

COMMENTARY / JAPAN

## Japan's risky Aegis Ashore radar choice



U.S. Navy Commander Mark Fegley is interviewed at the Aegis Ashore Missile Defense System in Romania on Feb. 18. Japan plans to have two operational Aegis Ashore sites by 2023. | NAVY REGION EUROPE,AFRICA, SOUTHWEST ASIA

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HONOLULU – In a surprising move, Japan's Defense Ministry has chosen an unproven developmental radar to support planned Aegis Ashore missile defense systems. In selecting the Long Range Discrimination Radar (LRDR) over the Air and Missile Defense Radar (AMDR AN/SPY-6) radar, Japan has chosen expected economy over ease of integration and demonstrated

operational capability.

Despite apparent progress with North Korea, Japan is the worst possible place to take such risk. This decision also puts Japan out of step with other U.S. allies and missile defense partners; the United States is upgrading the existing radar with the AN/SPY-6 for its Aegis missile defense systems, both on land and at sea.

Despite recent headlines and diplomatic discussions, North Korea continues to be one of the greatest global threats. Nowhere is the threat of North Korean ballistic missile capability more real than in Japan and continued improvements to defensive capabilities is a critical element of the maximum pressure policy.

Understanding this, Japan is procuring two Aegis Ashore sites that are expected to go online in 2023. As part of the Aegis Ashore Ballistic Missile Defense (BMD) system, Japan will have a state-of-the-art missile defense system that can protect against short to intermediate-range ballistic missiles from North Korea and elsewhere. Choosing the LRDR over the AN/SPY-6 will risk developmental delays and challenges in integration — decreasing the pressure on North Korea on to live up to the promises of recent progress toward peace and denuclearization.

The missile defense environment in and around Japan presents an exceptionally complex command and control environment. Short-, medium- and long-range missiles from North Korea and elsewhere can target Japan and South Korea. The longer-range systems can also target a variety of U.S. targets including Guam, Hawaii, Alaska and the 48 contiguous states of the U.S. mainland. Japanese missile defense systems in partnership with the U.S. and South Korea must be able to acquire threats,

determine their targets and choose the proper weapon to defend against an attack in a matter of seconds.

Choosing the LRDR over to do so in the most complex missile defense environment in the world is risky business and may represent significant operational risk. Despite the fact that the LRDR is a U.S. system, its choice will challenge the Japan-U.S. alliance and the security partnership with South Korea by virtue of being out-of-step with system standards.

The land-based Aegis Ashore system with its sophisticated sensors and interceptors is based on the U.S. Navy's proven ship-based Aegis Combat System that includes the AN/SPY radar and Standard Missile interceptors. An Aegis Ashore site has been operational in Romania for over two years, and another is currently under construction in Poland. Additionally, the U.S. Navy has more than 30 Aegis vessels, cruisers and destroyers, equipped with BMD capability, with plans to grow the fleet in the years to come. The AMDR AN/SPY-6 is the radar of the future for the Aegis BMD system.

That system is an integral part of protecting the world from ballistic missile threats, but it is only as good as the sum of its parts — radar (or sensor) capability and missile interceptors. Which is why it's curious that the Defense Ministry would chose the unproven LRDR rather than the AN/SPY-6 radar that's based on proven sensor technology (AN/SPY-1) that the U.S. and its allies are using today.

Procurement, particularly when it comes to advanced technologies like missile defense, is a difficult undertaking. Realistic and complex testing, essential to proven combat capability, is expensive. The AN/SPY-6 is already undergoing

testing and proving its value in contrast to an alternative radar such as the LRDR.

Further, missile defense is expensive to test and failure in combat can have devastating consequences, which is why it is in the best interest of allies to use the lessons learned and costs incurred by those that have already fielded these complicated but critical systems. In the case of the Aegis system, the U.S. has been testing and improving upon the system for years.

A Reuters report suggested that Japan had chosen the LRDR because it believes its life-cycle costs will be the lowest. Life-cycle costs include all recurring and one-time costs over the full life span or a specified period of a good, service, structure or system.

Basing this radar selection on such estimates could well be false economy as life-cycle cost estimation is imprecise at best and costs are almost never less than predicted. Developmental and testing costs for a non-standard radar not previously integrated in the Aegis system could very well consume or exceed any projected savings. Although the Defense Ministry officially confirmed it picked the LRDR, it would be wise to reconsider. Choosing an unproven, potentially inferior sensor system in the hope of some economy seems short-sighted and particularly dangerous at this critical time.

The LRDR will eventually be a capable radar and an important element of U.S.-based missile defense, but it is ill-suited to Japan's Aegis Ashore. Japan's planners should be drawn to the AN/SPY-6 as it is the same radar and interceptors that the U.S. Navy relies on for BMD in the face of real threats that are not going away — even if North Korea becomes less of a threat in the distant future.

There is no denying procuring the Aegis Ashore system will be a significant investment for Japan. For cost, performance and operational reasons, it makes little sense to for Japan to go it alone with its radar choice. The Defense Ministry, Cabinet and leaders in the House of Councillors and House of Representatives must maximize return on this investment and not place it at risk by procuring anything but the very best sensors and interceptors that are interoperable with Japan's partners.

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**KEYWORDS**

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