Impact of a North East Asian NWFZ on Taiwan Strait and Korea Deterrence

The NAPSNet Policy Forum provides expert analysis of contemporary peace and security issues in Northeast Asia. As always, we invite your responses to this report and hope you will take the opportunity to participate in discussion of the analysis.

Recommended Citation

Eric Heginbotham, "Impact of a North East Asian NWFZ on Taiwan Strait and Korea Deterrence", NAPSNet Policy Forum, January 08, 2013, https://nautilus.org/napsnet/napsnet-policy-forum/impa-t-of-a-ne-asian-nwfz-on-taiwan-strait-and-korea-deterrence/

---

by Eric Heginbotham

January 8, 2013

This report was originally presented at the New Approach to Security in Northeast Asia: Breaking the Gridlock workshop held on October 9th and 10th, 2012 in Washington, DC. All of the papers and presentations given at the workshop are available here, along with the full agenda, participant list and a workshop photo gallery.

Nautilus invites your contributions to this forum, including any responses to this report.

CONTENTS

I. Introduction
II. Report by Eric Heginbotham
III. Notes
IV. References
V. Nautilus invites your responses

I. Introduction

In this report Eric Heginbotham addresses the potential impact of a Northeast Asian Nuclea Weapons Free Zone on U.S. and allied deterrence capabilities in potential Korean Peninsula and Taiwan Strait scenarios. The report focuses primarily on technical military questions related to the balance and nature of military capabilities in those areas.

Eric Heginbotham is a senior political scientist at the RAND Corporation specializing in East Asian security issues. He has recently led RAND projects assessing U.S. engagement opportunities and challenges in Southeast Asia and on U.S. and Chinese relative military capabilities.

The views expressed in this report do not necessarily reflect the official policy or position of the Nautilus Institute. Readers should note that Nautilus seeks a diversity of views and opinions on significant topics in order to identify common ground.

II. Report by Eric Heginbotham

Impact of a NE Asian NWFZ on Taiwan Strait and Korea Deterrence
by Eric Heginbotham

This memo addresses the potential impact of a Northeast Asian NWFZ on U.S. and allied deterrence capabilities in potential Korean Peninsula and Taiwan Strait scenarios. It focuses primarily on technical military questions related to the balance and nature of military capabilities in those areas, rather than on the benefits that might accrue to regional stability and other international political goals (or the benefits on human rights and other secondary effects). To stipulate here, deterrence failure is only one possible avenue to conflict, and a Northeast Asian Asian NWFZ would, if successfully implemented, have a wide variety of positive political consequences in the region that might reduce the probability of certain paths to armed conflict. To provide but one example, the lessening of tensions on the Korean Peninsula, which would be facilitated by a NWFZ (especially if were agreed in conjunction with a formal peace treaty), would reduce the points of friction between not only the DPRK and the ROK, but also between China and its neighbors and, by extension, China and the United States.

Any consideration of a Northeast Asian NWFZ should also consider the impact on military balances and the deterrence capabilities of relevant states. Currently, the United States currently maintains robust conventional deterrent capabilities in both the Korean and Taiwan Strait contexts. Neither that capability, nor the credibility of the U.S. extended nuclear deterrent, would be appreciably undermined by a NE Asian NWFZ in the short-term. However, if Chinese military modernization continues to erode the balance of power across the Taiwan Strait beyond one or two more decades, a NWFZ could exclude certain options that the United States or, especially, its partners might deem desirable to reinforce the credibility of extended deterrence in the context of a war over Taiwan. The impact on perceptions in Japan might be particularly great, given Japan's perennial frictions with China. Ultimately, Japanese concerns could result in increased questioning of the alliance or pressure for a termination of involvement of the NWFZ.

Balanced against this would be the enhanced predictability of international dynamics in Northeast Asia that might result from the easing of tensions on the Korean Peninsula and lessened prospects for a general war that might involve both Korea and the Taiwan Strait. On balance, however, there would be some negative impact on the credibility of extended deterrence, and in designing a Northeast Asian NWFZ, this must be balanced against other benefits that might result.

Based on these conclusions, this memo suggests three potential modifications to a Northeast Asian NWFZ. First, building periodic renewal requirements into the agreement might partly address these concerns. Second, some sort of Chinese concessions as part of a larger Northeast Asian NWFZ might go farther towards generating mutual and sustainable support for such an agreement, though this would add yet another potential failure point to negotiations – and one that would not be trivial given current Chinese reluctance to engage in arms control discussions. Finally, narrowing the agreement to the Korean Peninsula (and excluding requirements on Japan) might offer a practical way to mitigate any negative impact of a NWFZ while preserving many of its most important elements. This would, however, require the ROK to conclude that addressing the North Korean nuclear program is important enough to accept a difference in its nuclear status than Japan.

Short- and Medium-term (5 and 15 year) Impact

The United States does not presently hold or deploy nuclear weapons on the territory of any Northeast Asian state, and since 1991, it has not deployed nuclear weapons on any surface warships, attack submarines, or naval aircraft, meaning that these weapons will not accompany U.S. naval forces during port visits or deployments in Northeast Asia. And while the United States retains the capability to deploy nuclear-armed bombers forward, the 2010 Nuclear Posture Review (NPR) deemphasizes the role of nuclear weapons and, especially, that of tactical nuclear weapons. The 2010 NPR states,

“With the advent of U.S. conventional military preeminence and continued improvements in U.S. missile defenses and capabilities to counter and mitigate the effects of CBW, the role of U.S. nuclear weapons in deterring non-nuclear attacks – conventional, biological, or chemical – has declined significantly. The United States will continue to reduce the role of nuclear weapons in deterring non-nuclear attack.”

Conventional deterrence. U.S. military deployments and discussions of operating practices and the military balance suggests a belief in its ability to deter non-nuclear attacks by potential adversaries in both the Taiwan and Korea scenarios using conventional means. In at least the short- to mid-term, there is little prospect for change in this view in either case, though the two cases present very different types and degrees of challenge.

In the Korean case, U.S. nuclear weapons were withdrawn from the peninsula in 1991. The correlation of economic and military strength had been moving against North Korea for at least two decades by that point and it has continued to do so since then. Although the North Korean military maintains large numbers of ground forces personnel and equipment, the ability of those forces to maneuver successfully is limited by a lack of resources to train, geography that benefits the defense, South Korea’s preparation of the battlefield (e.g., the preparation of bridges for demolition), vastly superior U.S. and ROK airpower, the allies’ ability to employ mines and cluster munitions, and by the continuing increases in the number and types of U.S. standoff and precision strike weapons.

Historically, the United States has suggested that it might respond to chemical attacks with nuclear weapons, and North Korea continues to maintain large stocks of such weapons. Certainly, chemical weapons could complicate U.S. and ROK military tasks by provoking the large-scale evacuation of civilian populations or by denying or impeding the use of air bases in South Korea. However, U.S. airpower could continue to operate and respond effectively from bases in Japan and Guam, while South Korean and U.S. ground forces are capable of operating in a chemical environment.

Provocations by North Korea, such as the recent shelling of Yeonpyeong Island in November 2010, also present challenges to U.S. defense planners. But while responding might require some escalation (if, for example, aircraft were employed), nuclear weapons would not be a solution.

While U.S. and ROK capabilities relative to those of a hypothetical North Korean adversary, trends across the Taiwan Strait are moving in the opposite direction. With annual double-digit growth in its defense budget since 1997, China has been able to improve its military capabilities faster than either Taiwan or the United States. Moreover, because PLA planners have been largely focused on Taiwan, the PLA has developed capabilities optimized for Taiwan-related scenarios. China’s so-called anti-access, area denial (A2/AD) systems, such as accurate conventionally armed ballistic missiles and modern submarines, would severely complicate the U.S. task of aiding Taiwan.

Nevertheless, the United States retains a number of important military advantages in a Taiwan scenario, and adjustments to its procurement, posture, and operational concepts will likely enable it to ensure credible conventional deterrence at least in the short- to mid-term future. The United States can reduce its vulnerability to ballistic missiles by hardening its bases, dispersing aircraft, and operating during the initial phases of a conflict from greater distances. It can exploit its existing strengths in submarines and standoff weapons to threaten Chinese ships at sea, port facilities, or landing areas. Modifications to equipment or operating practices developed under the AirSea Battle will enable U.S. services to achieve synergies, improve survivability, and interrupt enemy kill chains. And the United States can enhance deterrence by threatening a protracted war that might threaten Chinese sea-lanes or overseas assets.

(Note: the language above or elsewhere does not constitute advocacy or conflict nor any suggestion

that the United States seeks conflict with China. However, both states' militaries do, among the contingencies they both consider, prepare for possible war with one another.)

Nuclear use. The actual use of nuclear weapons by China or North Korea would presumably void the restrictions imposed NWFZ in Northeast Asia and permit the United States to introduce weapons of its own. Even if the United States were to employ nuclear weapons, it would not necessarily have to first deploy them to South Korean or Japanese soil. Attacks with strategic or tactical weapons could be conducted from the continental United States using either missiles (in the case of strategic weapons) or aircraft (strategic or tactical).

In America's recent wars, B-2s and other aircraft have flown direct from the continental United States to conduct conventional strikes, and they periodically

conduct operational bombing exercises across the Pacific. While this may entail tanking up to six times mid-flight, the U.S. Air Force operates some 476 tankers in its active and reserve components, and refueling a relatively small number of bombers is not likely to stress U.S. support forces, even across large distances. [1]

During a crisis, the United States may wish to enhance nuclear deterrence by manipulating the readiness or deployment of its nuclear forces. [2] While a NE Asian NWFZ might limit some of its options in this regard, the United States would still have a number of options, including the deployment of nuclear-capable bombers anywhere in theater, the deployment of nuclear weapons to Andersen Air Force Base in Guam or to areas not covered under the NWFZ, or adjustments to alert levels in the United States. In this context, limitations on the deployment of nuclear weapons to Japan, Korea, or Taiwan would not significantly undermine its ability to signal.

Long-Term Impact on the Reassurance of Partners (Beyond 15 years)

Barring unforeseen developments, the U.S. capability to deter North Korean conventional attack using conventional weapons is unlikely to erode in the foreseeable future. The prospects for conventional deterrence across the Taiwan Strait are more uncertain beyond the next one or two decades.

Deterrence across the Taiwan Strait. Depending on economic and technological variables, the United States will probably be able to retain a degree of advantage in conventional conflict through further adjustments to its force structure and posture, but it may no longer be able to dominate all areas or phases of a conflict. Technically speaking, Washington might also still be able to threaten the use of either tactical or strategic nuclear weapons in retaliation for first use by an adversary, even without basing weapons on the sovereign territory of partner states.

However, even under relatively optimistic assumptions, the United States might find it more difficult to reassure allies if a NE Asian NWFZ were in effect. The estimated costs to the United States of any war across the Strait with China will rise, as will the prospects for a protracted war. As China becomes more capable of challenging the United States in the conventional arena and as the PLA's nuclear second-strike capability becomes more robust, allies and partners might question the willingness of the United States to become involved in conflicts in which it no longer enjoyed clear conventional superiority or escalation dominance.

To date, U.S. partners, and especially Japan, have asked for more explicit reassurances on the workings of conventional deterrence, as well as of extended nuclear deterrence. Seoul is taking measures to improve its own long-range strike capabilities. And Tokyo has recently added the enhancing "national security" to its rationale for its civilian nuclear programs under its Basic Atomic

Energy Law. Japanese insecurities are likely to grow further over time, as its economy will almost certainly underperform China's, leading to a further deterioration in the military balance. In the future, they may be less, rather than more, willing to rely on rhetoric and may see merit in the U.S. deployment of "tripwire" nuclear forces on their own territory.

Two front war? A Northeast Asian NWFZ would reduce the probability of a conflict on the Korean Peninsula, as well as the possibility of simultaneous conflict in Korea and across the Taiwan Strait. This could potentially free up resources, with which the United States might buttress deterrence vis-à-vis China in a Taiwan scenario.

However, a two-front war is a very low probability event even without a Northeast Asian NWFZ, as China would be unlikely to invite the risks inherent in trying to mobilize North Korean support. The risks to China would include the possibility of compromising operational security and the possibility of triggering a more protracted and unpredictable war. And although North Korea might capitalize on the opportunity presented by a Taiwan war to ratchet up tensions in an effort to extort concessions on its own, it would be unlikely to initiate a major conflict that it could not win, especially without a long period of preparation.

Reducing the prospects for a two-front war would, on balance, be less important than the other political gains that were accrue from reducing tensions on the Korean Peninsula. Although the allies would prevail, a conflict on the Korean Peninsula would be a costly, bloody affair even if it remained conventional, and anything that reduces the probability of such a conflict, including a Northeast Asian NWFZ, should be welcomed. Balanced against this would be the impact on deterrence across the Taiwan Strait, which would have an impact on the credibility of U.S. extended deterrence, especially in Japan. While the reduced probability of a two-front war may mitigate this impact somewhat, this will be a relative minor consideration in the view of Japanese strategists facing a deteriorating military balance vis-à-vis China.

Hedging Against the Future and/or Assuring Mutual Benefit

The observations above suggest that although there might be little immediate material (or technical) impact on U.S. deterrence capabilities in the short- or mid-term, that situation will become less certain in the longer term. Moreover, given that the trend lines in the balance of power vis-à-vis China are negative and that the expected future impact are evident today, the balance across the

Taiwan Strait will weigh heavily on U.S. and, especially, Japanese strategists in contemplating an agreement. Three possible modifications to the proposal might address these concerns.

The first potential modification would be adding pre-established renewal requirements that would enable participants to hedge against the possibility that a NWFZ were no longer desirable. Given the strategic uncertainties in Asia, such provisions might be prudent. Even with such provisions, U.S. and allied planners might nevertheless be reluctant to enter into agreement that, once signed, might become politically difficult to escape.

The second potential modification would be ensuring that the NWFZ's provisions were balanced in such a way that they also addressed issues relevant to the Taiwan Strait and the U.S.-China military balance. One possibility might be mutual restrictions on short- and intermediate-range nuclear forces, which might arguably reduce the prospects for vertical escalation in the event of conflict. While these are already limited in the U.S. case by the INF Treaty, China remains free to deploy such forces. Geographic or numerical limitations might allay U.S. and Japanese concerns that China would benefit disproportionately from a Northeast Asian NWFZ and potentially undermine the credibility of U.S. conventional or extended nuclear deterrence.

While this might be a desirable approach to Northeast Asian international politics in the long-term, China is unlikely to respond positively in the short term. Its medium- and intermediate-range nuclear forces are important to its strategic posture against potential regional adversaries, and Beijing is currently unwilling to discuss strategic nuclear arms control in any form, though it appears to be gradually warming to the possibility. Nevertheless, given the potential gains to China of limiting the introduction of nuclear weapons into the region, Beijing should be willing to discuss some limitations on its own forces or activities in exchange for limits on others.

The third possible modification, and the one that might be most realistic and consequential, would be restricting the even agreement primarily to the Korean Peninsula. South Korea would foreswear the possibility of reprocessing. The United States would not introduce nuclear weapons onto the peninsula. And North Korea would give up its nuclear weapons. Japan, however, would not be required to give up its own reprocessing program. Clearly, this is not a suggestion without challenges, as it would require South Korea to accept a nuclear status different from Japan's. On the other hand, the gains for Seoul would be enormous, and the United States could make the arrangement more palatable by offering additional formal reassurances to South Korea.

III. Notes

[1] Providing tanker support for shorter-legged tactical aircraft would be much more onerous during a conflict with China, especially if those aircraft were based farther to the rear as threat from Chinese conventionally armed missiles threatens forward air bases. While it is true that demands on the tanker force will take a cumulative strain, the marginal impact of a small number of strategic attacks would make little difference.

[2] Balanced against this will be a desire to avoid escalation. One reason that the United States did not lower its alert levels under the 2010 NPR was that a restoration of higher levels during crisis might prove escalatory and prompt an adversary towards higher levels of alert.

IV. References

Dupree, Philip, Jordan Thomas. "Air-Sea Battle: Clearing the Fog." Armed Forces Journal. http://www.armedforcesjournal.com/2012/05/10318204.

Grant, Rebecca. "Countering the Missile Threat." Air Force Magazine, Vol. 93, No. 12. December 2010.

Kulacki, Gregory. Japan and America's Nuclear Posture. Union of Concerned Scientists, 2010.

Peifer, Douglas C. "China, the German Analogy, and the New Air-Sea Operational Concept," Orbis, Vol. 55, No. 1, Winter 2011.

Shlapak, David, David T. Orletsky, Toy I. Reid, Murray Scot Tanner, Barry Wilson. A Question of Balance: Political Context and Military Aspects of the China-Taiwan Dispute. RAND Corporation, 2009. http://www.rand.org/pubs/monographs/MG888.html

Trachtenberg, David J. "U.S. Extended Deterrence: How Much Strategic Force is Too Little?" Tailored Deterrence: Influencing States and Groups of Concern. USAF Counterproliferation Center,

May 2011. (available online)

U.S. Department of Defense, Nuclear Posture Review Report, April 2010. Document available at http://www.defense.gov/npr/.

van Tol, Jan, Mark Gunzinger, Andrew F. Krepinevich. “AirSea Battle: A Point-of-Departure Operational Concept.” March 2010. Available at http://www.csbaonline.org/publications/2010/05/airsea-battle-concept/.

V. Nautilus invites your responses

The Nautilus Peace and Security Network invites your responses to this report. Please leave a comment below or send your response to: napsnet@nautilus.org. Comments will only be posted if they include the author’s name and affiliation.

View this online at: https://nautilus.org/napsnet/napsnet-policy-forum/impact-of-a-ne-asian-nwfz-on-taiwan-strait-and-korea-deterrence/

Nautilus Institute
608 San Miguel Ave., Berkeley, CA 94707-1535 | Phone: (510) 423-0372 | Email: nautilus@nautilus.org