Answer

Regarding "SIGAR Warns Pentagon Against Afghan Weapons Purchase" (DefenseNews.com, June 25), what is needed for the Afghans to support will come over time.

Suspending the purchase is not what one does in the middle of a counterinsurgency. You keep what's running, running and work through the problems and fix bottleneck after bottleneck. Not cry in your soup, feel sorry for yourself, blame others and stop programs that are already late after being sometimes mismanaged by a bureaucracy. In the words of the late US Army Gen Norman Schwarzkopf: "The battle plan is good to the first five min utes of the battle," and that is why one fixes what's broken, adjusts and improvises. The ISAF folks know what they are doing in many cases, so let them do their jobs and look at the end result, not somewhere in the middle to justify a policy of disengagement and disinterest.

Oversight is important, but it should not turn into micromanagement from people half a world away or a pretext for another agenda (not necessarily SIGAR, who are more misguided and wrapped up in procedure, not combat). People with other agendas should stay out of foreign affairs. Please for God's sake stay out of a life-and-death struggle by Afghans, Americans, Canadians and others who are committed to seeing the mission through. The international community screwed it up in 1989 through neglect. Let's do it right this time, and please don't say we have been since 2001, because a consistent effort has not been fully applied all of this time. More like 2009 onward. and for the most part, we get out

of commitments what we consistently invest in them, or not.

Before making a procurement decision, in or out of government, please go into the Kandahar Airfield hospital and see patients with a tube in their mouth because you or I screwed up a procurement or equipment was delayed repeatedly. This is where our true lovalty lies, or should for those who have a conscience.

> CHRISTOPHER BAXTER Ottawa, Canada

Scale Back ANG Mission

Recent comments made by retired senior Air National Guard leaders are insulting and inaccurate at the same time.

The old inaccurate notion that the Guard provides almost 40 percent of operational capabilities for 6 percent of the Air Force budget is misleading and requires some highly selective accounting.

The ANG has blossomed in the politics of the post-World War II force structure battles and has continued to distort force planning using political influence ever since. As a nation, we do not need 50-plus air forces (active, Guard, reserve).

The Guard leadership's demand that they have a part of the F-22, F-35, C-17, etc., results in scattering of scarce resources into multiple small units. Aircraft are becoming more capable and more expensive, meaning we will have far smaller force structure going forward. The time has come to scale back the ANG dramatically.

MICHAEL GALLAGHER Hillsboro, Ore.

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he threat environment that faces the US today has evolved rapidly over the past three decades. Nowhere is this more evident than in the expanding constellation of countries with access to ballistic mis-

Iran continues to improve its

missile launch

capabilities

while North

Korea devel-

ops its mis-

nuclear pos-

ture, all de-

international

siles and



pressure. By William These states **Lennox**, a retired possess advanced capa-US Army lieutenant general and former bilities to superintendent of threaten regional allies the United States Military Academy at such as Israel. West Point. He runs South Korea, Lennox Strategies Japan and and consults with Europe, and various companies, rudimentary including Raytheon. capabilities to strike our

homeland.

We need a stable, consistently funded missile defense program that develops at a pace akin to the ballistic missiles and nuclear

Face the Threat

Steady Funding To Improve Missile Defense Vital

aspirations of countries like North Korea and Iran. That means we must invest enough to deploy existing systems like Patriot. Terminal High Altitude Area Defense (THAAD) and Aegis, while continuing to invest in and test new capabilities to help us stay ahead of the missile threat.

While military service leaders have a long-term view on the value of missile defense, policymakers have taken a feast-orfamine approach in the past. Federal funding rises and falls based on assessments of imminent threats and the pulse of the electorate.

Our national defense is best served by consistent dedication to missile defense research, development and procurement that accounts for our need to be prepared for threats that may not yet be fully understood.

The proliferation of missile technology has changed warfare at the regional level. To see this. only look at what has happened in Israel. The threat of rocket and missile attacks has grown exponentially and has driven Israel to develop a number of layered defensive systems to counter these enemy threats at various altitudes and distances.

This is part of a growing body of operational work that indicates missile defense has convincingly progressed past its early years as a theoretical solution to a theoretical threat — we now have proven and tested systems that must be deployed to counter proven and tested threats.

Missile defense systems can alter the calculus in a regional conflict. For example, this month. the US placed several Patriot missile batteries on the border dividing Syria and Jordan. At Turkey's request, the NATO alliance has also deployed Patriots to its border with Syria

Just as missile defense can make a difference on a regional basis, it can also make a difference worldwide. Rogue nations look to wield greater power by threatening global actors like the US with their developing systems. As North Korea and Iran flex their muscles on the international stage by testing longer-range offensive weapons, the US must keep improving and deploying defensive systems to counter this threat.

Testing makes a difference to a missile defense program. Tests are critical for the advancement of interceptors, sensors, and command and control. Some people are discouraged by failures and use these failures as an excuse not to fund the systems. Nowhere is this more evident than in the overwrought and critical responses to the Missile Defense Agency's July 5 missed test intercept. Yet such test "failures" in an experimental environment can actually be a beneficial step, helping improve products and capabilities.

For example, the Patriot system has undergone dramatic improvements since it was used in the first Gulf War. The Army's THAAD program initially had problems, but we worked through these challenges to develop a highly reliable system thanks to testing and commitment.

We need a stable, steady stream of funding to test our systems and learn from those tests so that we can continue to build out a layered missile defense system proven to stop all variants of missiles.

A consistent, adequate budget allocation for all aspects of missile defense, both operational and testing, will help us achieve our goal. Yet the opposite is taking place, even as threats increase. The administration's budget justification for the Missile Defense Agency, released in April, projects that the agency's budgets in fiscal 2014-18 will be \$600 million to \$1 billion lower each year compared with what it spent in 2012. And that doesn't begin to take into account the significant bite of sequestration cuts.

We, as a nation, have to incorporate missile defense fully into our defense dialogue and ensure that we are able to counter future threats. This process requires adequate investments to develop, procure and deploy the appropriate sensors, interceptors and command-and-control systems to do the job.

Instead of doling out funds in response to an individual crisis. we should steadily invest now to avoid a lack of preparedness or even disaster in the future. \square

2014 QDR Must Follow Congressional Guidance

s the US Department of Defense prepares for the 2014 Quadrennial Defense Review (QDR), the 20-year-old process is again under fire from across the political spectrum, including members of Congress who say it should be severely curtailed or abandoned. Even Rep.



By Sunil Desai, a retired US Marine who served as a strategist for the Marine Corps during the 2010 ODR and **US Strategic** Command during the 2006 ODR, These views are his own.

Randy Forbes, R-Va., a supporter of the process, recently said that previous QDRs were a "rubber stamp to justify and approve existing strategies" rather than a "fresh look at our national defense to make sure we had the right strategy," but that "the QDR is a valuable tool for us to

have ... if we just get back to the basics.

As with military operational plans, the QDR process itself is more important than the product.

This is because upon implementing a plan, enemy decisions and other unexpected factors change the situation, requiring adjustments. Having insights gained through a rigorous and disciplined planning process allows such adjustments to be made much more quickly and

But two basic elements of congressional guidance disregarded in previous QDRs must be followed to ensure the 2014 QDR process delivers what Congress intended and needs.

First, the time horizons of previous QDRs were too short. By law, the QDR is supposed to be a comprehensive effort to prepare a national defense strategy looking forward 20 years. Like its predecessors, however, the 2010 QDR focused on the next five years, justifying the focus by citing immediate wartime operational needs.

To meet Congress' intent, the time horizon considered should be much further out. While this might seem impossible or highly impractical, most major military programs (for ships, aircraft, armored vehicles, etc.) can take 50 or more years to fully implement from research and development to the end of the program. It is a common joke among service members that much of their equipment is older than they are.

Similarly, decisions regarding — the largest portion of the military budget - can take decades to implement completely. For example, although service academies have been teaching students about cyber warfare for over a decade, very few graduate with cyber degrees and enter the cyber warfare military field, and it will be at least another decade before these graduates are leading cyber operations at senior

The QDR also should consider potential demographic shifts. For example, regardless of any changes in combat exclusion policies for women, current trends suggest that in four or five decades women could make up half of the military.

The panel that Congress tasked to assess the 2010 QDR recommended programs to improve retention and make 40-year-long careers in service a standard goal. This kind of long-term outlook should be the starting point for the 2014 QDR.

Second, previous QDRs dis-

regarded explicit congressional guidance that recommendations be based on realistic threat scenarios without attempting to limit the total cost of programs to defeat those threats. Congress did this in part to prevent DoD components from pursuing parochial

During past QDRs, DoD components were required to offer up "trade-offs" with their recommendations. Specifically, if they wanted to start a new program or expand an existing one, the component had to propose canceling all or part of another program. The pressure to continue this practice in light of sequestration and the financial situation will be enormous, but it undermines adequate consideration of all potential threats to national secu-

Although projecting program costs out 50 years can be daunting, DoD financial analysts have plenty of experience and historical data to reference. Thinking 50 years ahead does not prohibit DoD from acquiring emerging technologies as soon as they are available. But not having a longterm horizon does make it extremely difficult to ensure that program costs are considered

through their expected conclusion, not just the next budget cycle.

Because the QDR is repeated every four years, unexpected changes in technology or other relevant factors can be incorporated in the next QDR.

There are plenty of entities within DoD that already look out five, 10 and even 20 years. Each QDR is an opportunity to go much deeper, giving that work perspective and enabling a useful comparison with other national budget items, such as Social Security, Medicare, Medicaid and the national debt

If the 2014 QDR resembles past QDRs, those who wish to end it will have good justification since the normal budget cycle can provide for tradeoffs within a constrained budget.

This is not to downplay the gravity of current national financial realities. But a concerted effort by DoD to look 20 to 50 vears ahead and make recommendations that are not financially driven will provide Congress with the clear-eyed perspective and advice it needs to address US budgeting needs and to understand risks inherent in anything it decides to leave unfunded. \square







Interview

LT. GEN. PASQUALE PREZIOSA

Italian Air Force Chief of Staff

espite cutting its purchase of F-35 joint strike fighters from 131 to 90 last year, the Italian Air Force remains under fire in Rome's parliament for its spending on the program as the country staggers through its worst economic downturn since World War II. The task of defending the JSF program now falls to Gen. Pasquale Preziosa, the Air Force's chief since February, who like his predecessors firmly believes that Italy needs both the JSF and the Eurofighter Typhoon.

A former F-104 pilot, who also flew Tornados over Bosnia, Preziosa was Italy's senior representative in the Enduring Freedom response cell in Tampa, Fla., and was Italian defense attaché in Washington before serving as head of cabinet at the Ministry of Defense from 2011 to 2013. As Air Force chief, he must handle cuts to flying hours while breaking in new acquisitions, including the M-346 trainer jet and two Israeli-supplied advanced early warning (AEW) Gulfstream jets

Q. What trends in air warfare have you seen emerging in Europe and in the world in the last few years? Do you see trends reflecting the experience of Libva?

A. A fundamental trend now is what could be called "the strategic surprise." We are confronting surprises from countries that appeared stable and instead are fragile, as well as understanding that many of our predictions for the world have been wrong. Since we appear unable to predict the future sufficiently, from a technical point of view, we need tools that allow us to confront any scenario and the ability to grow fast in sectors, like pooling and sharing with other nations.

Q. The need to share capabilities has prompted some to say national militaries should specialize in niche activities they can contribute to a shared campaign. But the Italian Air Force has always tried to do a bit of everything.

A. Air forces in Europe and around the world must have the means to intervene where necessary with the required instruments. If you wanted to have a situation in Europe where one nation offered air defense capabilities and another ground attack, you would need a completely different political system. That said, the reductions in budgets are reinforcing the need for alliances.

Q. Apart from strategic surprises, can we be sure of anything about coming threats and challenges?

A. We are seeing the consolidation of a geographical arc of crisis, with chronic instability, from North Africa across to the Middle East. Europe, meanwhile, is having difficulty deciding which

organization it should use to intervene overseas, with Libya an example. Then there is the geostrategic repositioning of the US, with more attention being paid to the Pacific, as well as the emergence of the BRIC [Brazil, Russia, India and China] countries

Q. What has the Air Force learned from its experience with AMX fighters dropping munitions in Afghanistan, after a long period in which the aircraft were used only for surveillance?

A. The deployment of laser- and GPS-guided munitions with the AMX in Afghanistan has been a surprise. The aircraft was approaching the end of its operational life. It was built for close air support and has found a new mission in both Afghanistan and Libya. It is a bit like the rediscovery of the B-52, which was seen as being used only for strategic missions; then, with evolution of munitions, it became a tactical bomber. Assets need to be realigned to new scenarios of instability as they arise.

Q. During your visit to Washington in June, did you discuss arming Italy's Reaper UAVs, a long-standing Italian request that the US Congress has hitherto resisted?

A. In Washington, we had important meetings about cooperation between air forces.

The United States will give us a response on arming Reapers by the end of the year. There are two levels, one technical and one political. Italy started acquiring its Predator [UAVs] 13 years ago, and we have always believed in this asset, using them in Libya and currently in Afghanistan, as well as flying them from their Italian base for operations in

Kosovo in the Balkans. There is also the possibility they could be used for law enforcement operations in Italy. Having an armed UAV in Afghanistan would mean cutting the chain of command, to be able to observe, to analyze and to decide on an intervention without sending out another platform, and to intervene before the situation on the ground changes. We would use the same weapons the US is now using.

O. At the Paris Air Show. European companies called on their governments to plan a European medium-altitude, long-endurance UAV, even as France looked set to join the list of European countries ordering the Reaper. How will this situation resolve itself?

A. If we have a Predator, why should we develop another Predator? Industry is driven by development and we need to look to the future, to what we will need in 20 years. The Reaper is good for our current needs, but we will need something different in 20years. As for UCAV [unmanned combat air vehicle] development, we are at the start of an industrial phase where you need to go beyond continental scale, to become transcontinental. The US and Europe separately will be too small to develop future platforms, just as the JSF was a US program that migrated to other countries. Neuron is a test bed; now, let's think about the industrial base for a post-Neuron.

Q. Did Italy's decision to order the JSF help hinder the development of the **Eurofighter Typhoon and reduce the** prospects of an exportable, multirole Typhoon?

A. I don't believe so. The decision to buy the JSF began to be made in the 1990s. The JSF and the Eurofighter have different roles, but absolutely complementary roles. The Typhoon has an excellent air combat capacity, and the JSF has a very refined air-toground capability. As for Eurofighter exports, they are going ahead, helped by the fact that many countries recognize the air superiority qualities of the Typhoon, which make it one of the finest aircraft of recent times.

Q. How are the latest cuts affecting Air Force flight hours, and are you interested in the French idea of two-tier flight training?







2013 total Italian military spending: 14.4 billion euros (US \$18.5

Air Force personnel: 42,000 Aircraft fleet: Includes Typhoon. Tornado, AMX, C-130J, C-27J, Reaper, B767 tanker

Source: Defense News research

A. Before cuts began to be made to budgets, in the 1990s we were flying 140,000 hours a year. That dropped to 100,000 hours and as low as 90,000 hours. The French idea for two-tier training is an interesting idea, and we are looking at it. But to a certain extent, we do it now. When we can't reach the 180 hours of flight training specified by NATO for a pilot, the pilot is switched to non-operational flying duties but ready to be retrained. To this, I would add something else — that flight simulation is only complementary to flight training, it cannot replace it. Not everything can be simulated.

Q. The Air Force will soon get two AEW Gulfstreams from Israel. How does that change mission capability for Italy? And does it herald more joint training with Israel?

A. In Libya, the NATO early warning assets were slow in arriving. With these aircraft, Italy would have had immediate commandand-control assets in the sky to protect its own territory, given the fact that many countries were launching operations from Italy.

As regards with relations with Israel, Italy continues to carry out exercises with various Mediterranean nations. With Israel, we will be part of a user group for the M-346, including Singapore. There is already a joint inquiry under way with these countries, looking into the recent losses of proto-

Q. Alenia announced the new M-345 trainer jet at Paris. Will you buy it?

A. The M-345 will replace the M-339A, built by Alenia Aermac-

chi, and will do so at a low cost of acquisition and operation. This is a segment of training that I need a jet for, not a prop. I will need to fly over 15,000 feet for training, hence you need a jet. This M-345 will teach pilots how to fly, then they move to the M-346, which will teach them how to fight. The Air Force is involved in the development. The first meeting of Air Force and industrial teams was on July 8, and we aim to have the aircraft in two to three years. The synergy will be fundamental.

Q. The Italian Air Force is exploring the different uses it can make of the C-27J. Where are we at?

A. Our Praetorian system envisages a series of modular functions, including the Jedi jamming system, developed in house by the Air Force, which has been certified by [the International Security Assistance Force] and is protecting Italian and allied convoys in Afghanistan.

We are also monitoring Alenia's development of a C-27J gunship, and we are also testing a command-and-control version for special forces. Since it will all be modular, I would like to see the possibility to fly the gun alongside the command-and-control function. There is also Lidar — a pallet-based system, developed with Italy's Ministry for Research, which can measure the particles in clouds, such as those produced by the Icelandic volcano a few years ago, to determine if aircraft can fly there. It is operational, and we have used it around Mount Etna in Sicily. \square

By Tom Kington in Rome.









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