



Missile Defense Requirements Grow with Cold War-Style Threat

After more than 20 years focusing on global terrorism and counterinsurgency, the United States and its allies are confronting the Cold War threat of nuclear missile attack again.

Defense Secretary Jim Mattis described the worsening global security situation at a June 12 Senate Armed Services Committee hearing, noting it was “a more volatile security environment than any I have experienced during my four decades of military service.”

“The most urgent and dangerous threat to peace and security is North Korea's continued pursuit of nuclear weapons and the means to deliver them—Mattis added.

Just a few days before the hearing, North Korea test launched four anti-ship cruise missiles, the fourth missile test in as many weeks.

THE THREAT



Despite continued world condemnation and United Nations sanctions, North Korea launched 16 missiles in 10 tests for the first half of 2017. Analysts say each launch, successful or not, improves North Korea technology and brings it closer to building an intercontinental ballistic missile (ICBM) that could reach U.S. territory. “The advancements in the last six months have caused great concern to me and others,” Missile Defense Agency Director **Vice Admiral J.D. Syring**, told the House Armed Services Committee June 7. “I would say we are addressing the threat that we know today. And it is incumbent upon us, to assume that North Korea today, can range the United States with an ICBM carrying a nuclear warhead,” he added. Besides expanding the size and sophistication of its missile forces, North Korea,

which began nuclear weapons tests in 2006, has conducted an “unprecedented level” of nuclear tests since 2016, according to the **MDA**.

North Korea's outlaw program isn't the only missile threat. Russia, which previous administrations said posed an existential threat because of its nuclear and ballistic missile capability has been developing a ground-launched cruise missile that the United States said violates the Intermediate Range Nuclear Forces Treaty, according to **Director of National Intelligence Dan Coats**. In describing the U.S. intelligence community's worldwide threat assessment to the Senate Select Committee on Intelligence May 11, Coats said China is modernizing its nuclear forces by adding road-mobile systems and enhancing silo-based nuclear missiles. Iran, with the largest inventory of ballistic missiles in the Middle East, might choose to field an ICBM to deter U.S. activities, the report said.

LOOKING FOR SOLUTIONS



One high point in the growing missile threat was the successful first live-fire test of a ground-based missile defense (GMD) interceptor against an ICBM-class target in May. During the test, a target vehicle was launched from the Reagan Test Site in the Marshall Islands. Multiple sensors, including the Sea-Based X-band radar, provided target acquisition and tracking data to the Command, Control, Battle Management and Communication (C2BMC) system. An interceptor was launched from Vandenberg Air Force Base in California. The exo-atmospheric kill vehicle intercepted, struck and destroyed the target.

The GMD system includes 36 interceptors in missile silos at Fort Greely, Alaska and Vandenberg. The MDA plans to field a total of 44 interceptors by the end of 2017. Since 1999 there have been 18 flight intercept tests. Ten were successful but only two of the last five were able to hit the target.

On the other side of the world, the MDA has established a land-based Aegis Ballistic Missile Defense System, known as Aegis Ashore, in Romania. The system is almost identical to the Aegis system on U.S. Navy destroyers and cruisers. Operational since May 2016, the Romanian facility will be joined by another one in Poland in 2018, as part of the European Phased Adaptive Approach (EPAA) program. Poland and Romania, both NATO members, are seeking to acquire the Patriot air defense system, the U.S. Army's primary high and medium air defense system for decades. Thirteen countries already have Raytheon's long-range, all-altitude Patriot system including Israel, Japan and South Korea.

BUDGET



The Trump administration's fiscal 2018 MDA budget request seeks \$7.9 billion for development, testing, deployment, and integration of interceptors, sensors, and command-control battle management communications systems.

The request includes \$1.5 billion for GMD. "This budget also funds flight and system ground testing of our homeland defenses, continues redesigned kill vehicle development, enhances the stockpile reliability program and expands the GBI battle space," according to Gary Pennett, MDA's director for agency operations.

MDA is seeking \$147 million for Israeli programs, continuing the agency's longstanding support of U.S.-Israeli cooperative BMD programs," Pennett told Pentagon reporters at the budget roll-out in May. The request includes procurement of Iron Dome, and the co-development of David's Sling weapons system upper-tier interceptor, and the Arrow weapons system improvements.

MDA officials also hope to use directed energy against incoming missiles. Ideas include integrating a high-powered, solid-state laser on a long-endurance unmanned aircraft to destroy an ICBM in the boost stage when it is most vulnerable. The directed energy request of \$54 million would allow MDA to continue the development and scaling of a low-power laser demonstrator. Another threat concern is hypersonic glide vehicles, which both Russia and China launched in 2016. "We are requesting \$75 million for hypersonic defense," Pennett said, noting last year's defense authorization bill directed MDA to establish a program in fiscal 2018. "But we have been doing studies in that area for a while," he said.

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(1) <https://armedservices.house.gov/legislation/hearings/fiscal-year-2018-national-defense-authorization-budget-request-department>

(2) <http://docs.house.gov/meetings/AS/AS29/20170607/106064/HHRG-115-AS29-Wstate-SyringJ-20170607.PDF>

(3) <https://www.mda.mil/system/threat.html>

(4) <https://www.intelligence.senate.gov/hearings/open-hearing-worldwide-threats-hearing-0>

(5) <https://www.mda.mil/news/17news0003.html>

(6) <https://www.mda.mil/global/documents/pdf/budgetfy18.pdf>

(7) <https://www.defense.gov/News/Transcripts/Transcript-View/Article/1193241/departments-of-defense-press-briefing-on-the-presidents-fiscal-year-2018-defense/>

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