



Expanding the ROKN's ASW capabilities to deal with North Korean SLBMs by Sukjoon Yoon

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North Korea's claimed development of Submarine-Launched Ballistic Missiles (SLBMs) shows that Pyongyang has decided to meet the resolve of Seoul and Washington by doubling down. The claim is not implausible, considering its technological abilities with submarines and missiles: a midget submarine sank a Republic of Korea Navy (ROKN) corvette, the *Cheonan*, in 2010, and per North Korea's own admission, progress has been made with warhead miniaturization.

North Korean dictator Kim Jong- Un is one of the world's most ruthless: it seems that he recently executed his defense chief, Hyon Yong-chol, in the most gruesome manner. South Korean President Park Geun-hye, meanwhile, has been talking about a golden time of peace and prosperity for the Korean Peninsula. With the spread of modern information technology, even in North Korea, it is becoming ever more difficult for Kim to keep the North Korean people in ignorance. The timing of the SLBM project could be a sign of his insecurity.

Implications of North Korean SLBMs

Satellite images of Shinpo shipyard indicate that North Korea is building larger submarines than previously, with one or two vertical launch tubes for ballistic missiles or cruise missiles. North Korean propaganda photos from May 11, if authentic, show a submarine test launch of land attack missiles. This new threat must be taken seriously: A North Korean deployment of SLBMs equipped with miniaturized nuclear warheads would represent a grave menace to regional security. Missiles launched from underwater are harder to detect than those launched from land, so this development potentially undermines the utility of the Korea Air Missile Defense (KAMD) system currently under development. The KAMD, which is scheduled for completion by 2020, is focused on North Korean aircraft and missiles. It must be expanded to include other targets such as ports capable of harboring submarines carrying ballistic missiles (SSBs). US cooperation may be required to enhance the KAMD capability, which leads to the question of whether the US Terminal High Altitude Area Defense (THAAD) system should be deployed on South Korean soil. This possibility was mentioned by Secretary of State John Kerry for the first time when he visited Seoul on May 18.

The militarization of the East Sea (aka the Sea of Japan) would cause problems as much for China as for the US and its allies. North Korea may attempt to create so-called "bastions"

within the East Sea where its low-value SSBs could operate, following the logic of Soviet and Chinese models. This would make the East Sea an operational theater for Western submarines, which will disrupt Chinese plans to use this route to transport coal from its three poor northern provinces to its prosperous east coast cities. Worse still for China, North Korean SLBMs may encourage the ROK to set aside its historical grievances with Japan, resulting in closer naval cooperation between Japan, the ROK, and the US; even Australia and India might join.

South Korea's response

With this new manifestation of North Korean adventurism, the ROK needs to rethink its Anti-Submarine Warfare (ASW) operations if it wishes to send a strong signal to North Korea that operating SSBs is a risky and unattractive option. If North Korean submarines are allowed access to deep waters, they become more difficult to locate and destroy. The most practical approach is for the ROKN to extend its already impressive ASW capabilities by building an ASW-oriented aircraft carrier (ASW CV) and/or nuclear-powered attack submarines (SSN). Both can counter the North Korean bastion strategy by bottling up submarines in confined waters and then hunting them down. Nuclear-powered submarines, with their high speed and stealth, are especially effective at detecting other submarines by tracking underwater sounds, but the East Sea has a very challenging acoustic environment.

The US already has these assets, and promised to redeploy more than 65 percent of its naval combatants to Asia by 2020. According to the recently revised "Cooperative Strategy for 21st Century Sea Power: Forward, Engaged, Ready," current budget submissions will provide for more than 300 ships and a forward presence of about 120 ships by 2020, up from an average of 97 in 2014. However, disputes in the East and South China Seas are intensifying, and this may draw the US 7th Fleet away from Korean waters. With China seeking to become a maritime power, there is surely a role for the ROKN in sharing the US command of the seas surrounding the Korean Peninsula. At present, US Navy cruisers and destroyers assigned to missile patrol operations are limited in their capacity to conduct effective ASW operations because they have insufficient air wing and underwater platforms available; a suitable indigenous ROK ASW CV and an SSN would be invaluable.

Options

Possible models for an ROKN ASW CV include the Royal Australian Navy's *Canberra*-class Landing Helicopter Dock (LHD), or the trimaran produced by Austal USA as a Littoral Combat Ship for the US Navy, or Austal's proposed trimaran CV capable of carrying unmanned aerial combat vehicles. Any CV-based organic ASW air-wing capacity should be seen as a defensive asset intended to deny enemy

submarines access to the seas around the Korean Peninsula, not as an offensive naval platform.

When it comes to expansion of the ROK's littoral ASW capabilities to enable operations against SSBs, speculation has centered around the ROKN's *Chang Bogo-III* class submarines. A vessel with air-independent propulsion (AIP) is under construction, and it is rumored that a "batch-2" is being designed with a nuclear-powered propulsion system; this would provide the speed required to track and destroy North Korean SSBs, and also to outrun torpedoes.

The ROKN has limited offensive capabilities, but any ROKN SSNs must be able to support a US CV Strike Group (CVSG) in projecting power inland from the littoral, which means being capable of conducting submarine-to-submarine operations as well as attack warfare. What is needed are hybrid assets capable of both defensive and offensive naval operations. By building an indigenous ASW CV and SSNs the ROKN can satisfy both strategic aims in a rapidly changing maritime security environment that presents several urgent challenges. Hopefully, then, this new threat from SLBMs can be contained.

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