Challenges for the PLAN in the Western Pacific: Implications for the U.S.-Japan Alliance

BY TETSUO KOTANI

China is further developing its anti-access/area-denial (A2/AD) capabilities, particularly its submarine fleet and cruise missiles launched from land-based aircraft, to defeat an approaching enemy fleet. In addition to developing A2/AD capabilities, the People's Liberation Army Navy (PLAN) is making concerted efforts to become a blue water navy. However, the PLAN faces some difficult challenges—both geographical and operational—in becoming an ocean-going navy. This paper considers the challenges the PLAN faces in the open ocean and the implications of these challenges for U.S.-Japan alliance cooperation.

PLAN's Nine Exits to the Open Ocean

Since the Pacific Ocean is quite vast, the many islands in the region have strong implications for Asian geopolitics. The Japanese archipelago constitutes part of the offshore island chain running off the Asian continent. This offshore island chain creates a series of marginal seas along the Asian continent, including the Sea of Okhotsk, the Sea of Japan, the Yellow Sea, the East and South China Seas, and the Philippine Sea. For land powers, the island chain is a double-edged sword. It can protect them from hostile maritime powers, while blocking their access to the open ocean.[1]

Chinese strategy has conceived two "island chains" as China's maritime defensive barrier. The PLAN has enhanced its A2/AD capability up to the first island chain by introducing modern hardware such as the new YJ-18 supersonic anti-ship cruise missile deployed on the newest the Luyang III-class destroyers, Song/Yuan-class diesel attack, and the Shang-class nuclear-powered attack submarines.[2] The PLAN has also improved its aviation fleet for early warning and surveillance and expanded operational areas into the high seas toward the second island chain.

But these island chains do not necessarily constitute a defensive barrier for China since they are controlled by U.S. allies. At the same time, the PLAN needs to expand its activities beyond the first island chain to expand the reach of its A2/AD capabilities and defend Chinese sea lines of communication. The PLAN has a total of nine exits to the open ocean (see graphic on page 2).[3]

Since 2008, China's naval activities have become highly intense in the East China Sea and other areas along its maritime periphery in order to improve access to the open ocean through Japanese straits. The most frequently used route is the Miyako Channel between Mainland Okinawa and Miyako Island, the widest gap along the first island chain. The PLAN uses most of Japanese major straits on a regular basis,[4] and the PLAN is also increasing its submarine fleet activities along the first island chain.

Two Challenges for PLAN

There are two immediate challenges for the PLAN to become a blue water navy. The first challenge is its lack of sufficient antisubmarine warfare (ASW) capabilities. The PLAN has invested more in anti-surface and anti-air warfare (ASUW and AAW)

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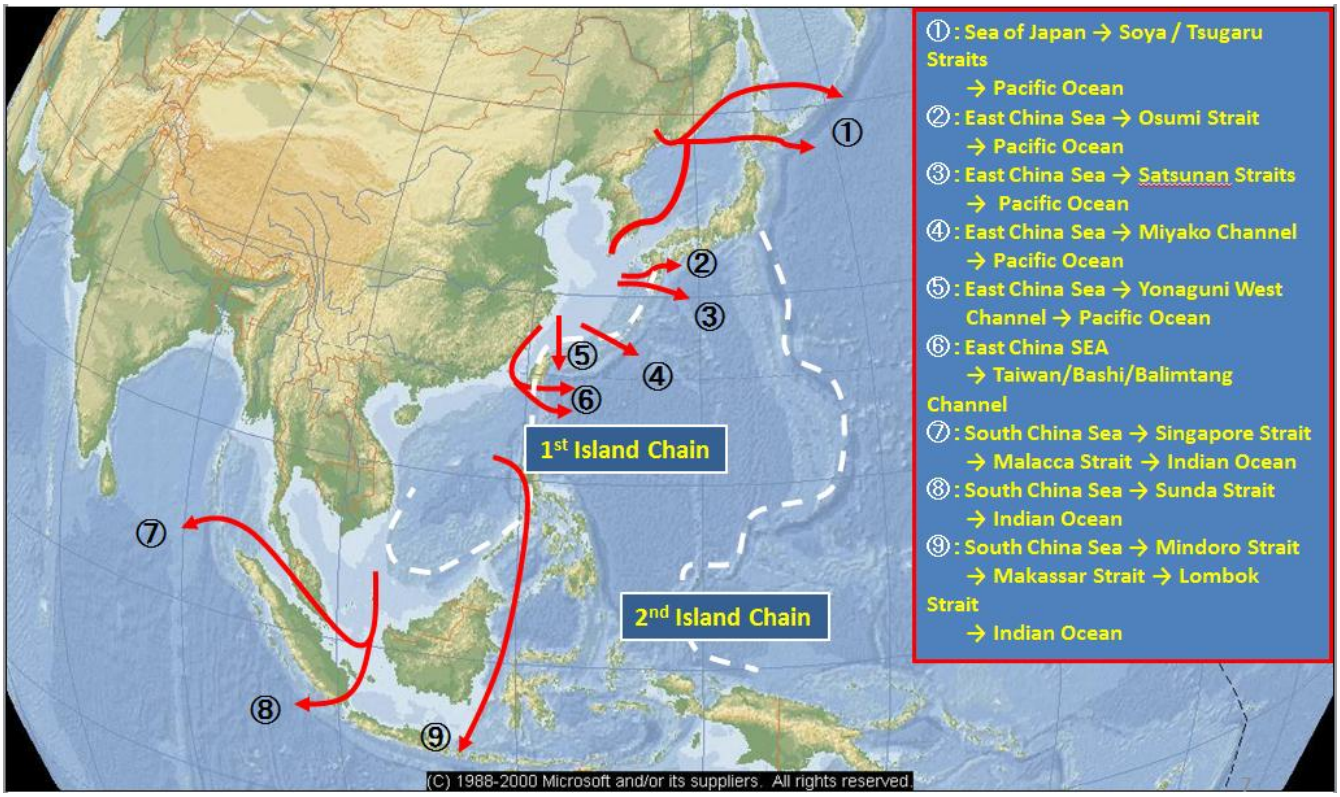

capabilities than it has in ASW. There are occasional reports about the development of ASW aircraft (Y-9) by the PLAN. Despite the fact the PLAN is expanding its submarine fleet and unlike other navies, it is not tasked for ASW.[5] It will take years, if not decades, for the PLAN to develop reliable ASW capabilities. As the result, the PLAN will continue to be vulnerable to attack from enemy submarines even inside the first island chain.

The second challenge for the PLAN is fleet air defense. The PLAN has improved shipboard air defense systems by introducing the Luyang II- class and Luyang III-class destroyer with the HHQ-9 surface-to-air missiles and the phased-array radar. The introduction of these capabilities gives more confidence to the PLAN outside of shore-based air defense systems. [6] The PLAN's first aircraft carrier Liaoning is suited not for long-range power projection but for fleet air defense. The PLAN has tested the operation of the J-15 aircraft on the Liaoning, but it will take many years before the PLAN aircraft carrier program becomes operational. The Liaoning is likely to be used for training and experiments rather than fleet air defense in a military contingency.[7] Chinese defense officials acknowledge plans to build indigenous carriers, but it is still unclear whether the new carriers can provide sufficient fleet air defense.

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Perhaps in an effort to expand coastal air defense coverage, the PLAN aviation fleet increased the frequency of its encroachment into Japanese territorial airspace after 2010. [8] Accordingly, Japanese scrambles against Chinese aircraft continue to rise.

Between October 2013 and September 2014, JASDF made 473 scrambles against Chinese aircraft—about a 23% increase from the previous year. Most of those Chinese aircraft were jet fighters.

The flight pattern of Chinese aircraft in the East China Sea indicates the limitation of Chinese coastal radar coverage. Chinese aircrafts typically fly up to the median line of the East China Sea without being escorted by an early-warning aircraft. In May and June of 2014, the Chinese fighter SU-27SK harassed OP-3C and YS-11EB Japanese surveillance aircraft along the median line. On the other hand, however, there has been no harassment against Japanese P-3C maritime patrol aircraft by Chinese aircraft. Chinese coastal radar systems may be able to detect aircraft flying higher along the median line such as the OP-3C or YS-11EB, but may not detect those flying at a lower altitude such as a P-3C.

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Since the announcement of the "East China Sea Air Defense Identification Zone" in November 2013, the PLAN aviation fleet has expanded their activities beyond the median line. The Tu-154 Chinese intelligence-gathering aircraft is often detected along the outer limit of the ADIZ. In 2013, the H-6 Chinese bomber started to operate outside the Okinawa island chain while being escorted by an early-warning aircraft.[9]

Chinese Efforts to Address these Challenges

In addition to expanding the scope of its activities in the air domain, the PLAN has launched a complex long-range maritime exercise in the western Pacific. In 2013, the PLAN conducted Manuever-5, a large-scale joint exercise involving the North Sea, East Sea, and South Sea Fleets in the Philippines Sea.[10] PLAN bombers and other aircrafts joined these joint exercises. The same exercise was repeated in 2014. These exercises notwithstanding, PLAN fleet air defense will continue to be a big challenge due to the PLAN's lack of sufficient airborne early-warning aircraft. If these early-warning aircrafts are neutralized, the PLAN aviation fleet would not be able to provide fleet air defense.

On the other hand, despite the lack of sufficient fleet air defense, China's missile forces can neutralize Japanese and U.S. air assets. China posseses more than one thousand intermediate-range ballistic missiles (IRBMs) and medium-range ballistic missiles (MRBMs) that can destroy Japanese and U.S. air bases on Okinawa, thereby providing protection for the PLAN fleet operations in the East China Sea and beyond, at least in the initial phase of a contingency. The DF-21 anti-ship ballistic missile may also be able to neutralize U.S. carrier strike groups in the future.

In addition, the PLAN may seek to obtain an unsinkable aircraft carrier in the form of an island. Among the Japanese Nansei (southwestern) Islands, there are 17 islands that have civilian airfields. For instance, Ishigaki Island and Shimoji Island have long airstrips that can operate fighter and large transport aircraft. At this moment, there are no Japanese Ground Self-Defense Force units protecting those islands. In order to gain control of these airstrips, China may attempt to occupy those islands by sending either amphibious assault units or hundreds of fishing boats with armed militia aboard.

Conclusion and Implications for the Alliance

To access to the western Pacific for counter-intervention operations, the PLAN needs to address two fundamental challenges—the lack of ASW and fleet air defense. Otherwise, Japan is in a position to control six out of the nine Chinese maritime routes to the open ocean. In peacetime, China has every right to enjoy freedom of navigation outside Japanese territorial seas and innocent passage in Japanese territorial seas. However, in the event of an escalation of military tensions, Japan needs to possess the capability to deny China's access to the open ocean and skies to maintain maritime and air superiority.

In order for Japan to maintain sea control in the western Pacific, the expansion of the Japanese submarine fleet from 16 to 22 is necessary. Furthermore, the introduction of Japanese P-1 and U.S. P-8 maritime patrol aircraft will enhance the ASW capabilities of the alliance and contribute to the alliance's ability to maintain sea control. As China continues to expand its submarine fleet, Japan and the United States should cooperate with Australia and support its new submarine program to maintain underwater superiority.

An increasingly important aspect of deterrence is an ability to respond to China's precision strike capabilities. The new U.S.-Japan Defense Guidelines refer to dispersion, hardening, and resiliency of existing facilities to deal with China's ballistic missile threat vis-à-vis, for instance, Kadena Airbase in Okinawa. Even after a Chinese ballistic missile attack, the alliance will maintain counterattack capabilities using other military and commercial facilities, while rapidly recovering damaged ones. In addition, the deployment of ground troops to remote islands that have long commercial airstrips is important in order to keep those islands open for use by Japanese and American forces.

[1] Robyn Lim, *The Geopolitics of East Asia: The Search for Equilibrium* (NY: Routledge, 2005), p. 7.
[2] Bill Gertz, "ONI Reveals Massive Chinese Naval Buildup—New Supersonic Cruise Missile Deployed," *Washington Free Beacon*, 10 April 2015, at http://freebeacon.com/national-security/oni-reveals-massive-chinese-naval-buildup/.
[3] *Asahi Shimbun*, December 27, 2010.
[4] Every year Japan's defense white paper updates China's maritime activities around Japan. The most recent one is Ministry of Defense, *Defense of Japan 2014*, July 2014, pp. 40-45, http://www.mod.go.jp/e/publ/w_paper/pdf/2014/DOJ2014_1-1-3_web_1031.pdf.
[5] The Office of Naval Intelligence, "The PLA Navy: New Capabilities and Missions for the 21st Century" (April 2015), p. 16, available at http://www.oni.navy.mil/Intelligence_Community/china_media/2015_PLA_NAVY_PUB_Interactive.pdf.
[6] Ibid., p. 13.
[7] Ibid., p. 20.
[8] For the detailed data on Chinese air activities, see Ministry of Defense, "China's activities surrounding Japan's airspace," no date, http://www.mod.go.jp/e/d_act/ryouku/.
[9] Interview with an informed source.
[10] Office of Secretary of Defense, "Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2013," P. 34, http://www.defense.gov/pubs/2014_DoD_China_Report.pdf.