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Japan To Focus on Atago, PAC-3 Upgrades

By PAUL KALLENDER-UMEZU

TOKYO — Japan's ballistic missile defense (BMD) plans revolve around bolstering its Aegis-based fleet and upgrading its Patriot capabilities to counter a still-limited threat from North Korea.

More important, for now, is developing a limited pre-emptive strike capability to take out missile sites, which will be provided when the F-35 joint strike fighter joins the fleet.

But with a view to the future, the Ministry of Defense may consider adding a third-tier of defense with a proven system such as the Terminal High Altitude Area Defense (THAAD) system, to serve as an intermediate layer between the Aegis ships and Patriot Advanced Capability-3 (PAC-3) systems. There also is interest in Japanese defense circles for a space-based early warning capability.

The Aegis improvements, in particular, are an outgrowth of Japan's recent government move allowing limited collective self defense.

Under the current five-year Mid-Term Defense Plan drawn up in December, the Maritime Self-Defense Force (MSDF) will purchase two of the latest Atago-class of guided missile destroyers, with orders to be placed in 2015 and 2016 and the ships joining the fleet in 2020-2021.

Improvements are ongoing. For example, Lockheed Martin Mission Systems and Training recently announced a \$53.5 million modification contract for development and test of the Japan Aegis modernization baseline computer programs and equipment to boost the capability of Atago ships DDG 177 and 178.

While the two new ships will boost the MSDF's fleet to a nominal eight hulls, two of the oldest

Hatakaze-class destroyers also will be retired. The emphasis is therefore on quality rather than quantity, said Narushige Michishita, director, Security and International Studies Program at the National Graduate Institute for

Policy Studies.

Key to the Atago class is the larger, more capable SM-3 Block IIA missile being jointly developed by Raytheon and Mitsubishi Heavy Industries, with an approximate 2,500-kilometer operational range and a larger diameter kill vehicle that is more maneuverable and comes with upgraded sensors.

"The SM-3 Block IIA will be able to take care of the NK threat, but they are also quite significant because they will also have some ability to take care of missiles coming from China. It is a natural step that we are taking to modernize our old systems," Michishita said.

At the same time, the Air Self-Defense Force (ASDF) will be updating two of the six PAC-3 batteries with the more powerful missile segment enhancement interceptors. More important will be the role of some 42 F-35s, which will be deployed in small batches, and the ASDF's purchase of three refueling tankers, which will give Japan some ability to launch pre-emptive strikes on North Korean missile sites.

"PAC-3 is seen as a sort of last-resort backup system, and with budget restraints the ASDF has very limited resources. It's a good idea to improve the technology, not the number of batteries, but [the ASDF] is more focused on F-35," he said.

The F-35s will play a political role in demonstrating Japan's credibility as an alliance partner, showing its greater ability to proactively defend itself rather

than just waiting for the US to come to its aid.

"Without a limited but robust pre-emptive strike ability, we would be asking the US to make all efforts on our behalf, and that would make it more politically difficult for the US," Michishita said.

Japan's evolving Aegis-based capabilities have to be seen in the context of Japan's historic July 1 Cabinet decision allowing itself limited rights of collective self-defense, said Chris Hughes, professor of international politics and

Japanese studies at the [University of Warwick](http://www.warwick.ac.uk)

"One of the scenarios was the interception of missiles directed at US territory. I suppose this means Taepodong-2 targeted at Guam but perhaps beyond. I know that some Japanese defense planners privately stated that this scenario did not seem very realistic given that the US could likely fend for itself but also that even the upgraded SM-3 could not intercept anything approximating to an ICBM," Hughes said.

"So I am not really sure if Japan's BMD role will in practice shift that much from defending against more localized threats against Japan and US bases from North Korean and Chinese medium range ballistic missiles," Hughes said.

For the moment, Japan faces the North Korean missile threat, based around Unha and Musudan mobile intermediate-range ballistic missiles, but these lack countermeasures. If these systems become technically more sophisticated, Japan's next option would almost certainly be a third layer based around THAAD, Michishita said.

"If we need a three-tiered system, then THAAD is a good idea. One SM-3 Block IIA is very expensive. If we divert many resources to yet another system, then that



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might be a waste of money. The main thing is that the SM-3 Block IIA is credible," he said.

One thing worrying both US and Japanese defense planners is China's growing cruise missile threat and ship-killing missiles, such as the DF-21D. Against this, Japan already has some limited capabilities in the aging Mitsubishi AAM-4 air-to-air missile, operational since 1999.

In light of this, the MSDF may consider deploying the SM-6 and baseline 9C Aegis combat system with over-the-horizon naval integrated fire control-counter air capability in the future, Michishita said.

The MoD is also planning to mount an infrared missile detection sensor aboard an experimental reconnaissance satellite being built by the Japan Aerospace Exploration Agency. This could allow the MoD to either establish an independent space-based early warning system or supplement the US' evolving Space-Based Infrared System.

This move comes on top of a new space policy being drawn up that will more fully integrate military space efforts with last December's first National Security Strategy. Following a report released by the Liberal Democratic Party (LDP)

this August, Japan plans a wide range of new military space activities, including doubling the number of its four-satellite constellation of information-gathering satellites and supporting the US in space situational awareness.

The MoD also has been investing in low-level experimental research into space-based sensors since 2009, when Japan scrapped its 1969 commitment to "peaceful purposes only" space development, allowing it to research defensive military space development.

In a written statement to Defense News, the MoD denied it had any plans to evolve such a capability, stressing the experimental na-

ture of the system. According to Hiroshi Imazu, chairman of the LDP's Research Commission on Security, Japan may be interested in space-based early warning, but only if extra funds can be found.

"Some people think it's good to procure early warning satellites. It's very expensive and duplicates capabilities that the US has. As long as the recce satellites work, it may not make sense to duplicate systems. We can devote the same amount of money to other areas," he said.

"In my opinion, BMD has never been just about shooting down North Korea missiles. It has always been seen as an integrated span of a system that provides protections for Japan from the Earth to space," said Saadia Pekkanen, an expert on Japanese space policy, at the Jackson School of International Studies, University of Washington.

Pekkanen said an interim report on revised US-Japan guidelines also stresses the importance of missile defense to the peace and security of Japan even when there is no armed attack against Japan. Japan has been floating the idea of having its own early warning BMD satellites for some time, she said.

"Obviously Japan has a legitimate interest in monitoring potentially hostile missile launches in the Asian neighborhood. And, under the reinterpretation of collective self-defense, so does the US, as it is relying on protections from Japan in an alliance context," she said. □

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