On 4th July 2017 (Independence Day of the U.S.), North Korea gave a surprise gift to the U.S. in the form of its first ICBM- Hwasong-14 which according to the experts has the potential to reach till Alaska. In the same month on 28th July 2017, North Korea again tested the same Hwasong-14, which flew around 45 minutes, and achieved the maximum height of 3700 km and covered a distance of 1000 km. According to David Wright-missile expert from the Union of Concerned Scientists, if this missile were fired upon a flatter (standard trajectory), it would have reached as far as the U.S. cities such as Denver, Chicago, Los Angeles, New York and Boston.

The U.S. appears to be in the range of North Korean missiles, the question regarding the capabilities of its major allies such as Japan and South Korea to defend the U.S. against the North Korean missiles is rising again. This event led to the temporary deployment of additional THAAD (Terminal High Altitude Area Defence) batteries by South Korea. However, THAAD has proven capabilities to work against short, medium, and intermediate-range ballistic missile systems. Since it cannot intercept ICBM, the North Korean Hwasong-14 would be out of the coverage area of THAAD.

Presently Japan has two layers of missile defence system which includes: Japan's Maritime Self Defence Forces (MSDF) and Air Self Defence Forces (ASDF). MSDF has Aegis destroyers equipped with Standard Missile-3 (SM-3) interceptors. SM-3 interceptors are tasked to stop missiles in the outer atmosphere. MSDF has four equipped Aegis destroyers namely JS Kongo, JS Myoko, JS Chokai, and JS Kirishima and talks are going on to upgrade two more with this defence system. Whereas, Japan's ASDF has Patriot Advanced Capability-3 (PAC-3) surface-to-air guided interceptors. PAC-3 works as next level of defence shield. With the latest round of
missile tests by North Korea, talks to buy another
level of defence system has picked up the pace.
Aegis Ashore and THAAD are two contenders
from which Japan is planning to choose its next
level missile defence:

a) The quality that makes THAAD (a
transportable system) a strong contender is
its ability to intercept ballistic missiles not
only inside the atmosphere but also outside
the atmosphere during their terminal or
final phase of flight. This quality is critical
for multilayer missile defence system which
makes THAAD a perfect fit between endo-
atmospheric Patriot interceptors and exo-
atmospheric Aegis interceptors. However,
one thing which is going against THAAD,
especially in case of Japan, is its cost. Each
THAAD battery cost around $900 million
and Japan need a total of six missile
interceptors to cover its complete area.
Moreover, China opposition is also one of
the factors that go against Japan’s THAAD
deployment. The resistance was visible
when South Korea deployed two THAAD
launchers in May. China imposed unofficial
sanctions when Chinese tourists were
encouraged to boycott South Korea and
Chinese consumers attacking Korean
companies online. Foreign ministry
spokesperson also warned against the
further deployment of THAAD. China’s
fury against THAAD deployment by South
Korea can be understood from the fact that

THAAD has sophisticated radar capabilities
that can track China’s missile system which
will give the U.S. a significant lead in a
future conflict. If Japan also deploys
THAAD, then it has to face ire of its leading
trading partner China.

b) Aegis Ashore is a land-based component of
the Aegis Ballistic Missile Defence (BDM)
system developed for warships. Factors
that are working in favour of this system
include cost, coverage area, and familiarity.
Each battery of Aegis Ashore is around
$718 million. Aegis Ashore has more
coverage area than THAAD due to this less
number is required. Since Japan’s MSDF is
already using Aegis system, it is familiar
with the Aegis system. Aegis Ashore will
also be equipped with SM-3.

With all these benefits of Aegis Ashore,
Japan is finally tilting towards purchasing it and
evaluating locations to base this system. For
securing Northern part of Japan, the government
is considering Akita or Niigata prefecture. While
Nagasaki prefecture is the choice to secure the
southern part of Japan. Since this is an
unplanned move, the installation plans would be
finalised only by the end of 2017, the cost of the
new Aegis Ashore system would be included in
fiscal 2018. Japan wants to have this new
system as soon as possible, and it hopes to be
operational by 2023-24.
Japan is also seeking Spy-6 radar technology for its BDM from the U.S., but till now its effort to secure that from their ally have come to nought. Spy-6 will boost the range of the BDM range dozens of times. In the present situation while interceptors have enough range to strike a missile into a high space but radar are only powerful enough to detect the threats when it is much closer.9

These BMD such as Aegis Systems (both land and sea version), PAC-3 or even THAAD for that matter are incapable of protecting against ICBM. As mentioned earlier the Hwasong-14 missile has the range of an ICBM. That means that even after receiving Aegis Ashore will not help Japan much. At the moment there are only three systems that can intercept ICBMs. That includes Russian A-135 system, The U.S. Ground-Based Midcourse Defence (GMD), and Israel Arrow 3 system.

Furthermore, a recent confidential U.S. intelligence report (reviewed by The Washington Post) makes the case more complicated. According to the report, North Korea has made a breakthrough and is now capable of building nuclear bombs small enough to fit into the ICBMs.10

North Korea which is moving at breakneck speed to acquire or develop the missile and nuclear technology even when the country is under heavy economic sanctions. Earlier it was only South Korea and Japan that were in danger from the North Korea, but now the U.S. is also in the range of destruction as the Hwasong-14 missile can reach to the U.S. cities. It is evident that with the present missile defence system, Japan can’t defend the U.S. against the growing North Korean arsenal.

(Disclaimer: The views and opinions expressed in this article are those of the author and do not necessarily reflect the position of the Centre for Air Power Studies [CAPS])

Notes


