Counter A2/AD in Japan-U.S. Defense Cooperation: Toward 'Allied Air-Sea Battle'

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Since the Cold War, the Japan-U.S. Security Treaty has been the lynchpin of the regional security architecture. The alliance served as the key mechanism to ensure U.S. military presence and commitment to the Asia-Pacific. In addition to the modernization of Japan Self Defense Force (JSDF) military capabilities, U.S. military presence manifested through bases in Japan, and Japan-U.S. military cooperation based on the Japan-U.S. Defense Guidelines[1] have been the pillars of the alliance and regional stability in the Asia-Pacific.

The rise of China during a period of Japan and U.S. budget austerity requires creative discussion on defense cooperation between the two allies. China has invested a great deal of resources to develop robust "anti-access / area-denial" (A2/AD) capabilities. Furthermore, China's rapid economic growth may cause a geostrategic "power shift" in the global strategic landscape.[2] Even in the absence of a clear "power shift," enhanced A2/AD capabilities can transform the regional strategic balance. In spite of the strategic implications of a militarily rising China, prolonged economic stagnation in Japan and the United States make it so that no significant increase in either country's defense budget can be expected in the near future.

In order for the alliance to remain relevant and continue to play a key role for peace and stability in the Asia-Pacific region, defense cooperation within the broader framework of the Japan-U.S. alliance needs to adapt to the region's changing strategic reality. Indeed, the People's Liberation Army (PLA) A2/AD capabilities may alter the regional military balance in the near term; therefore Japan and the United States should update defense cooperation to maintain deterrence under the new military situation. This paper seeks to address the potential challenges posed by a rising China and trends in Japanese strategic thinking based on the *National Defense Program Guidelines*, which was released in December 2010, then conclude with recommendations for the next phase of defense cooperation under the rubric of "allied air-sea battle."

[1] A bilateral agreement originally concluded in 1978 and revised in 1997, "The Guidelines for Japan-U.S. Defense Cooperation," (September 1997) <http://www.mofa.go.jp/region/n-america/us/security/guideline2.html> (accessed on April 16, 2012).

[2] The Tokyo Foundation, "Japan's Security Strategy toward China: Integration, Balancing, and Deterrence in the Era of Power Shift," (October 2011), <http://www.tokyofoundation.org/en/additional_info/security_strategy_toward_china.pdf> (accessed on March 31, 2012).

Addressing the Challenges: A2/AD and Opportunistic Creeping Expansion

In the 2001 version of the *Quadrennial Defense Review (2001 QDR)*, which was released three weeks after the tragic 9/11 terrorist attacks, a paragraph in the chapter on "Creating the U.S. Military of the 21st Century" stated:

> Future adversaries could have the means to render ineffective much of our current ability to project military power overseas. Saturation attacks with ballistic and cruise missiles could deny or delay U.S. military access to overseas bases, airfields, and ports. Advanced air defense systems could deny access to hostile airspace to all but low-observable aircraft. Military and commercial space capabilities, over-the-horizon radars, and low- observable unmanned aerial vehicles could give potential adversaries the means to conduct wide-area surveillance and track and target American forces and assets. Anti-ship cruise missiles, advanced diesel submarines, and advanced mines could threaten the ability of U.S. naval and amphibious forces to operate in littoral waters. New approaches for projecting power must be developed to meet these threats. Adversaries will also likely seek to exploit strategic depth to their advantage. Mobile ballistic missile systems can be launched from extended range, exacerbating the anti-access and area-denial challenges. Space denial capabilities, such as ground-based lasers, can be located deep within an adversary's territory.
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> Accordingly, a key objective of transformation is to develop the means to deny sanctuary to potential adversaries. This will likely require the development and acquisition of robust capabilities to conduct persistent surveillance, precision strike, and maneuver at varying depths within denied areas.[3]

With the exception of anti-ship ballistic missile (ASBM), the *2001 QDR* accurately predicted most of the challenges that strategists currently express concerns about. As the *2001 QDR* proves, A2/AD capabilities have been a serious concern for defense planning in the U.S. strategic community for over at least a decade.

The threats from robust A2/AD capabilities may be categorized into two types: threats against fixed bases by ballistic / cruise missiles; and threats against moving assets such as naval vessels by ballistic / cruise missiles and submarines. The former existed since the development of ballistic and cruise missiles in the 1940s – so effective countermeasures exist. Developing capabilities to counter the latter is more difficult. A military that is seeking to develop robust A2/AD capabilities against moving targets needs to develop real-time intelligence, surveillance and reconnaissance (ISR) ability for target acquisition and real-time information sharing system to transmit target information from sensor to shooter. These are highly complex tasks and even the U.S military forces had a difficult experience during the "Scud Hunt" air campaign in the 1991 Gulf War.[4]

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[3] Department of Defense, "Quadrennial Defense Review Report," (September 30, 2001), p.31. <http://www.defense.gov/pubs/pdfs/qdr2001.pdf> (accessed on March 31, 2012).

[4] Department of Defense, *Gulf War Air Power Survey*, Volume II, Part II (Washington, D.C. : Government Printing Office, 1993), esp. pp.331-336.

Whether the PLA will acquire integrated capabilities in the near term remains to be seen, but its capabilities against mobile targets will gradually increase, especially in light of its enormous investments in space-based assets and doctrinal emphasis on informatization.[5]

Fixed bases are vulnerable and in-theater operations based on fixed air bases face significant challenges. Against the backdrop of advanced A2/AD capabilities, naval operations and reinforcements from out-of-theater assets could also be restricted. Therefore, future alliance cooperation needs to adapt such future operational challenges.

From a Japanese perspective, challenges below high-end threat (i.e., China's A2/AD capabilities) are also a major concern. The National Defense Guidelines (2010 NDPG), released in December 2010, clearly indicates concerns about such challenges.[6] In Defense Minister Toshimi Kitazawa's remarks on the release of 2010 NDPG, he referred to the frequent activities/operations of surrounding countries' military and other government organizations, as well as about the potential degradation of the security environment. In response to such challenges, Defense Minister Kitazawa emphasized the necessity of continuous and strategic implementation of steady-state operations, such as ISR.[7]

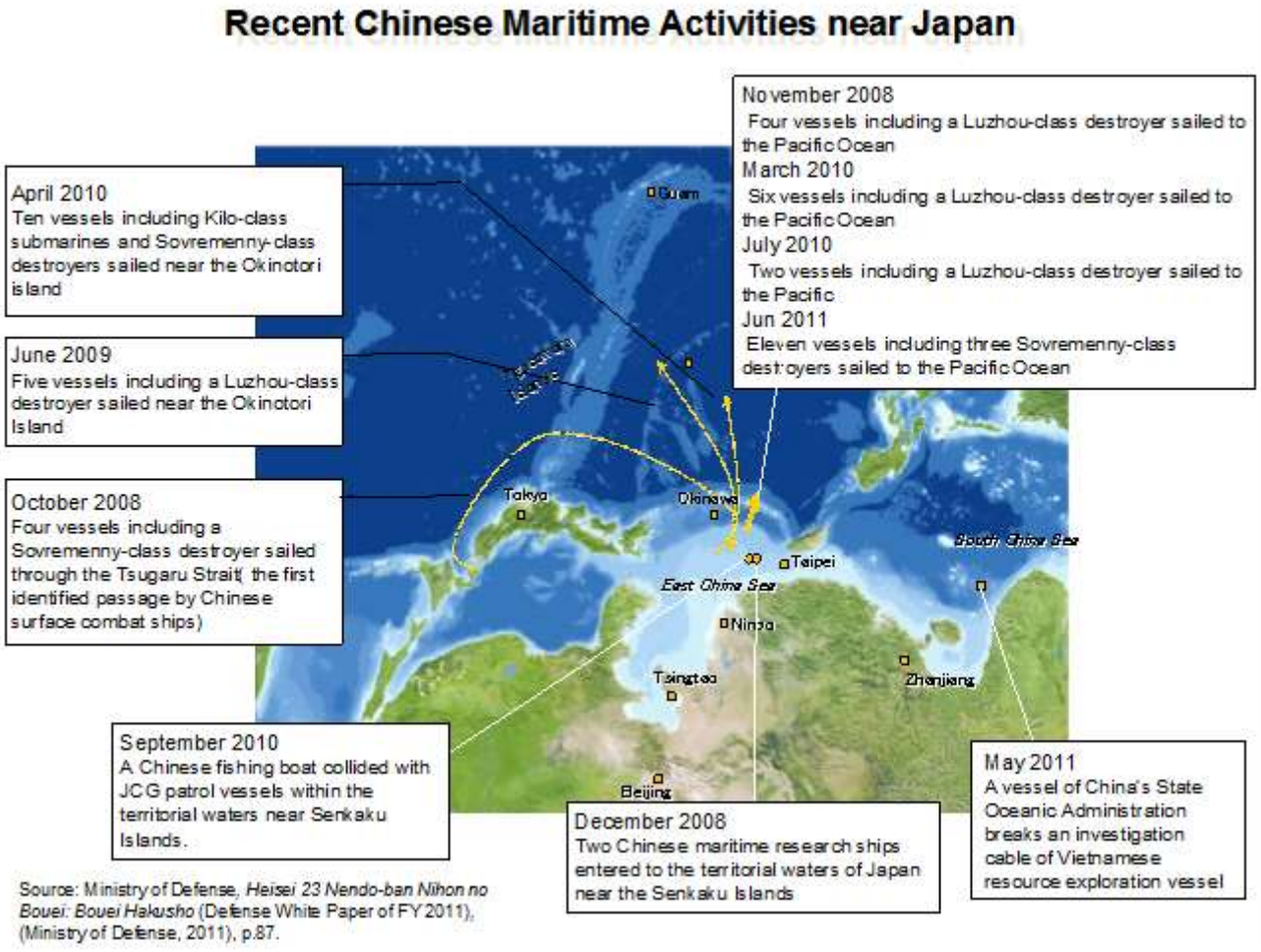
In light of increasing frictions over the East China Sea, such as exclusive economic zone (EEZ) borderline issue around natural gas wells and Beijing's claim over Japanese territorial islands, China's opportunistic creeping expansion over such issues have become more disconcerting. With these concerns in mind, the 2010 NDPG highlighted continuous steady-state ISR operations and patrols in the East China Sea as highly prioritized operations for Japan's "Dynamic Defense Force," since capabilities and posture to "fight and win" in a high-end conflict may no longer adequately address such challenges.

With increasing maritime and air activities in these areas, a "balance of activities" is necessary for maintaining strategic equilibrium between Japan and China.

[5] National Institute for Defense Studies, *East Asia Strategic Review 2008*, (Tokyo: The Japan Times, 2008), pp.17-36 <http://www.nids.go.jp/english/publication/east-asian/pdf/2008/east-asian_e2008_01.pdf> (accessed on April 16, 2012); National Institute for Defense Studies, *East Asia Strategic Review 2010*, (Tokyo: The Japan Times, 2010), pp.129-131. <http://www.nids.go.jp/english/publication/east-asian/pdf/2008/east-asian_e2008_01.pdf> (accessed on April 16, 2012).

[6] Government of Japan, "National Defense Program Guidelines for FY2011 and beyond," (December 17, 2010) <http://www.mod.go.jp/e/d_act/d_policy/pdf/guidelinesFY2011.pdf> (accessed on March 31, 2012).

[7] Ministry of Defense, "Defense Minister's Statement on the Approval of the "National Defense Program Guidelines for FY2011 and beyond" and the "Mid-Term Defense Program (FY2011-FY2015)," <http://www.mod.go.jp/j/approach/agenda/guideline/2011/daijin_e.pdf> (accessed on March 31, 2012).



Source: Ministry of Defense, *Heisei 23 Nendo-ban Nihon no Bouei: Bouei Hakusho* (Defense White Paper of FY 2011), (Ministry of Defense, 2011), p.87.

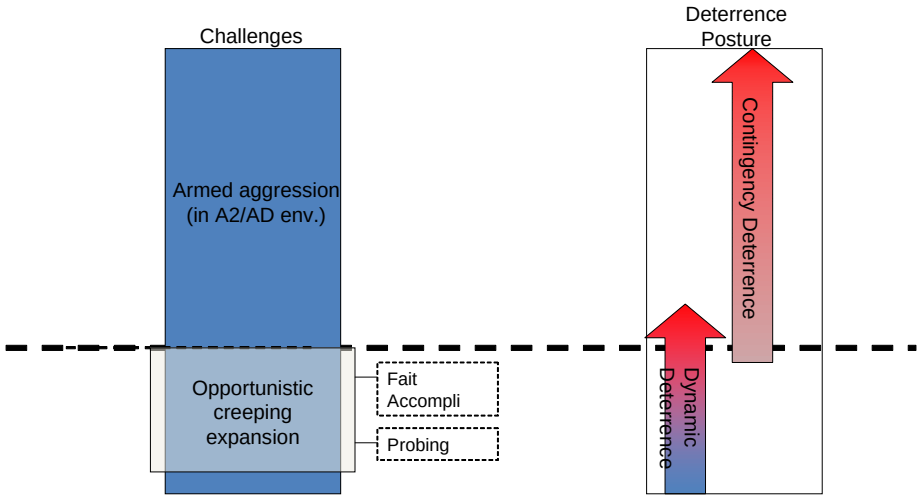
Strategic Thoughts in Japan: Dynamic Deterrence

The NDPG is the capstone of Japan's new defense policy. It analyzes Japan's security environment, defines roles, missions, and capabilities for the JSDF, and force structure. There have been four version of NDPG: 1976, 1995, 2004, and 2010. The Japanese government released the Mid-Term Defense Program (MTDP), which is a procurement plan for the coming five years to transform its force structure, on the same day as 2010 NDPG.

The most important element in the 2010 NDPG is the overarching concept of a "Dynamic Defense Force," which includes such concepts as readiness, mobility, flexibility, sustainability, and versatility reinforced by advanced military technology and intelligence capabilities. The basic idea that underlies a "Dynamic Defense Force" is the recognition of transformative military forces from roles and missions based on a separation of peacetime and wartime operations, to operations in the 'gray area' that falls between wartime and peacetime. Looking back at recent military operations since the Gulf War, most operations took place in such 'gray area':

Northern Watch / Southern Watch Operation at Iraq, peacekeeping operation in Bosnia and Kosovo, counter insurgency / stabilization operations in Iraq and Afghanistan, counter piracy operations off the coast of Somalia, and various UN peacekeeping operations. The intensity of these military operations is lower than conventional warfare, but higher than that of traditional peacetime mission, i.e. training and preparation for conventional warfare. The 2010 QDR depicts that challenges in future strategic landscape feature "in the ambiguous gray area that is neither fully war nor fully peace,"[8] steady-state operations at the level less than high-intensity conflict are prevalent challenges in the contemporary security environment, not only in the future. Military operation in such gray area often begins suddenly, and usually continues very long time. This is the reason why "dynamic defense force" emphasizes readiness and sustainability.

Sketch of Dynamic Deterrence



[1]

A more 'dynamic' JSDF is essential for keeping pace with trends in global military operations, and to address the regional security situation. In the case of China, even though a large-scale conventional amphibious invasion against Japan may be inconceivable, Beijing's "opportunistic creeping expansion" would surely continue if Japan shows a "windows of opportunity" or offers a sense that there is a "power vacuum" in the East China Sea. In other words, one important role of the JSDF is to not show any "windows of opportunity" to China as a preventive measure.

Therefore, "dynamic deterrence," is intended to counter such creeping expansion and a key element of a "dynamic defense force." [9] According to deterrence theory, there are some situation which deterrence hardly works, including *fait accompli* and probing. [10] *Fait accompli* is a situation that the adversary adopts a strategy in which it attempts to change the status quo without giving enough time for a deterrer to react. Probing is a situation that the adversary

[8] Department of Defense "Quadrennial Defense Review Report," (February 2010), p.73 <http://www.defense.gov/qdr/images/QDR_as_of_12Feb10_1000.pdf> (accessed on April 16, 2012).

[9] About "dynamic defense force" and "dynamic deterrence," see National Institute for Defense Studies, *East Asian Strategic Review 2011*, (Tokyo: The Japan Times, 2011)pp.252-257, <http://www.nids.go.jp/english/publication/east-asian/pdf/2011/east-asian_e2011_08.pdf> (accessed on March 31, 2012).

[10] Alexander L. George and Richard Smoke, *Deterrence in American Foreign Policy: Theory and Practice*, (New York: Columbia University Press, 1974).

challenged to find out the lower ceiling of deterrence commitment. Japan's concern over China's opportunistic creeping expansion in the East China Sea fits these two challenges that are difficult to deter.

Dynamic deterrence was developed in reaction to growing concerns that these challenges could not be adequately dealt with by a traditional deterrence posture, which is designed to deter high-end conventional conflict. In particular, the main objectives of dynamic deterrence can be described in the two types of situations mentioned above in which conventional deterrence would likely fail, i.e. "*fait accompli*" and "probing activities." Deterrence is executed through continuous steady-state ISR, information gathering, military exercises and demonstration of operational effectiveness and readiness through actual military operations such as international cooperation or disaster relief.

Next Phase of Japan-U.S. Defense Cooperation in A2/AD environment

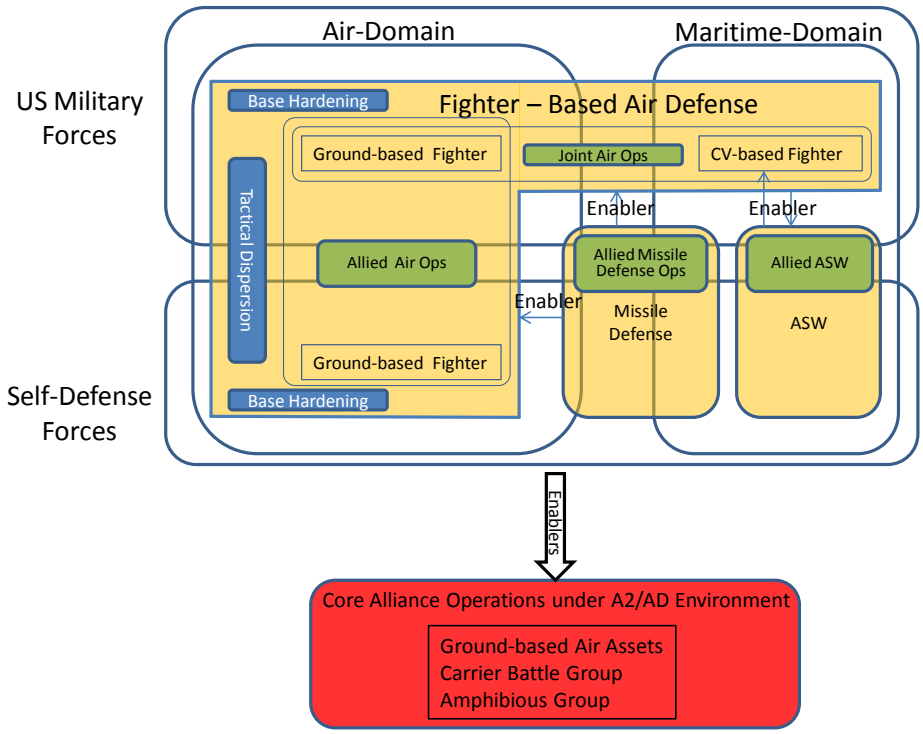
Two different security concerns have emerged as a result of PLA military modernization: A2/AD and creeping expansion. Different capability portfolios will be needed in order to address these issues: high-end advanced conventional force posture against the former, and steady-state operations for ISR and presence patrol against the latter. From a defense planning perspective, the former measures will likely require the procurement of long-range strike capabilities that can launch attacks from outside the A2/AD areas or enhance the resiliency of fixed-base networks. On the other hand, for the latter measures, operational and maintenance spending should be prioritized over procurement. Combining counter-measures in a "smart" way is the most important challenge for the next phase of the Japan-U.S. defense cooperation.

In summary, "dynamic deterrence" is designed to close "windows of deterrence" by increasing JSDF activities in the East China Sea. In this context, U.S. military presence in Japan reinforces JSDF efforts to close the "windows," and enhance "dynamic U.S.-Japan defense cooperation," through co-location of SDF and U.S. forces, joint and combined exercises, and combined ISR activities.[11] With the presence of high-readiness amphibious unit in Okinawa, Chinese military planner would need to consider the possibility of engaging the U.S. military when they conduct "creeping expansion" toward the East China Sea. This makes the planning process in Beijing more complex and the level of "creeping" lower, and consequently makes Japanese response easier. Combining Japanese "dynamic" everyday activities and U.S. "static" presence, "dynamic deterrence" can become a more robust deterrent against *fait accompli* and probing activities. In that way, combined deterrent against "opportunistic creeping expansion" could help prevent a crisis from possibly occurring in the first place.

Countering opportunistic creeping expansion is an important element but does not account for the whole deterrent posture. Without a deterrent posture against high-end

[11] The notion of "Japan- U.0.S dynamic defense cooperation" is agreed in Japan-U.S. defense ministerial meeting on November 2011. See Ministry of Defense, "Summary of the Japan-U.S Defense Minister's Meeting (October 25, 2011)" (in Japanese) (October 25, 2011) <http://www.mod.go.jp/j/press/youjin/2011/10/25_gaiyou.html> (accessed on April 2, 2012).

Sketch of Allied Air-Sea Battle



conflict, deliberate expansion (not opportunistic) with strong resolve by an adversarial force will be difficult to deter. "Dynamic deterrence" against opportunistic creeping expansion must be combined with high-end contingency deterrence to counter deliberate expansion (with preparation for dealing with escalation). Another important pillar of the regional deterrence posture is an alliance to counter A2/AD. Since Japan is focused more on countering opportunistic creeping expansion, alliance cooperation for contingency deterrence is more important as a collaborative effort. The primary actor in "dynamic deterrence" against opportunistic creeping expansion is played by SDF.

Even in the face of U.S. defense budget austerity, countering A2/AD appears to be one of the most prioritized challenges in U.S. defense planning. The *Defense Strategic Guidance* released in January 2012, emphasized the importance of countering A2/AD by emphasizing to "project power despite anti-access and area denial challenges" as one of ten primary missions.

Since the *Defense Strategic Guidance* is meant to provide a strategic foundation for the FY-2013 defense budget, the FY-2013 budget proposal is key to understanding whether or not the Defense Department will be able to make efforts to realize the strategic priorities stated in this document. Yet it is difficult to assess whether or not the budget prioritizes counter A2/AD capabilities, even though the *Defense Strategic Guidance* clearly emphasized its importance. Among many programmatic decisions in FY-2013 programs that support a counter A2/AD

posture include the development of long-range new bomber[12] and maintenance of 11 aircraft carrier groups, with the decision to begin to build one new aircraft carrier in FY-2013. On the other hand, programs for manned and unmanned maritime ISR capabilities such as Global Hawk, P-8A Poseidon maritime patrol aircraft, and E-2D carrier based aerial early-warning aircraft are "restructured." [13] These maritime ISR capabilities are critical for enhancing the resiliency of maritime assets such as aircraft carrier under A2/AD environment. In the context of an A2/AD environment, it appears inconsistent that the FY-2013 will maintain 11 aircraft carriers, while maritime ISR capabilities will be "restructured."

Regardless of the FY-2013 budget decision, given their combat radius, both current and next generation ground based tactical aircraft (i.e., F-15, F-16, F-22, and F-35) needs in-theater air base for effective operations. Therefore, for both the U.S. Navy and Air Force, stand-off strike from outside A2/AD range is not a viable option, simply because of the lack of such assets. To maintain and enhance deterrence through such "traditional" assets, improvement in the resiliency of operational infrastructure for these assets is vitally important. More specifically, great efforts should be made for the improvement of resiliency of in-theater bases and forward deployed aircraft carrier for effective operation by existing assets.

"Resiliency" will be the key for conducting operations under A2/AD environment. Given current defense cooperative programs, revolutionary measures for power projection will not likely emerge in the near future and the alliance needs to rely on traditional assets such as ground-based tactical aircraft and aircraft carrier. Assets used in such operations need to be "resilient" against A2/AD threats, such as ballistic/cruise missile and submarine. In terms of becoming resilient, a potential vulnerability of forward bases can be turned into a strength. As long as a military force is able to maintain operating bases within the theater, the bases would serve as an effective staging point to neutralize A2/AD threats. This is because these bases will already be located within the sphere of A2/AD operations and therefore would not be to be concerned about its ability to access these zones. In summary, "resilient" and "forward" stationed bases should be key elements in a strategy to counter A2/AD capabilities. Moreover, a "resilient" base structure ensures crisis stability by eliminating an adversary's first strike advantage.

There are multiple measures to improve the resiliency of air assets operating from in-theater ground bases. In addition to fighter-based air defense, active defense such as missile defense, passive defense such as the physical hardening of facilities, tactical dispersion among multiple in-theater bases are potential measures for enhancing resiliency. In the context of Japan-U.S. defense cooperation, closer cooperation in missile defense, synchronized operations between JSDF air defense operation and U.S. air strike campaign and shared use of air bases by both countries' fighter units will contribute to building a more resilient deterrent posture.

[12] Office of the Under Secretary of Defense (Comptroller), Department of Defense, "Fiscal Year 2013 Budget Request Overview," (February 2012), p.4-7, <http://comptroller.defense.gov/defbudget/fy2013/FY2013_Budget_Request_Overview_Book.pdf> (accessed on April 2, 2012).
[13] Ibid., p.4-6, 4-8, 4-9.

In the maritime context, improvement of resiliency of aircraft carrier and amphibious forces form the core. For these moving assets, anti-ship ballistic and cruise missile, and threats from submarines poses grave risks. Air cover from in-theater ground airbase and robust anti-submarine warfare (ASW) will reduce these vulnerabilities, although an ASBM would remain a serious concern. In the context of underwater threats, MSDF ASW capability with new maritime patrol aircraft (P-1, indigenously developed maritime patrol aircraft) and reinforced submarine fleet from 16 to 22 (decision of 2010 NDPG), could be a key enabler for enhancing the resiliency of U.S. naval and amphibious operations. At the same time, without a resilient ground base structure, both air cover and ASW are difficult to conduct. In this way, enhanced resiliency measures in air and maritime domain are closely linked and these efforts should be developed as a way to bring about greater synergy among forces. In both domains, coordinated efforts by JSDF and U.S. forces are indispensable to improving resiliency. In short, the combination of maritime domain and air domain with coordinated JSDF and U.S. efforts should constitute the core theme in the next phase of the Japan-U.S. defense cooperation toward "Allied Air-Sea Battle."

Conclusion

In the final analysis, a rising China is clearly transforming the strategic balance in East Asia. While these changes may not bring about a global "power shift" or transition of hegemony in the coming five or ten year timeframe, there will be two strategic challenges that could be better addressed through greater Japan-U.S. defense cooperation.

First, Japan's growing concerns over China's opportunistic creeping expansion in the East China Sea. To counter these concerns and to prevent a crisis from occurring, Japan has introduced the concept of "dynamic deterrence" in its 2010 NDPG. Its objectives will be demonstrated primarily by JSDF's "dynamic" activities, while "static" presence of U.S. military forces will be essential for reinforcing Japanese efforts.

Second, in light of China's rapid military modernization, the PLA's growing A2/AD capabilities will be a serious issue for Japan-U.S. defense cooperation. Given these future threats, both fixed ground base and aircraft carrier will be put at greater risks and U.S. operations based on these assets could be severely restricted. To neutralize such "denial" in areas or "denial" of access, forward base structure should be made more resilient.

The efforts toward more resiliencies must be developed in both the maritime and air domain. More importantly, efforts for these two domains should be coordinated in a more synergistic way.

The concept of "Allied Air-Sea Battle" is the key for moving Japan-U.S. defense cooperation forward. In both domains (i.e., air and sea), Japan-U.S. cooperation could serve as the main force multiplier. Countermeasures against A2/AD capabilities should be constructed in these two dimensions. While air-sea battle remains undefined in the context of defense cooperation, it is explicitly clear as a countermeasure to overcome A2/AD threats in air and maritime domains. Given the importance of Japan-U.S. alliance cooperation for developing a resilient posture, these counter A2/AD efforts should be pursued in a cooperative fashion with Japan. In that sense, "Allied Air-Sea Battle" could serve as the key concept in the next phase of strengthening Japan-U.S. defense cooperation.