



Center for Strategic and Budgetary Assessments

STUDIES

Meeting the Anti-Access and Area-Denial Challenge

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This report looks at the US military services struggling to adapt to an expeditionary era. This expeditionary era has emerged from two defining developments. First, due to the collapse of the Soviet empire in 1989 and of the Soviet Union, itself, in 1991, more and more US combat forces have been brought home from the overseas garrisons, bases, and ports they once occupied on the periphery of America's Cold War adversary. Second, there is ample reason to anticipate that future adversaries, having seen Iraq routed twice by US-led coalition forces after they were allowed to deploy unmolested into Southwest Asia, will seek asymmetric ways of opposing the movement of US military forces into their region.

A2 and AD capabilities are, therefore, a natural and logical response to American military preeminence and demonstrated power-projection capabilities. Iraq's Baathist regime may have learned little in this regard from the 1991 Persian Gulf War, but evidence is accumulating that other nations are more adept competitors. For instance, the ongoing People's Republic of China (PRC) deployments of advanced CSS-6 and CSS-7 short-range ballistic missiles (SRBMs), SA-10 SAMs, over-the-horizon targeting systems, and related capabilities opposite Taiwan may be a leading indicator of the kinds of A2/AD capabilities America's expeditionary forces will eventually confront should another Taiwan Straits crisis arise. Moreover, US power-projection capabilities are themselves contributing the problem. It is likely, for example, that the GPS coordinates of most potential fixed targets on Taiwan are already precisely known to PRC SRBM units, and GPS has also made accurate, long-range cruise missiles an option countries with limited defense resources relative to the United States will find increasingly affordable in the future.

But the Pentagon's concerns are not limited to China. A recent commander-in-chief of US forces in Korea declared that the problem of forward base access is not a problem for the US military of 2010, but one that exists in embryonic form in Korea today, and which will only worsen over time. Indeed, Secretary of Defense William Perry voiced concerns over this problem during the 1994 crisis on the peninsula. A cursory examination of the situation on the Korean peninsula reveals the reasons for concern.

In the near term, air operations from the two US air bases in South Korea are unlikely to be severely disrupted by North Korean missile attacks as long as North Korea refrains from using nuclear or chemical warheads, and does not improve the accuracy and lethality of its conventional missiles. North Korea's current inventory of Scud-C (Hwasong 5/6) and Scud D/E (No-Dong 1 and 2) ballistic missiles, despite ranges of over 300 and 900 miles respectively, lack sufficient accuracy to target an air base effectively. North Korea has yet to develop warheads for delivering submunitions, either bomblets or runway penetration submunitions, a capability useful for disrupting operations spread over large areas.

However, this relatively favorable situation seems unlikely to endure. North Korea is increasing its inventory of No-dong 1 and 2 ballistic missiles. South Korea and a significant portion of Japan are within range of the No-dong 1. Most of Japan, including the US air bases of Misawa and Yokota, are within range of the No-dong 2. All of Japan, including the US Kadena air base in Okinawa, is within range of the Taepodong 1 medium-range ballistic missile currently in production. While these missiles are relatively inaccurate, over time improvements in their accuracy appear not only possible, but highly likely. As this comes to pass, forces relying on large, fixed bases will find themselves paying an ever greater (and perhaps prohibitive) price for continuing to operate out of these facilities.

There is also the matter of Iran. The importance of maintaining free maritime passage through the Strait of Hormuz cannot be understated. Yet the strait is perhaps the most likely maritime chokepoint to be threatened by an AD capability. Iran, with military-technical support from China, North Korea, and Russia, seems intent on developing and fielding a range of A2/AD capabilities, to include ballistic and cruise missiles (possibly equipped with WMD warheads), mobile ASCMs (both shore based and sea based), submarines, small high-speed coastal combatants, and advanced anti-ship mines. While the situation appears manageable for US maritime forces over the near term, the prospect that Iran will continue to develop more formidable AD capabilities cannot be ruled out. If anything, such a development would appear likely. Moreover, Iran's AD capabilities could be enhanced by its fielding of A2 forces, which could also be used to hold at risk the oil and natural gas production facilities (to include over land pipelines) of other Gulf states. As noted earlier in this report, a recent US military major joint field exercise, Millennium Challenge 2002, revealed what even a small country's AD forces could do to limit US maritime forces' ability to control key narrow waters.

How have the Air Force, Navy, Marine Corps, and Army responded to this emerging challenge? Perhaps the most striking feature of their individual responses to the A2/AD challenge so far is the absence of a truly joint approach. Instead, each Service appears to be pursuing its own solution, for its own institutional purposes, within the boundaries of its traditional warfighting roles and domain. The Air Force's GSTF concept focuses on turning the short-range F-22 into an F/A-22 able not only to have a devastating first-look, first-shot advantage over enemy fighters, but also to kick in the door to denied airspace by taking out advanced SAMs as well as critical mobile targets such as enemy mobile-missile launchers. However, unless the GSTF can succeed in suppressing or destroying such systems very quickly—probably within a day or two at the most—the closure of the Army's first few Objective Force brigades on the desired timelines is likely to be delayed. Similarly, whether the sea base is assured or not, V-22 insertion of a Marine combat battalion into enemy battlespace still actively defended by SA-20 class SAMs would also have to wait for the suppression of these AD systems by the GSTF. At the same time, except for TLAMs, the Navy will have no realistic means of attacking these defenses with manned aircraft until the JSF enters service. Indeed, because the SA-10D is believed to have a credible capability against non-stealthy cruise missiles such as the TLAM, the Navy appears to have no capability to attack any critical inland targets in the face of S-300/S-400 class SAMs. Thus, in an A2/AD environment, the ability of the entire joint force to project power promptly ashore may hinge at the outset on the viability of the GSTF to eliminate various A2 and AD systems in a matter of hours to a day or two. And, given the operational risks inherent in the GSTF, doing so appears to be a non-trivial challenge—especially in the absence of long-range, penetrating, staring surveillance.

Operationally, the Army's admirable goals of being able to have a brigade combat team on the ground anywhere in the world within 96 hours, and an entire division within 120 hours, are laudable lines to draw in the sand for an expeditionary era. However, even if the operational risks in the GSTF are set aside, these brigades still appear to require more strategic and in-theater airlift than either the Air Force or Navy are ever likely to field. Beyond simply getting the combat units on the ground within the desired timelines, there is the additional burden of logistical sustainment for light, dispersed ground forces operating deep in enemy territory. As Chapter IV noted, the Army is exploring advanced airlift and sealift options. At best, though, they lie far in the future, and the fiscal pressures on the Army created by the FCS alone suggest that, in the end, other Services will have to bear much of the development and procurement burden of such systems if they are to be fielded before 2015. Consequentially, there appears to be a major disconnect between the deployment goals of the Army's Objective Force and the lift capacity of the rest of the joint force.

Turning to the DoN, the overriding risk to its current approach to the A2/AD challenge is, surely, fiscal. As suggested in Chapter III, the new class of littoral combat ships will probably cost \$2-3 billion per year over a period of 15 years just to construct. Manning and operating this new class of ships will create additional costs. Even if one assumes that the Defense Department's 051 topline grows to \$483.6 billion in discretionary budget authority by FY 2009, as the Department presently projects, paying for this new class of ships will probably require the transfer of some total obligation authority (TOA) from the Air Force's or Army's topline to the Navy Department.

If, on the other hand, the 051 topline begins leveling off, as history would suggest, before FY 2009, an even larger reallocation of Service budget shares will be needed to pay for the LCS class of ships and the associated growth of the fleet to 375 ships. Thus, even before one contemplates the non-trivial operational risks of trying to operate these vessels close to the shore within the reach of enemy AD capabilities, the fiscal assumption that the DoN can count on an increasing share of TOA at the expense of its sister Services over the next 15-20 years seems to require a major leap of faith about maritime preeminence in the expeditionary era. Unless this leap of faith is borne out, the more likely outcome is that the LCS class will not be fielded in the numbers presently envisioned.

The disconnects between individual Service solutions to the A2/AD challenge, then, are substantial. Furthermore, these disconnects suggest an obvious recommendation. A joint approach to the prospective A2 and AD capabilities of future US adversaries is crucial if the various path, operational, technological, and fiscal risks are to be mitigated or hedged against to any serious degree.

Granted, one could argue or assume that the A2/AD threat, as depicted in this report, is overblown and will not emerge within this decade—or the next. Doing so, of course, would be tantamount to judging the risk of encountering serious A2 or AD capabilities before 2020 as unlikely or remote. In other words, foreseeable opponents concerned about US power-projection capabilities into their regions will not really be serious for a long while to come. At the end of the day, however, this viewpoint appears to be a huge gamble and one that neither prudence nor history could recommend with much confidence.