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Taiwan's Submarine Debate: Exploring Alternative Solutions

By Koh Swee Lean Collin

Synopsis

Debates over Taipei's submarine acquisition plan have resurfaced in recent times. The plan is likely to continue to be dogged by intractable geopolitical, financial and technical hurdles. One possible alternative is to not acquire new submarines but integrate land-based air and small surface anti-submarine warfare capabilities.

Commentary

DESPITE the warming of cross-strait ties, Taiwan continues to build 'resolute defence and effective deterrence' as an insurance. As part of its defence planning, Taipei seeks new F-16C/Ds jet fighters to upgrade its air force capability but much-publicised negotiations have come to nowhere. Less publicised, however, is Taiwan's submarine programme which has since acquired a low-profile, not low priority, status.

A recent Taipei Times article on Taiwan's submarine programme reflects the rising interest among scholars in the submarine debate that is re-emerging. This revival of interest in Taiwan's submarine plan is understandable given the aging fleet of two operational Hai Lung class conventional submarines serving in the Republic of China Navy (ROCN), as the Taiwanese Navy is also known.

Uncertain Future for Taiwan's Submarine Force

ROCN's Hai Lungs are tasked with primarily keeping vital sea lanes open in times of war and conducting naval blockades of Chinese ports. In addition, there is one crucial dimension of their roles: that of anti-submarine warfare (ASW). ROCN's major warships such as the American-built Knox class frigates are designed with open-ocean ASW in mind, and they are less effective in the shallow waters of the Taiwan Strait. In addition, their huge sizes constrain manoeuvrability in the narrow strait and also present easy targets to enemy fire. As such, the Hai Lungs are valuable in their ASW role.

Commissioned in the late 1980s, the Hai Lungs will turn 30 years old by 2020. With further upgrades becoming less cost-effective, they will be in need of replacement. But no foreign country is willing to infuriate China by selling new submarines to Taiwan. Washington is also reluctant to render technical support for Taipei's indigenous Project Diving Dragon submarine programme. To compound matters, indigenous submarine building, while diplomatically less sensitive, also carries an exorbitant price tag – scarcely affordable by Taipei's shrinking defence budget.

Time is not on the side of Taipei -- with only about 10 years to achieve any breakthrough in its submarine programme. Even if new submarines are eventually built, more time is required for the new boats to reach full operational status. Due to the prevailing geopolitical, financial and technical problems, it remains possible that ROCN may one day be left without submarines in service when the Hai Lungs are duly retired. Until ROCN manages to acquire a firm guarantee on a submarine replacement, it may have to explore austere interim measures to ensure some vital ASW gaps left by the eventual retirement of the Hai Lungs are filled.

A Passive, Integrated ASW Defence Network

Instead of 'big ticket' purchases such as major warships, ROCN may look into optimising its future defence budget by building a passive, integrated ASW defence network. This is as an interim, austere solution before new submarines are ever acquired. At the heart of this network could be an elaborate undersea sonar array deployed along the vital sea approaches to the island. This sonar array can be centrally coordinated with other ASW sensors deployed on warships and aircraft via a secure, shore-based command and control centre.

Upon detection of a hostile submarine contact, ROCN can despatch small, specialised ASW task groups which comprise small corvette-sized submarine hunters. A potential candidate of such a platform is a modified version of the existing indigenous Kuang Hua VI (KH-6) stealth missile boat design, by equipping it for littoral ASW operations. This initiative leverages on existing platforms, obtain logistical compatibility for ROCN while keeping costs low. These small, specialised littoral submarine hunters shall be supported by land-based ASW aerial platforms, such as the P-3C Orion maritime patrol aircraft newly-acquired from Washington. But the Orion serves in small numbers and they are expensive. A possible option for ROCN to consider is a smaller equivalent platform which can be deployed in greater numbers alongside the Orion. One such potential candidate may be the S-3 Viking, designed to operate from American aircraft carriers and was largely withdrawn from service with the demise of the Soviet submarine threat at the end of the Cold War.

At US\$27 million apiece the Viking is less costly than the Orion which costs US\$36 million. An added advantage is that the Viking needs only a 4-men crew, compared to the Orion's 11, yet deemed by some analysts to be roughly as effective. This is an attractive proposition given Taipei's plan to streamline its armed forces manpower by 2015. Like a modified KH-6 submarine hunter, the Viking is also a much smaller platform that can be more easily concealed in hardened shelters and hence less vulnerable to hostile bombardment in the opening of war.

Less Controversial, More Cost-Effective

It is likely that, notwithstanding the current amount of attention paid to the F-16C/D deal, Taiwan's submarine debate may re-emerge in time to come. With the Hai Lungs aging and nearing possible retirement, Taipei will soon find it hard to sidestep this issue. The submarine debate will gradually regain salience and have an effect on cross-straits ties. This in turn have an impact on stability in the Taiwan Straits and hold security implications for the Asia-Pacific at large.

Judging from the geopolitical difficulty of acquiring submarines from abroad, as well as technical and financial infeasibility of reviving *Project Diving Dragon*, austere interim measures can be explored by the ROCN until new breakthroughs are achieved in the submarine program. One possible measure is a passive, integrated ASW defence network outlined above. This leverages on existing strengths of the Taiwanese defence industries at a lower cost. Moreover, compared to acquiring submarines, establishing such a passive network can be politically less sensitive for the present warming cross-straits ties. Though not wholly perfect, this interim measure may at least offer a way forward for Taiwan instead of foot-dragging on controversial, protracted submarine negotiations.

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