



China's Military Capability and Anti-access Area-denial Operations

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China's military developments and growing naval capabilities are the focus of much discussion among strategists and policy makers. China's moves in this direction are of particular concern because of the implications to maritime security in the region, particularly to countries that have territorial disputes. Its burgeoning military power and growing naval and maritime capability are linked to the country's overall maritime strategy and rising profile in the international arena, raising questions outside the region as to her long-term intentions in the Asia-Pacific region. Of particular interest is China's Anti-access Area-denial (A2/AD) strategy. This paper undertakes an analysis of China's military with specific reference to the A2/AD strategy, and is premised on the belief that the A2/AD strategy is a component of overall Chinese maritime strategy. This paper suggests that People's Liberation Army Navy military capabilities and force developments are inter-related to the evolution of China's maritime strategy, and that China's building onto A2/AD would pose a significant threat to regional security.

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Introduction

The People's Liberation Army Navy (PLAN) is the main force for operations at sea and is responsible for safeguarding China's maritime interests. The PLAN has three main fleets, comprising the Beihai Fleet (Northern Fleet), the Donghai Fleet and the Nanhai Fleet (Southern Fleet). The PLAN's mission derive from the strategic guidance outlined by the Central Military Commission (CMC)¹ in "Military Guiding Theory" and the "Historic Mission" established by President Jiang Zemin in 1989 and revised by President Hu Jintao in 2004 as a "New Historic Mission", which is aimed at safeguarding China's national interests. The "New Historical Mission" entrusts the People's Liberation Army (PLA) to protect "state sovereignty, security and territorial integrity and to safeguard the interest of national development above anything else".²

The primary role of the PLAN is to fight threats and accomplish diversified military tasks. From 1994 until 2004, PLAN focused primarily on deterring Taiwan's moves towards independence and to prepare for combat in Taiwan Straits. With the promulgation of the New Historic Mission, PLAN moved its traditional role of defending Taiwan to safeguarding China's expanding national interests, of which maritime domain predominate. As such, the military has to provide a powerful strategic support for safeguarding national interest including securing the sea lines of communication (SLOC) for China's economy.

Besides the conventional role of war fighting, patrolling and surveillance to protect China's national interests, the PLAN is also actively involved in non-combat roles. To this end, the PLAN has incorporated the development of non-combat capabilities as part of its naval modernization. The force development of PLAN includes capabilities for blue water operation, strategic power projection and improving on specialized capabilities in activities such as search and rescue (SAR) and humanitarian and disaster relief (HADR) operations.

Assessment of China's Military Expansion

PLAN military capabilities and force developments are inter-related to the evolution of China's maritime strategy. As the focus has been on safeguarding national interests, China's defence policies and White Papers have placed emphasis on the responsibility to "defend the security of China's land, inland waters, territorial water, airspace and

rights and interest". This was mentioned by President Hu Jintao in the "Historic Mission" statement and re-emphasized in China's *National Defense* in 2010 and 2013 and *The Diversified Employment of China Armed Forces*. With this, the role assigned to the PLAN is becoming more important with a mandate to fulfil the historic mission. In essence, PLAN's role, capabilities and activities have received higher priority than other services within the PLA.

The PLAN's force development program seeks to achieve the objectives of the PLA to become a major military power in the 21st century. This is guided by formulating a strategy that is important for the navy's long-term transformation. However, there are doubts as to whether China can achieve it, based mainly on comparisons with the US military. Military transformation over the last 25 years since the PLAN put forward its blue water maritime strategy involves acquiring sea-control capabilities within coastal waters by 2000 and a limited sea-denial capability within the first island chain in the West Pacific during 2010–2020. The USA believes that the PLAN is a capable fighting force; for example in 2012 PLAN sent seven surface action groups and the largest submarine to the Philippines Sea. It was reported that PLAN conducted more than 20 types of exercises such as naval confrontation, battle drill far out in the sea, exercising of maritime control with a focus on war, and drills for fighting or sinking the opposing fleet. Moreover, China Maritime Surveillance (CMS) activities (seen as complementing the PLAN's conventional role) have increased since 2008 and it regularly challenges the exclusive economic zone (EEZ) rights of Brunei, Indonesia, Japan, Malaysia, Philippines, South Korea and Vietnam. A mapping out exercise by the US intelligence indicated that the activities of the CMS cover the nine-dashed lines that are an indication of Chinese claims in the South China Sea.

Anti-Access Area-Denial

A survey of literature on A2/AD suggests that it is a military strategy aimed at preventing foreign military forces from arriving and operating within the PLA's theatre of operations or, denying effective use of facilities such as basing, staging, transit or over-flight rights for enemy forces. In this paper, China is viewed as the enemy of the USA and her allies in the Asia-Pacific region. In operational terms, in event of hostilities, the PLA would employ A2/AD capabilities to disrupt and neutralize the USA and its allies. To achieve this, the PLA, and in particular the navy,

is building capabilities to support major combat operations in China's "Near Seas" including the Yellow, East and South Seas and their approaches, while gradually growing its ability to influence strategic capabilities in the "Far Seas" including in the Indian Ocean.

The Center for Strategic and Budgetary Assessments (CSBA) defines "anti-access" as "enemy actions which inhibit military movement into a theatre of operations" and "area-denial" operations as "activities that seek to deny freedom of action within areas under the enemy's control".³ Another simple explanation of the term A2/AD is provided by McDevitt where, "anti access is A2 and "area denial" is AD and the basic idea is "to prevent approaching U.S. Navy aircraft carrier strike groups from getting within tactical aircraft operating range".⁴ In his view, a successful and credible PLA's anti-access capability would challenge US credibility in assuring security of its friend and allies in the Asia-Pacific region.

Major aspects of the A2/AD capabilities are associated with the advancement in technology such as land-based ballistic missiles capable of striking moving targets at sea, land-based surface-to-air missiles (SAMs) and land-based air force aircraft armed with anti-ship cruise missiles (ASCMs). For example, Chinese anti-ship ballistic missiles ASBMs allegedly can attack aircraft carriers. Successful A2/AD capabilities also rely on an effective command, control, communication, intelligence, surveillance and reconnaissance (known as C4ISR) and space and counter-space capabilities that are executed in integrated joint operations covering military domains such as land, sea, air space and cyber space. Indeed, military practitioners have stated that a successful A2/AD operation by China's military is incumbent upon joint military operations that encompass more than one service to include the PLAN, PLAF and the Second Artillery.⁵

Strategic literature also reveals that A2/AD is not a term used in any formal, informal or scholarly writings by the Chinese and neither does it appear in any of China's official documents, strategic papers or white papers. As such, it is clear that the term is given by the American to describe China's active defence strategy adopted in the late 1970s. For the purpose of this study, A2/AD is a military strategy of the PLAN's "active defence" programme. This is primarily because there seem to be similarities of the strategy as well as of development capabilities of PLAN under active defence and A2/AD. This view is supported by scholars of the US Department of Defense (DoD), who note that A2/AD is similar to the Chinese plan termed *jiji fangyu* or "active defence", which appeared in the Chinese National Military Strategic

Guidelines (NMS).⁶ Active defence is the operational component of the NMS guidelines in which the PLA will engage in wars to defend national sovereignty and territorial integrity, and the key element in active defence is the counter attack.⁷ DoD explains:

*Active defense is based on the capability to rapidly project force in response to external threats, seizing the initiatives at the outset of the conflict ... a defensive military strategy in which China does not initiate war or fight wars of aggression, but engages in war only to defend national sovereignty and territorial integrity. Once hostilities have begun, the essence of active defense is to take the initiatives and to annihilate the enemy.*⁸

Active defence and A2/AD have commonality in terms of strategic guidance, and operational and tactical aspects such as the emphasis on striking the enemy in the early stages of a conflict, delaying or preventing the enemy's approach and deployment of forces to project its reach within a specific theatre. The most striking similarity is that both active defence and A2/AD places emphasis on the role of the navy and long range attacks for safeguarding the sovereignty and territorial integrity, which is the core objective.⁹

Anti-access refers to any action by an opponent that has the effect of slowing the deployment of friendly forces into a theatre, preventing them from operating from certain locations within that theatre, or causing them to operate from distances farther from the locus of conflict than they would normally prefer. Area-denial seeks to check freedom of action in the more narrow confines of the area under an enemy's direct control. Area-denial can be thought of as a smaller subset of anti-access operations. A2/AD is a type of asymmetric military action whereby China's military understands that an opposing combatant has different military capabilities and uses different approaches to manage hostilities. As a weaker party, China is unlikely to confront stronger forces directly and instead would seek new ways to attack enemy forces and citizens. Thus, A2/AD capability is being developed as an asymmetric way to handle a military confrontation with countries like the USA and its alliances.

Like the Soviet Union during the Cold War, China cannot compete head-to-head with US navy. The naval build-up required to compete would be too expensive and too threatening to other regional actors, and developing the necessary capabilities (such as multiple carrier battle groups) would require many years. The aim of this

approach is to avoid a direct naval competition with superior US battle groups while denying them the ability to access China's coastal waters, including the area surrounding Taiwan. In the words of Major General (Retd.) Peng Guangqian:

*China should firmly grab hold of the freedom to conduct military operations and strike the enemy at a time, place and in a manner that is advantageous for China and disadvantageous for the enemy, while also being at a time, place and manner that the enemy is least expecting, least willing to face and least able to counter.*¹⁰

As such, A2/AD is an asymmetric operation adopted by China to defeat a superior military power such as the USA and its allies. The idea is to attack the enemy's weak point through offensive actions. However, unlike the Soviet Union during the Cold War, the PLAN has become a more capable force to implement A2/AD operations attributed mainly to advancements in military revolution. This view is shared by O'Rourke, who stated, "China's navy has better capability to carry out an anti-access or area-denial strategy than the Soviet Union during the Cold War".¹¹

The origins of China A2/AD strategy suggests that the PLA military developed A2/AD based on lessons learnt from observations since the 1980s on the evolution of military technology. One impactful military revolution that contributed to the development of China's A2/AD capabilities was derived from the US experience in the 1991 Gulf War, where Iraqi forces were defeated by the use of advanced military technology.¹² The PLA realized that the Iraq's military equipment used during the war lacked the technology possessed by the US forces. Scholars have analysed that the "1991 Persian Gulf War sent shockwaves throughout China's military community and accelerated the modernization of the PLA and shifts in strategy."¹³ Indeed since 1993, PLA began to prepare to confront "local wars under high technology conditions".¹⁴

Other historical events also contributed to the development of A2/AD capability. First was China's defeat by British forces during the First and Second Opium Wars and in the two Sino-Japanese Wars. Defeat in the wars drove China to develop a more sophisticated military, which included the adoption of the A2/AD operational capability. Secondly, during the 1995–1996 Taiwan Straits crisis, the US carrier striker group was deployed to the Taiwan Straits when the PLA launched missile tests targeted at Taiwan. Known as the "Taiwan Confrontation", this incident prompted the PLA to note that the USA would deploy its forces in aid of Taiwan in any military

aggression from China. Hence, PLA strategists adopted A2/AD, aimed to disrupt and delay US military deployment in the Western Pacific in the event of conflict.

Over and above that, A2/AD operations are meant to defend and safeguard China's territorial integrity with the aim of preventing the USA and its alliances from interfering in PLA's actions in the near seas. The objective of the PLA is to "unswervingly implement the military strategy of active defense, guard against and resist aggression, contain separatist forces, safeguard border, coastal and territorial air security, and protect national maritime rights and interest and national security..."¹⁵

China's military would utilize A2/AD capabilities to respond quickly to external threats to protect its sovereignty and territorial integrity. The modernization of PLAN to implement A2/AD is aimed at forestalling Taiwan from declaring independence and in the event such a scenario occurs, the PLAN would attack Taiwan forces as well as foreign assistance to them. In recent times, the A2/AD capability has been developed and strengthened to protect China's claimed territorial areas and to project power beyond its immediate vicinity. The focus on A2/AD operations are on blockading, to counter SLOC, undertake anti-ship and littoral attacks, maritime transportation protection and strengthening naval base defences.

A2/AD means that the PLA would have the capability to attack transportation systems, bases and other facilities to defend its interests and sovereignty. Initially aimed at defending its claims on Taiwan, it has gradually developed into the defence of its maritime interests. Thomas states that China has developed A2/AD capabilities including submarines, ballistic and cruise missile forces, fifth-generation fighters, and advanced air defences, and this development was directed to create a sea denial network stretching from the East China Sea to the South China Sea.¹⁶ Another scholar referred to A2/AD as "China's military innovation" to win wars under local and "infomatized" conditions, which involve "developing military capability to interdict or attack maritime forces mainly from the USA and its allies in the Western Pacific at long ranges. The growing numbers of fourth generations fighters and fifth generation aircrafts, advanced surface to air missile and precession guided conventional ballistic missiles are developed as a part of the A2/AD strategy."¹⁷

Other evidence that shows that A2/AD is part of an active defence strategy is described in "The Science of Military Strategy", where it is considered akin to "Active Strategic Counterattack against Exterior Line" (ASCEL) or "*jiji de zhanbue waixian fanji zuo zhan*". According to this idea, the PLA would conduct self-defence operations once a foreign force has invaded China, which is an "active preemptive

response". This active preemptive operation would be launched against the intruders as far away as possible ... to the enemies operational bases, and weaken them through launching attacks on their systems.

Observations on A2/AD

There are several observations that can be drawn from the discussion on military capabilities of PLAN and the A2/AD strategy to show that PLA modernization and increasing military capabilities are in line with the mandate of China's maritime strategy. A2/AD operations are similar to the active defence operational doctrine and the PLA has been conducting operations in the intended sea and air spaces above. Essentially, A2/AD strategy has been operationalized by PLAN as follows.

As envisioned in China's White Papers, PLAN is developing capability to fight and win local wars under "informatized" condition. To achieve this, it has embarked on rapid advances in science and technology that is critical for its modernization as well as on broader A2/AD strategy. According to Erickson, PLAN informatization began in late 1990s and focused on upgrading C4ISR systems. One important aspect of improving it was "the construction of a national fiber-optics communications network that provided the PLA with much greater communications capacity, higher reliability, and improved communications security". These fibre-optic communication network cables have been set up in coastal military commands to facilitate communication at levels between the military and civilians.¹⁸ Besides, China is also building a credible surveillance system to monitor ocean areas of vital interest. According to McDevitt, "a successful anti access campaign rests on effective surveillance of the approaches to China". A recent effort towards acquiring a credible surveillance system by China was the launch of its sixth surveillance satellite, the Yaogan Weixing-10, a naval observation satellite, in August 2010. This space-based surveillance and navigation is a "key component of China's military modernization and also forms an important part of anti-access strategy".¹⁹

Other evidence includes a number of capabilities that PLAN has pursued, including the application of a full range of sensors across the radio frequency (RF) and acoustic spectrums, new weapons with increased speed and sophistication, new communications capabilities across the RF spectrum, increased automation and data links in C2 systems, new space systems for navigation, sensing and communications, as well as anti-satellite capabilities, sophisticated capabilities for computer network

attack and exploitation, kinetic information warfare and signal jamming capabilities. The development of informatization provided the PLAN an advantage for flexible and rapid response ability and would contribute to strengthening access-denial operations.

PLAN is also increasing its combat readiness capability, which is central to the conduct of A2/AD operations through the use of advanced technology. Such combat readiness exercises include large joint fleet exercises such as “Jidong 5” or “Mobilisation 5” conducted in October 2013 in the western Pacific. These exercises are characterized as:

A campaign-level exercise involving a very significant portion of the surface combatants, aircraft and submarines from China’s North, East and South Sea Fleets. More serious concerns are PLA has attempted to replace the heavily scripted scenarios of previous exercises with the more spontaneous maneuvering necessary for rapid-reaction power projection.²⁰

The point that needs emphasizing is that PLAN combat readiness exercises are mainly aimed at achieving objectives provided by “China’s Military Strategic Guidelines for the New Period” on operational doctrine of active defence that includes defeating military threats from sea, defending sovereignty and territorial integrity, and protection of maritime rights. This objective is focused on China’s first and second island chains. Some scholars view PLAN’s conduct of regular military exercises as a show of the growing power of a global navy. Beginning 2010, PLAN conducted long-range deployment of naval exercises involving modern warships.

Evidently, PLAN increased exercises in the Indian Ocean and the Western Pacific to showcase that it is a seagoing force and is on its way to eventually becoming a naval power. In January 2014, PLAN’s flotilla consisting of amphibious landing craft *Changbaishan* and destroyers *Wuhan* and *Haikou* conducted naval exercises in the Indian Ocean and in the Western Pacific.²¹ PLAN had access and manoeuvrable capability in which the ships sailed through the Lombok Strait, Makassar Strait and the Sulawesi Sea to enter the West Pacific Ocean. During the exercises, PLAN built upon its capabilities for anti-pirate operations, joint search and rescue as well as damage control drills as well as to test the command’s response and soldiers’ combat skills.

Operational characteristics of area-denial actions are coordinated operations by different services on air, land, sea and sub-sea. A successful joint operation by the

army, navy, air force and marine forces is the key to achieving military superiority against another enemy. This was described by the CSBA report as:

Aerial AD operations include coordinated operations by an enemy's air forces and integrated air defense forces to maintain a degree of air parity or superiority over their territory and forces. Land AD operations might include short-to medium-range artillery, rocket, or missile strikes against U.S. maneuver forces at either their littoral penetration points or at air-landing points before they can disperse and when they are most vulnerable; wide-area mine fields; contamination of large areas by chemical, biological, or radiological agents; and counter-special operations tactics. Long-range maritime AD threats include anti-ship cruise or even ballistic missiles, and submarines. Closer to shore, sophisticated mines, coastal submarines, and small attack craft could be employed ...²²

To implement effective A2/AD operations, the PLA would require synchronized combined military operations on land, air, sea and space in the battle area to achieve the overall objective. Indeed, the PLA noted that joint operations and security of command system are the basic requirements of operations under informationalized conditions. To establish joint operational command, the Chinese military has conducted research and feasibility studies to establish the joint operational command system with Chinese characteristics.²³

The primary objective of A2/AD is to deny access to the enemy force into China's theatre of operation at land, sea and the airspace above. To have control over airspace, the PLA established the controversial air defence identification zone referred to as "The East China Sea Air Defense Identification Zone (ADIZ)" on November 24, 2013. The zone includes the airspace within the area enclosed by the outer limits of China's territorial waters and six other points, as shown in [Figure 1](#).

Besides China, other countries including the USA, Canada, Japan and South Korea have established such air defence identification zones since 1950. The air regulations under the ADIZ means any aircraft whether commercial or military flying in the zone drawn by PLAF must "report a flight plan to the Chinese government, maintain radio communication and respond to identification inquiries, maintain radar transponder function, and exhibit clear nationality and logo markings".²⁴ If this regulation is not met, the PLA would respond militarily towards the "enemy" because the act is considered an intrusion into Chinese air space.



Fig 1. Map Illustrating China's Air Defence Identification Zone. Source: Ministry of National Defense, China.

The Chinese Ministry of National Defense (MND) announced that the air defence zone is in accordance with Chinese law and international practices to safeguard its sovereignty. It will enable early warning and help China to protect its sovereignty, maintain flight order and guarantee regional air security. At the same time, the ministry issued the Aircraft Identification Rules for the East China Sea, which require aircraft flying in the zone to abide by these rules. The regulations also require aircraft to adhere to the instructions of the zone's administrative organ or the unit authorized by the organ.

China's move is essentially in line with the operations concept of A2/AD and her policy of defending national sovereignty and territorial airspace security; it is a fundamental goal and is considered a sacred mission. China's defence policy states that "responding to China's core security needs, the armed forces aim to main peace, contain crises and win wars; safeguard borders, coastal and territorial air security, strengthen combat readiness and war fighting-oriented exercises and drills; readily respond to and resolutely deter any provocative actions which undermines China's sovereignty." The growing confrontation between Japan and China over the Senkaku/Diaoyu islands is seen as undermining China's sovereignty and ADIZ was implemented to provide PLA greater legitimacy to have military control over the zones in case of confrontation in a war with Japan or its US ally.

In late 2013, China announced a reduction in the size of its armed forces to allow budget allocation for military modernization. This development justifies the belief that China is pushing for military modernization specifically to have a strong and powerful navy. The higher allocation for military modernization was largely targeted at threats from Japan on China's sovereignty claim over the Senkaku/Diayou islands as well as protecting her claims in the South China Sea. The increased budget has been consistent and PLAN is in the forefront in securing more robust weaponry and military assets, which is a clear advantage for its A2/AD operational capabilities.

Challenges in Executing A2/AD

The A2/AD strategy has gained much attention and provoked serious assessments and analyses among military planners on the way to confront the threat. The general assessment is that China's building onto A2/AD would pose a significant threat to regional security in particular to the USA and its allies in the Asia-Pacific. The USA and its allies such as Japan, which is equally threatened by A2/AD, have been developing new concepts and military capability to confront these threats from China. The reaction and counter strategy from the USA and its allies would be major obstacles for PLA to execute its A2/AD strategy effectively.

To deal with the increasing military capability of PLAN and overcoming the threat posed by A2/AD, the US Department of Defense has developed the counter strategy of Air–Sea Battle (ASB) which is expected to become the primary challenge to China's military in effectively executing A2/AD. ASB is based on the idea of carrying out massive counterstrikes against an enemy's home territory. This includes cruise missiles, launched from submarines or ships that, along with smart bombs dropped from stealth aircraft, would blind and incapacitate the adversary by taking out its military surveillance and communications systems. Bitzinger argues that ASB is similar to the Pentagon's concept in the 1990s of the "Revolution in Military Affairs" (RMA) and mutated into "network-centric warfare" and "force transformation" in the 2000s. In the 21st century, the concept is known as ASB but the analogy is similar to the RMA in another approach.

The US Department of Defence strategy and budget documents released in January 2012 state that US military strategy will place a renewed and increased emphasis on the Asia-Pacific region and that as a result, there will be a greater emphasis on air and naval forces. Administration officials have stated that notwithstanding reductions in planned

levels of defence spending, the US military presence in the Asia-Pacific region will be maintained and strengthened. The US Navy programs for countering improved Chinese maritime military capabilities could affect the likelihood or possible outcome of a potential US–Chinese military conflict in the Pacific over Taiwan or over the freedom of navigation for the US military in the Asia-Pacific.

The DoD has been developing a new ASB, an improvised concept that is intended to enhance joint operating effectiveness among the naval and air force units and operations in tightly coordinated cross-domains. A more recent report in 2013 by RAND Corporation suggests that although ASB places high emphasis on countering A2/AD threats, it is not sufficient to counter A2/AD threats holistically and proposed the development of land-based anti-ship missile capability. According to the report:

Land-based ASM capability would be relatively easy to create in the armed forces and could be seen as a 21st-century extension of the Army's earlier coastal defense role. It would need to operate as part of a joint effort. In general, it would require access to other services' (and perhaps national) sensor systems capable of identifying targets to engage, a C2 system that can receive and act on this information, and firing batteries that can respond to this C2 architecture. In this case, the range of these assets must span all passages through the straits that provide access to the seas surrounding China. If such a land-based ASM capability were to be used as part of a blockade, it would also have to be paired with assets that could challenge and board commercial ships, such as rotary-wing aircraft or partner-nation navies and coast guards.²⁵

The report also mentioned that land-based systems have featured in China's A2/AD strategy but there is a lack of evidence on the land-based support capability.

Besides the USA, China's A2/AD capabilities have met with alarm from many regional countries such as Japan, the Philippines and India. This is largely due to their fear of the rise of China and her military powers, more specifically A2/AD. Wu Sichun wrote, "Japan is threatened by PLA's A2/AD operational concept, as it could potentially undermine the credibility of the Japan–U.S. alliances that has secured Japan using the U.S. military's nuclear and conventional deterrent."²⁶

This has resulted in countries in the region reassuring, re-opening and redefining commitments to each other, should conflict arise. This essentially means that China would have to be on the offensive on many fronts and defend itself from various aspects. As Axe states,

A preemptive strike was, needless to say, a highly risky proposition. If it worked, the PLA just might secure enough space and time to defeat defending troops, seize territory and position itself for a favorable post-war settlement ... But if China failed to disable American forces with a surprise attack, Beijing could find itself fighting a full-scale war on at least two fronts: against the country it was invading plus the full might of U.S. Pacific Command, fully mobilized and probably strongly backed by the rest of the world.²⁷

This is borne out by recent assumption of a larger role for the USA in the region over the coming decades, as a distant power but as part of, and working closely with, the nations in the Asia-Pacific.²⁸

The objective is to confront common challenges and to promote peace, prosperity, and security. The US Asia Pacific strategy in the future involves a smaller and leaner, but agile and flexible US military that is quickly deployable and employing cutting-edge technology. While the US military will remain a global force for security and stability, it will nonetheless tilt towards the Asia-Pacific region vis-à-vis maintaining its presence throughout the world.

And, by 2020, the US Navy will shift its forces from a balance of 50/50 to 60/40 between the Pacific and the Atlantic oceans.²⁹ Apart from the counter strategy from the USA there are also other challenges that would leave the PLAN with a more daunting task to implement A2/AD successfully in the near future. These are largely related to actual capability that PLAN possesses as well as the question on ability, which includes the lack of effective anti-submarine operations despite it currently operating one of the world's largest submarine fleets. Although submarines of various class are in PLAN's fleet, it currently requires operators to learn and gain proficiency and it is unclear to what extent PLAN has mastered operational ability.

Conclusion

The military capabilities of PLA and particularly the PLAN are developing in tandem with the country's aspiration of being a major regional naval power. The transformation of the Chinese military is going hand in hand with the evolution in China's maritime strategy. The A2/AD strategy on the other hand is indeed an

operational concept of the PLA adopted in the late 1970s and operationalized in stages to meet the objectives drawn by China's defence policies from the 1980s. PLAN's military development and modernization are aimed at serving China's larger national interest of achieving the status of a strong naval force capable of supporting its grand maritime strategy. The A2/AD strategy, which is similar to the active defence strategy, has alarmed the US military forces since it is aimed to disrupt and deny them access to the Western Pacific. The expansion of PLAN in all aspects including the increased defence budget, increased quality of manpower, supporting military infrastructure, military research and development and the development of defence related industrial base are the components showing that PLA and the navy is attaining a force that could challenge other navies in the region.

While the above discussions show that PLAN has become more capable from being a coastal navy in the 1950s to 1980s to an ocean going navy in the 1980s, its capability and A2/AD operational strategy is faced with many daunting challenges. First, A2/AD would not be a simple military calculation that favours China because the USA has countered it with its ASB concept and it is supported by its allies and friends in the region. Indeed, the USA is preparing to assist countries in the region to develop their own A2/AD strategies. Should there be a confrontation in the East China Sea or the South China Sea, or a conflict over Taiwan, the PLA would have to face threats from multiple fronts. This would also appear to be counterproductive to China's aspirations to deepen security cooperation and fulfil international obligations for a peaceful rise.

Second, although there has been steady growth in assets and equipment to implement A2/AD operations, the PLA still lacks professional training in anti-submarine warfare and to operate sophisticated equipment. The PLA has yet to master the weapons such as ABM that include technical issues like command and control. Ultimately, the issue revolves around translating information that has been obtained during actual combat. However, these challenges are not permanent and with training and mastery of weapons system, PLAN should be able to overcome them and become a credible navy with a strong A2/AD capability.

Notes

1. The Central Military Commission of the People's Republic of China is the highest state military organ with the responsibility of commanding the entire armed forces in the country.

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