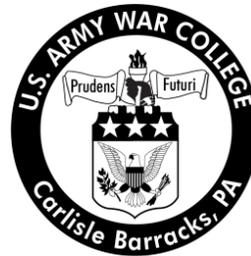


# Civilian Research Project USAWC Fellow

## The Army Needs More Patriots

by

Colonel Gregory J. Brady  
United States Army



United States Army War College  
Class of 2013

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## **Abstract**

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Combatant Commanders want the Army to fill their critical air and missile defense (AMD) capability gaps. The updated DoD Strategic Guidance, January 2012, and CJCS Capstone Concept for Joint Operations: Joint Force 2020 prioritize improvements for missile defense to counter weapons of mass destruction, project power and enhance interoperability with our allies. The air and missile threat landscape is changing drastically. No longer limited to tactical ballistic missiles, an increasing spectrum of threats such as rocket, artillery and mortar (RAM), Unmanned Aerial Vehicles (UAV) / Unmanned Aircraft Systems (UAS), and cruise missiles is proliferating. The Army will need to grow its AMD forces even though it is downsizing and there will be significant financial constraints in the near future regardless of sequestration. As the Army prepares its strategy from post-2014 Afghanistan, this paper will examine why ADA is one of the best enablers that directly supports the CSA's Guidance – Prevent, Shape, and Win, and will also play a key role as one of the Army's main efforts in rebalancing U.S. forces to the Pacific.



## **The Army Needs More Patriots**

This paper is intended to serve as a threat warning for senior strategic leaders and decision makers. The U.S. supremacy against missile threats has been critically eroded due to the proliferation of technology. Air and missile threats are changing drastically. Meeting new threats posed by rockets, artillery, and mortars (RAM), unmanned aerial vehicles (UAV) and unmanned aircraft systems (UAS), and cruise missiles (CM) from state and non-state actors constitute a serious threat to our national security. Recent Palestinian rocket attacks on Israel, the NATO-led deployment of the Patriot missile system to Turkey, and a deployment of a Terminal High Altitude Area Air Defense (THAAD) Battery to Guam are current examples of the changing nature of missile threats. The new *U.S. Army Capstone Concept* highlights that “[i]n an environment of decreasing resources, the Army must plan for a shift in strategic focus while preparing to confront these threats.”<sup>1</sup> As the Army prepares its post-2014 strategy, Air and Missile Defense (AMD) will become one of the most critical enablers needed to support more complex and sophisticated operating challenges. The Army needs to improve both the capability and capacity of its Air Defense Artillery (ADA) force structure to meet these new threats.

Emerging Combatant Commander (COCOM) Army AMD requirements must be addressed immediately in PACOM and EUCOM while also sustaining the current AMD strategy in CENTCOM. Increasing AMD capacity is a dilemma because the Army has 47% of its ADA force currently deployed for combat and operational missions worldwide.<sup>2</sup> The remainder of the force is either preparing to deploy or unavailable because they are entering the reset phase of the Army Force Generation (ARFORGEN) model. Further, AMD capability still needs to adapt to the changing threats while

simultaneously growing capacity. ADA force structure only makes up 1.3% of the Army force, which is as lean as it can get.<sup>3</sup> In the late 1990s, the Army leadership made the decision to remove ten Short Range Air Defense (SHORAD) battalions from the U.S. Army Divisions to pay other non-ADA force structure personnel bills. Now the Army lacks flexibility to crew new weapon systems, and does not possess a significant capability for defeating lower tier threats, especially cruise missiles.

### **Strategic Guidance and Threat Are Driving Army AMD Expansion**

The Chairman of the Joint Chiefs of Staff's Capstone Concept for Joint Operations (CCJO): Joint Force 2020 raises concern that “[a]s missile technology improves and proliferates, missiles will become a major threat to deployed and deploying forces and even to forces in the homeland.”<sup>4</sup> This fact is reinforced by the Congressionally-mandated comprehensive review of U.S. Ballistic Missile Defense completed by the Department of Defense (DoD) in 2010, which assessed that regional Combatant Commander requirements will exceed the available missile defense assets to counter these threats.”<sup>5</sup>

This assessment is reaffirmed in the National Intelligence Council's (NIC) *Global Trends 2030: Alternative Worlds*. In its report, the NIC predicts that the diffusion of precision strike capabilities due to widespread availability of GPS navigation data to state and non-state actors, will degrade the U.S. military's ability to project power within the next 15-20 years.<sup>6</sup> “The proliferation of long range precision weapons and anti-ship missile systems would pose significant challenges to U.S. or NATO forward deployed forces, limiting in theater options for military action.”<sup>7</sup> Additionally, the NIC assesses that

stand-off missiles will be the weapon of choice in future interstate and intrastate conflicts, especially for non-state actors.<sup>8</sup>

While the research and development of the US Army air defense upper tier systems, Patriot and THAAD, have been successful at keeping pace with the global tactical ballistic threat, it is time to start placing emphasis on a comprehensive solution to defeat cruise missiles. They are a more challenging threat because they fly low, maneuver in the air and are tough to detect with our current radar systems until it is too late to engage. Mr. Philip Coyle, former Assistant Secretary of Defense during the Clinton Administration who had oversight of weapons testing, stated that DoD has for years “pretended cruise missiles did not exist.”<sup>9</sup> Just in the next ten years, the threat of cruise missiles will rapidly increase because they are relatively inexpensive and there are nine states that are manufacturing them with the intent to export them to other countries.<sup>10</sup>

The DoD Strategic Guidance is explicit in stating what is required of the joint force to succeed “...*the Joint Force will need to recalibrate its capabilities and make selective additional investments...*”<sup>11</sup> To fulfill the objectives of the President’s National Security Strategy,<sup>12</sup> the DoD’s Strategic Guidance highlights improving missile defense three times in its top 10 priorities.<sup>13</sup> The CCJO for Joint Force 2020 acknowledges that even though approximately 80% of the Joint Force is already developed or the resources are already committed, there is still flexibility to significantly change the other 20% and that “we can change the way we use the entire force.”<sup>14</sup> These important words by General Dempsey are incorporated into the Army Capstone Concept Plan (ACC), but also provide latitude and encourage a desire to look for new strategic

solutions to “...prevent conflict, shape the environment and win the Nation’s wars...”<sup>15</sup>

The ACC also states that “[b]y building and preparing a force that is able to prevent, shape, and win, the Army will achieve a level of operational adaptability that makes it a relevant and preferred choice for combatant commanders to meet the demands of national strategy and defend America’s interests...”<sup>16</sup>

### **AMD Examples of Prevent, Shape, Win Strategies**

Major General Bill Hix, Director of the Concepts Development and Learning Directorate, US Army Training and Doctrine Command (TRADOC), emphasizes that the Army can significantly mitigate wars in the first place by executing “...prevent/shape strategies, some of which hinge on social interactions and psychological perceptions among and between partner nations, militaries and organizations like the State Department – even multinational corporations.”<sup>17</sup> The Army’s Air Defense Artillery (ADA) is one the best examples of a branch already adapted to the new post-2014 operational environment and achieving Combatant Commander requirements around the globe.

The Patriot missile force has been an effective enabler preventing conflict within Southwest Asia and the Central Command (CENTCOM) area of operations since 2007. There is no doubt as to the Patriot’s credibility and historical performance in 2003 during Operation Iraqi Freedom I where it successfully intercepted eight tactical ballistic missiles that were threatening critical US and coalition assets. Another contributing factor to its credibility is the psychological effect a forward based or deployed Patriot unit provides to the citizens where it is emplaced, and their adversaries, that they are being defended by the best land-based system against air breathing and tactical ballistic missile threats.<sup>18</sup> Even the deployment of just one Patriot battery draws significant

international press coverage of the event and reinforces the notion that the US is committed to that nation or region. One of the best metrics as to the measure of “effective deterrence” created by the deployment of Patriot units to the countries of Bahrain, Kuwait, United Arab Emirates, and Qatar over the last six years is that the Iranian’s have not fired a single missile at one of our Gulf partners and there has been no disruption to international commerce in the Persian Gulf.<sup>19</sup>

Air Defense Artillery units are just as effective shaping the operational environment as they are preventing conflict. The CSA’s definition of shaping in this context is “[t]he Army shapes the environment by sustaining strong relationships with other Armies, building their capacity and facilitating strategic access.”<sup>20</sup> There are numerous current and relevant examples of ADA units contributing to four key elements of shaping: provide a sustained and stabilizing presence, build partners and capacity, support security cooperation activities, and conduct steady-state activities.<sup>21</sup> One of the best examples that combine all four shaping concepts is the ADA formal relationships established with Gulf Cooperation Council Air Defense units from Bahrain, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates. Even though these are operational rotations, all of the US ADA units ensure continuity in their rotational plans with their respective GCC ADA unit partners. These engagements are not just weekly meetings to discuss lofty goals. The majority of these relationships are day-to-day military to military engagements supporting real world missions monitoring the airspace, conducting combined live missile fires to validate war plans, and building redundancy for the C4I architecture while continually building partner capacity.

While these engagements might seem basic and what other organizations across the Army are doing with our allies, the difference here is that because of the strong relations that have been fostered over the last six years, the Army and CENTCOM took building partnership capacity to next level. The 32<sup>nd</sup> Army Air and Missile Defense Command (32AAMDC), 3<sup>rd</sup> Army, and CENTCOM took the initiative to establish the Integrated Air and Missile Defense Center (IAMDC) in the United Arab Emirates. General James N. Mattis, Commander, CENTCOM, stated that missile defense remains one of his primary priorities for the Middle East and he “...strongly support[s] the continued development of the IAMDC Center in the UAE as a place for professionals to meet, discuss, and exercise important regional air and missile defense principals, concepts and procedures using academics, planning and simulation.”<sup>22</sup> Further, “[t]hrough the IAMDC Center, Air Defense Liaison Teams (ADLTs) are incorporated into the Air Operations Centers (AOCs) of our Gulf partners, providing air picture and situational awareness, as well as training and exercising Air and Missile Defense Tactics, Techniques, and Procedures (TTPs).”<sup>23</sup>

### **A Prevent/Shape/Win Strategy That Does Not Include a BCT**

Army future operations focusing on expeditionary and scalable capability are concepts that are receiving a lot of attention, and were most recently re-emphasized in a brief by the commander of the US Army Training and Doctrine Command (TRADOC), General Robert Cone, during the Association of the United States Army (AUSA) Winter Symposium in February 2013.<sup>24</sup> Further, the initial US response to the complex situation in Syria, which has strategic effects on its national security objectives, is not a Brigade

Combat Team but a Patriot unit. This is a recent example of how Army AMD units are best suited to execute the CSA's prevent/shape/win strategies.

The purpose of this deployment is NATO's response to the Turkish leadership's request for missile defense against threats from Syria. Overall, this mission demonstrates Army Air Defense's ability to support expeditionary operations and scalability to mitigate the threat within the context of prevention.<sup>25</sup> The Patriot unit was able to rapidly deploy minimum engagement packages via airlift from the Continental United States (CONUS) to meet the NATO timeline to establish operational capability to defeat a missile threat from Syria. More importantly, the unit was able to deploy and maintain a relatively small footprint with only 50% of its combat power and half of its Soldiers forward deployed to Turkey. Army Air Defense's success in deterring the threat from Syria is because of the simultaneous shaping of the operational environment. The two US Patriot batteries are task organized with two Dutch Patriot Batteries and two German Batteries. This posture is extremely important because it maintains flexibility in the US Patriot force for other global missions, but also demonstrates an equitable and shared approach from NATO and does not give the perception that it is a US centric mission. More importantly from an US interagency perspective, this is a comprehensive solution embraced by both DoD and the State Department.<sup>26</sup> In the end, the low number of troops and small footprint are effectively deterring a threat, and providing the international community more time to find a solution. However, if diplomatic efforts fail, precedence has demonstrated the Patriot missile system's proven ability to decisively win in combat because it is the best anti-ballistic missile system in the world.

## PATRIOT Deployment Locations



Figure 1 – NATO PATRIOT Deployment to Turkey in February 2013<sup>27</sup>

The global desire for future prevent/shape strategies that involve US air and missile defense assets is not going to decrease anytime soon. Even as the NATO mission is underway in southern Turkey for at least one year, there are requests to create no fly zones to deter Syrian aircraft from dropping ordnance in the north and south of Syria. Based on historical precedents set in the 1990s during Operations Southern and Northern Watch in Saudi Arabia and Turkey, this would most likely require the use of Patriot units.<sup>28</sup> It is also not a far stretch that Patriot units could be emplaced in northern Jordan to defend against ballistic missile attacks. However, there is only one organic Patriot battalion assigned within the European theater, under the 10<sup>th</sup> AAMDC, the unit designated primarily to support. Presently, 10<sup>th</sup> AAMDC it is trying to balance its

partnership with the Israeli air defense units and theater security requirements such as Patriot to Poland. The current Patriot battalion deployed to Turkey was from the 32<sup>ND</sup> Army Air and Missile Defense Command (AAMDC), which primarily supports CENTCOM AMD requirements. With the recent news of chemical weapons use in Syria, the mission in Turkey could go longer than one year which means designating another battalion to replace it. An additional Patriot battalion requirement will be a challenge to achieve because a majority of the fifteen battalions in the US Army inventory are already committed to other COCOM missions.

### **Building AMD Capacity and Capability in Pacific Command (PACOM)**

In the near term, the ACC advocates Army investment for Air Defense Artillery (ADA) leadership to focus on “providing air and missile defense to defeat anti-access and area denial strategies.”<sup>29</sup> Of course, where A2/AD should be fielded is a critical question. The Joint Operational Access Concept’s (JOAC) approach to anti-access and area denial (A2/AD) is one of the Army’s main challenges in supporting the rebalancing of U.S. forces to the Pacific.<sup>30</sup> Air Sea Battle (ASB) is a concept developed about three years ago that was initially an exclusive approach used by the US Air Force and US Navy to mitigate A2/AD challenges for joint forces.<sup>31</sup> However, land forces will play a crucial role in the execution of this concept, and the Army is now being integrated into the further development of this process. More importantly, Mr. Peter Bechtal, the Army’s primary representative on the DoD Steering Group for ASB, states that it will be Army AMD forces that will provide “the first line of defense” for our strategic interests if the enemy is successful at denying the Navy and Air Force access to an area.<sup>32</sup> Forward deployed air and missile defense forces protecting airbases and allied territory

can increase flexibility for the Navy's strategic mobility advantage and allows the Air Force to sustain combat power for offensive operations.<sup>33</sup>

The senior ADA leadership recently commissioned a comprehensive study of the role of Army AMD in Joint Operational Access.<sup>34</sup> This four month study was represented by all services and led by a Navy-centric experienced team with extensive knowledge of integrated joint air and missile defense operations and ASB concepts. A common thread in the study's findings is that "[r]egardless of where operations take place in the Asia-Pacific region, AMD forces would play key roles in defending U.S. interests."<sup>35</sup> However, the study highlighted immediate concerns that the ADA Branch and senior Army leadership will need to change to accomplish the strategic objectives of the ACC. Two of the most significant concerns are current AMD capability and limited AMD capacity for ground maneuver operations in the Pacific.<sup>36</sup>

Over the last twenty years, Army ground forces have enjoyed unlimited freedom of maneuver from air threats due to air supremacy and air superiority. This will not be the case in the Pacific. China has learned from the U.S. successes in global force projection and invested significantly in A2/AD technology to limit this U.S. advantage over the past 15 years.<sup>37</sup> The Chinese have heavily invested in cruise missiles, UAS, and anti-radiation missiles (ARM) to exploit U.S. AMD capability gaps. The Army has not kept up the pace. For example, the Army terminated the SLAMRAAM<sup>38</sup> program which had the primary role of defeating cruise missiles. Another key program that is at risk is the Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS), which has seen a system requirement drop from 16 to 2 orbits.<sup>39</sup> This sensor is crucial to the AMD modernization strategy that mitigates the capability gap for "a

persistent, elevated and netted sensor” that provides 360 degree coverage.<sup>40</sup> JLENS already proved able to assist in the successful engagement of a cruise missile in April 2012.<sup>41</sup> Without these combined capabilities to defeat lower tier threats forces the “potential necessity of employing [Patriot] PAC-3 or PAC-2 missiles against these threats produc[ing] an unfavorable cost-exchange ratio that runs the risk of greatly accelerating depletion of missile inventories.”<sup>42</sup>

The Army also lacks in its ability to provide ADA coverage for tactical land forces, including an inability to be the most effective enabler for Brigade Combat Team (BCT) A2/AD ground maneuver missions in the Asia-Pacific region (and almost everywhere else for that matter).<sup>43</sup> The most recent U.S. Army National Training Center (NTC) observations during BCT Decisive Action rotations to Fort Irwin, California, highlight that the “Air Defense umbrella does not exist.”<sup>44</sup> The Maneuver Center of Excellence (MCoE), TRADOC's proponent for developing the future BCT of 2020, acknowledges the same emerging threats of UAS and SAMs (which includes CMs) for the BCT.<sup>45</sup> There are only two SHORAD battalions in the Army active component inventory which highlights the lack of sufficient inventory to support any large-scale deployed force. For future AMD planning in the Asia-Pacific region, ADA's requirement to support operational maneuver elements will limit its flexibility due to the large dispersion of forces for an “already thinly spread AMD force.”<sup>46</sup> ADA leadership started addressing the lack of capacity by developing a rotation plan to align National Guard SHORAD battalions to support BCTs. However, this relationship will take time to develop with each state involved in the plan.

The AMD capability and capacity concerns were validated during the recent TRADOC Unified Quest Winter Wargame Exercise which was conducted at Carlisle Barracks, Pennsylvania from February 9-14, 2013. The participants were not only Army, but a combined, joint team of senior leaders from US and foreign services including academic leaders in the respective fields. This classified exercise was set in the year 2020 in the Asia-Pacific region focusing on early entry operations, specific security challenges, a failed state and weapons of mass destruction.<sup>47</sup> A key objective of the exercise was to focus on the Chairman's guidance from the CCJO: Joint Force 2020 to determine the 20% of the joint force that can still be changed to adapt to the future environment in the next 7 years. One of the participants stated that an area that ADA will need to develop for 2020 is an expeditionary AMD system that is highly mobile and can protect the maneuver force with the capability of CRAM, defeating cruise missiles, and performing counter unmanned aerial surveillance (C-UAS).<sup>48</sup>

### **EUCOM Army AMD Demands Are Growing Beyond Current Capacity**

As the Army shifts focus to prioritize the A2/AD challenges in the Asia-Pacific region, there is limited capacity for new missions within EUCOM. There is an expectation that these requirements will continue to increase based on the situation in Syria and the recently passed United States-Israel Enhanced Security Cooperation Act of 2012, which will require the DoD to provide "additional articles and missile defense services" to Israel, specifically designating "missile defense capabilities" as part of the legislation.<sup>49</sup>

The Secretary of Defense, Mr. Chuck Hagel, made a major announcement on March 15, 2013, that the United States would cancel Phase 4 of the European Phased

Adaptive Approach (EPAA) in order to re-allocate resources to a more immediate threat from North Korea's Intercontinental Ballistic Missile (ICBM) Program.<sup>50</sup> Although this strategic decision does create the perception of a capability gap in the long term, Secretary Hagel did emphasize "...the strong and continued commitment of the United States to NATO missile defense. That commitment remains ironclad."<sup>51</sup> The BMD threat is still significant for NATO and Europe. During his COCOM Posture to the 113<sup>th</sup> Congress in March 2013, Admiral James Stravedis, European Combatant Commander and Supreme Allied Commander, Europe, mentioned missile defense thirty-six times in his submitted brief to the Senate and House Armed Service Committees.<sup>52</sup> One of his top six European theater concerns for fiscal year 2013 is the transnational proliferation of ballistic missile material from North Korea and Iran, as well as Syria's chemical weapons.<sup>53</sup>

The US Army's approach to NATO missile defense should also be nested with DoD's guidance in order to maintain credibility (Prevent) and build partner capacity (Shape). However, this is an area that needs improvement especially the force structure for the AAMDCs.

Current Army doctrine requires an AAMDC to support each COCOM. However, the Army is only able to man and equip four AAMDCs for five COCOMs and there is not a current sourcing solution to build a fifth AAMDC.<sup>54</sup> Furthermore, the 10<sup>th</sup> AAMDC, which is the Theater Air and Missile Defense Coordinator (TAMCOORD) and Deputy Area Air Defense Commander (DAADC) for EUCOM, is structured with 18% less personnel (150 authorizations vice 183) than the two other active component AAMDCs, 32<sup>nd</sup> AAMDC which supports CENTCOM and 94<sup>th</sup> AAMDC which supports PACOM.<sup>55</sup>

There is also no Brigade Headquarters in the 10<sup>th</sup> AAMDC to provide mission command for the two battalions, one of which is deployed to Turkey in support of NATO for Syrian missile threat, and training readiness authority (TRA) for other AMD assets.

Additionally, “[t]o successfully intertwine AMD Operations across all services and international partners will place a heavier burden on [AAMDC] commanders to provide liaisons at each headquarters.”<sup>56</sup> The 10<sup>th</sup> AAMDC span of control remains challenging without a subordinate headquarters as it develops and executes contingency plans for EUCOM and NATO at the operation/strategic level while executing TRA at the tactical level for AMD assets across three countries.

### **Recommendations**

Clearly, the Army will have to change the way it trains, mans, organizes, and equips in order to adapt to the new missions it will be required to assume in the future.<sup>57</sup> The 2012 Army Strategic Planning Guidance is a starting point for a culture change on how the Army needs to strategically think about the effectiveness of different enablers vice Brigade Combat Teams in terms of protecting our national interests.

In this regard, the time is right to re-look the Modular BCT force structure. The Army is already addressing courses of action to reduce BCT force structure in order to meet the Army end-strength requirement of 490,000 Soldiers by fiscal year 2020. In January 2013, a major step in the future BCT force structure decision process was realized with the release of the Programmatic Environmental Assessment in January 2013.<sup>58</sup> While it is still at the HQDA decision point level, a true culture for change exists to make the ground force more capable is the best opportunity in the decision process to include the ADA force structure growth and with ADA’s significant future contributions

represented within three of the ten DoD Strategic Guidance missions. *If the Army reduced just one BCT and apply the force structure savings to ADA, the result would be 45 Patriot additional batteries for the global force.*<sup>59</sup> Even one half of a BCT's worth of personnel, applied to create 22 Patriot batteries, would greatly increase the flexibility for ADA to continue to "prevent, shape and win" in EUCOM and CENTCOM while simultaneously supporting the PACOM Commander's emerging requirements for Joint Operational Access in the Pacific-Asia region.

In order to build equity with the other active component AAMDCs and meet EUCOM commander expectations of an AAMDC, the Army should also recommend increasing the force structure of the 10<sup>th</sup> AAMDC by at least 48% to account for requirements to perform Brigade headquarters functions, maintaining AAMDC TAC forward deployed and sustaining six critical AMD partnerships for EUCOM: Israel, United Kingdom, Germany, Netherlands, Poland, and Turkey.<sup>60</sup> This is the same rationale as standing up 7<sup>th</sup> ID at Fort Lewis to execute mission command for its five Brigades in lieu of just a Corps Headquarters; span of control is too great.

With new force structure, ADA leadership could pursue a deployment manning cycle similar to the Blue and Gold crew rotation practiced by the U.S. Navy's ballistic missile submarine crews. This approach would double AMD combat power for Patriot units, without requiring additional equipment.<sup>61</sup> Blue and Gold crews are two identical composite crews that enhance the deployment tour length of the submarine by swapping out a complete crew halfway through the deployment cycle. "The nature of continuous operations in a high-intensity environment over vast expanses and challenged communications capability to higher engagement authorities places

increased pressure on the three to four Fire Control Crews currently authorized per battery.”<sup>62</sup> While this is definitely advantageous from a combat crew readiness perspective, it would still require additional collective training requirements, as well as establishing an equipment rotation plan at each individual installation. However, if implemented, personnel manning could be applied more efficiently and economically over time.

Another method to preserve force structure while improving capability is for the Army to “seek joint sponsorship for programs” that support mission requirements under the Joint Operational Access Concept.<sup>63</sup> The JLENS program would be ideal for this course of action. It has recently been approved to participate in a CONUS-based COCOM exercise in 2014 as part of the validation process.<sup>64</sup> Additionally, with the recent deployment of a coalition Patriot task force to Turkey in support of the NATO alliance, this would be the perfect opportunity to accelerate the fielding timeline for JLENS after having already proving its mettle, and validating it in a joint operational environment.

Another potential joint sponsorship program would be the Israeli Iron Dome system. On 20 March 2013, the US committed an additional \$250 million to improve the weapon system.<sup>65</sup> This Iron Dome could be a short term answer for defeating rockets and artillery from fixed locations, especially for South Korea airbases where Army AMD systems are already co-located. Another advantage to this system is that it only requires five personnel to man it. However, joint sponsorship would be needed to integrate it into AMD sensors/mission command elements for the Army and US Navy (USN). The USN is also looking at Iron Dome as a self defense weapon for Aegis

Cruisers, but will need to determine best how to integrate it with other systems because it is currently a stand-alone system.<sup>66</sup>

With all of the effort focusing on increasing capacity and improving Army AMD capability, the same energy also needs to be applied on the assignment of officers to key joint and visible Army positions coded for Air Defense officers. Talent management will be crucial to ensure the best officer with the right experience is assigned to these critical joint and visible positions to ensure they can educate Army and Joint senior leaders of the capability and capacity of ADA forces as well as their value as a strategic enabler.

The ADA Commandant, US Army Fires Center of Excellence, TRADOC, can influence the assignment process to ensure the right, experienced leaders are in place to advise the Army and Joint strategic leaders of Army AMD capabilities. ADA Commandant would need to determine which Army/Joint positions are key to influence decision makers. The next step would be the ADA Branch Chief, Officer Personnel Management Directorate (OPMD), Army Human Resources Command (HRC) nominating the officer slate through the ADA Commandant for oversight of the process. The slate can be updated twice a year which is synched with the OPMD Manning Cycles within the OPMD Operations and Plans Division in order to maintain a common operating picture of when critical positions will be vacant.

Another issue impacting the ADA officer corps is the lack of 'hands-on' AMD experience for short range air defense (SHORAD) at the ADAM Cell within the BCT and Army Division Headquarters. During the recent 4<sup>th</sup> Infantry Division Tactical Command Post (DTAC) and 1<sup>st</sup> Brigade, 4<sup>th</sup> Infantry Division rotation to the National Training

Center, the Division Commander, MG Joseph Anderson, highlighted in his After Action Report (AAR) to US Army Forces Command (FORSCOM) in November 2012 one of his major concerns for “air defense planning and integration capabilities of the modular force:”

[A]fter 11 years of COIN/Asymmetric Warfare we have begun to lose the capability to integrate air defense units into tactical operations. While most young AMD officers have a strong background in EAD (Patriot) operations, very few have any background in Forward Area Air Defense weapon systems. This gap causes problem for the BCT as the AMD officer is not capable of providing subject matter expertise to the command. Simple concepts like mass, mix, defense depth, weighted coverage have been ignored for 10 years, and more technical concepts like understanding the capabilities of enemy aircraft and how that effects their attack profiles (therefore effecting the concept of air defense coverage) could soon become a lost art. BCT Commanders and senior leaders have little or no experience with FAAD units, preventing them from providing clear guidance IAW current AMD doctrine.<sup>67</sup>

This is an issue that can be resolved in the near term with three improvements to ADA planning at the BCT level. The ADA Commandant, working through FORSCOM, US Army Europe (USAEUR), and US Army Pacific Command (USARPAC), can mitigate atrophy of AMD planning at BCT, Division and Corps headquarters by assigning sponsorship for all ADAM Cells to Army Air and Missile Defense Commands (AAMDC). AAMDCs then can determine the best strategy to assign sponsorship for their Brigades and Battalions for the 77 ADAM Cells Army-wide. Second, the Mission Command Training Program (MCTP), US Army Combined Arms Center (CAC), Ft. Leavenworth, Kansas, can coordinate with AAMDCs to send a senior AMD officer to attend unit Warfighter Exercises / Mission Rehearsal Exercises to coach maneuver leaders/staff on AMD guidance. Last, the ADA Commandant and ADA OPMD Branch should determine if “Key and Development” (KD) assignment credit should be offered for ADAM Cells

again to ensure the BCT gets the right talent and that this initiative is documented in DA Pamphlet 600-3 (Officer Professional Development) for consideration by Army selection boards for promotion, school and/or command.

### **Conclusion**

It is clear that more ADA forces will be needed to meet all regional combatant commander requirements, counter future threats, and directly support the Army's rebalancing to the Asia-Pacific region. However, it will be difficult to realize force structure growth in a zero sum environment. With the Army drawing down at least 75,000 Soldiers in the next 8 years, there is no easy solution to find force structure savings, especially with an Army priority to increase organic capability and capacity for the BCT, meaning for the moment devoting ever more personnel to that process. However, if the Army remains committed to executing the intent of the ACC, it is the right decision to increase AMD forces while inactivating other Army organizations. An AMD increase will immediately and ultimately help us defend our national security interests in a decisive manner.

### **Endnotes**

<sup>1</sup> U.S. Department of the Army, *The U.S. Army Capstone Concept* (hereinafter "ACC"), Training and Doctrine Command Pamphlet 525-3-0 (Fort Eustis, VA: Training and Doctrine Command, December 19, 2012), 6.

<sup>2</sup> Spillman, Christopher L, Colonel, U.S. Army, "ADAM/BAE Cell Air Defense Airspace Management / Brigade Aviation Element," Brief to Future Brigade Commanders at Brigade Command Tactical Commander's Development Program at Fort Leavenworth, KS. December 18, 2012.

<sup>3</sup> Fires Center of Excellence. "U.S. Army Fires 2020," information briefing slides, Fort Sill, OK, Fires Center of Excellence (FCoE), August 28, 2012, Slide 3.

<sup>4</sup> U.S. Joint Chiefs of Staff, *Capstone Concept for Joint Operations: Joint Force 2020* (hereinafter “CCJO for Joint Force 2020”) (Washington, DC: U.S. Joint Chiefs of Staff, September 10, 2012), 12.

<sup>5</sup> U.S. Department of Defense, *Ballistic Missile Defense Review Report* (Washington, DC: U.S. Department of Defense, February 2010), 23.

<sup>6</sup> U.S. National Intelligence Council, *Global Trends 2030: Alternative Worlds* (Washington, DC: Office of the Director of National Intelligence, December 2012), 64.

<sup>7</sup> *Ibid.*

<sup>8</sup> *Ibid.*, 60.

<sup>9</sup> Erwin, Sandra I. “Proliferation of Cruise Missiles Sparks Concern About U.S. Air Defenses.” January 29, 2013. Linked from “Army Capabilities Integration Center (ARCIC) Press Highlights” from “National Defense Magazine.” <http://www.arcic.army.mil> (accessed January 30, 2013).

<sup>10</sup> *Ibid.*

<sup>11</sup> Panetta, Leon E. *Sustaining U.S. Global Leadership: Priorities for 21<sup>st</sup> Century Defense* (hereinafter “DoD Strategic Guidance”) (Washington, DC: Department of Defense, January 5, 2012), 4.

<sup>12</sup> Obama, Barack H. *National Security Strategy* (Washington, DC: The White House, May 2010).

<sup>13</sup> DoD Strategic Guidance, 4-5. The three priorities for AMD are: Project Power Despite Anti-Access/Area Denial Challenges, Counter Weapons of Mass Destruction (WMD), and Defend the Homeland and Provide Support to Civil Authorities.

<sup>14</sup> CCJO for Joint Force 2020, iii.

<sup>15</sup> ACC, 6.

<sup>16</sup> ACC, 11.

<sup>17</sup> Vergun, David. “Army leaders plan for uncertain future.” February 14, 2013. Linked from “The Official Homepage of the United States Army.” <http://www.army.mil> (accessed February 20, 2013).

<sup>18</sup> Author’s experience being deployed in support of operations in Saudi Arabia (1996, 1997-1998, 1999), Bahrain and United Arab Emirates (2008-2009), and travel to Kuwait and Qatar in 2005.

<sup>19</sup> Karbler, Daniel L. *An Assessment of Opportunities for the U.S. Army Air Defense Artillery*. (Fort Sill, OK: US Army Air Defense Artillery School, Fires Center of Excellence, March 2012), 2.

<sup>20</sup> Odierno, Raymond T. General, 38<sup>th</sup> Chief of Staff, U.S. Army. *Marching Orders. America's Force of Decisive Action* (Washington, DC: Department of the Army, January 2012).

<sup>21</sup> ACC, 13.

<sup>22</sup> CENTCOM Public Affairs. Remarks by GEN James N. Mattis, USMC. Commander, CENTCOM. International Symposium on Air Defense (ISAD) 2020+. Jeddah, Saudi Arabia. 17 April 2011.

<sup>23</sup> Karbler, *An Assessment of Opportunities for the U.S. Army Air Defense Artillery*, 3.

<sup>24</sup> McLeary, Paul. "AUSA: Doctrine Chief Outlines Priorities for Army's Future." February 20, 2013. Linked from "Army Capabilities Integration Center (ARCIC) Press Highlights" from "Defense News." <http://www.arcic.army.mil> (accessed February 21, 2013).

<sup>25</sup> ACC, 12.

<sup>26</sup> Benitez, Jorge. "Proposal to deploy Patriot Missiles to enforce no-fly zone in Syria has 'won advocates in the State Department.'" November 8, 2012. Linked from "Atlantic Council." <http://www.acus.org> (accessed November 10, 2012).

<sup>27</sup> North Atlantic Treaty Organization, "PATRIOT Deployment," February 2013, [http://www.nato.int/nato\\_static/assets/pdf/pdf\\_2013\\_02/20130220\\_130220-factsheet\\_patriot-en.pdf](http://www.nato.int/nato_static/assets/pdf/pdf_2013_02/20130220_130220-factsheet_patriot-en.pdf) (accessed March 1, 2013).

<sup>28</sup> Benitez, Jorge. "Proposal to deploy Patriot Missiles to enforce no-fly zone in Syria has 'won advocates in the State Department.'"

<sup>29</sup> ACC, 33.

<sup>30</sup> U.S. Joint Chiefs of Staff, *Joint Operational Access Concept (JOAC)*, Version 1.0 (Washington, DC: U.S. Joint Chiefs of Staff, January 17, 2012), 6. Anti-access is defined as those actions and capabilities, usually long range, designed to prevent an opposing force from entering an operational area. Area denial is defined as those actions and capabilities, usually of shorter range, designed not to keep an opposing force out, but to limit its freedom of action within the operation area.

<sup>31</sup> U.S. Joint Chiefs of Staff, JOAC, 4.

<sup>32</sup> Wong, Kristina. "Foot Soldiers march their way into new Air Sea Battle concept." September 30, 2012. Linked from "Army Capabilities Integration Center (ARCIC) Press Highlights" from "The Washington Times." <http://www.arcic.army.mil> (accessed October 2, 2012).

<sup>33</sup> Goure, Daniel. "Air and Missile Defense Could Be the Army's Role In the Asia-Pacific Theater." August 28, 2012. Linked from "Army Capabilities Integration Center (ARCIC) Press Highlights" from "The Lexington Institute." <http://www.arcic.army.mil> (accessed August 29, 2012).

<sup>34</sup> Delex, Systems Inc. *The Role of Army Air and Missile Defense in Joint Operational Access*. (Fort Sill, OK: U.S. Army Air Defense Artillery School, Fires Center of Excellence, August, 10 2012). Team led by CDR(Ret.) Bryan McGrath, who is the primary author of the U.S. Navy's current maritime strategy, *A Cooperative Strategy for 21<sup>st</sup> Century Seapower*.

<sup>35</sup> Delex, *The Role of Army Air and Missile Defense in Joint Operational Access*, 12.

<sup>36</sup> *Ibid.*, 8.

<sup>37</sup> *Ibid.*, 5.

<sup>38</sup> SLAMRAAM is a Surface Launched Advanced-Medium Range Air to Air Missile system.

<sup>39</sup> Judson, Jen. "Conus-Based Location Chosen for JLENS COCOM Exercise." January 18, 2013. Linked from "Army Capabilities Integration Center (ARCIC) Press Highlights" from "InsideDefense.com." <http://www.arcic.army.mil> (accessed January 22, 2013).

<sup>40</sup> Fires Center of Excellence. U.S. Army Fires 2020 Brief. August 28, 2012. Slide 3.

<sup>41</sup> Judson, "Conus-Based Location Chosen for JLENS COCOM Exercise."

<sup>42</sup> Delex, *The Role of Army Air and Missile Defense in Joint Operational Access*, 28.

<sup>43</sup> *Ibid.*, 4.

<sup>44</sup> Bronco Team. "National Training Center Trends Brief, Recommendations for Commanders. Collected Observations from SFAB and DA Rotations." Information brief to future Brigade Commanders at Brigade Command Tactical Commander's Development Program, Fort Leavenworth, KS, School of Command Preparation, December 17, 2012, 30.

<sup>45</sup> King, Scott, Colonel, U.S. Army, "Maneuver Center of Excellence," information brief to future Brigade Commanders at Brigade Command Tactical Commander's Development Program, Fort Leavenworth, KS, School of Command Preparation, December 17, 2012, 13.

<sup>46</sup> Delex, *The Role of Army Air and Missile Defense in Joint Operational Access*, 21.

<sup>47</sup> Wasserbly, Daniel. "Unified Quest Wargame to Advance Army Operating Doctrine." February 7, 2013. Linked from "IHS Jane's." <http://www.janes.com> (accessed February 20, 2013).

<sup>48</sup> Bateman, Sean T. Lieutenant Colonel, U.S. Army. Chief of Field Artillery Concepts, US Army Fires Center of Excellence, Fort Sill, OK. E-mail interview on February 27, 2013.

<sup>49</sup> *United States-Israel Enhanced Security Cooperation Act of 2012*, Public Law 150, 112<sup>th</sup> Congress (July 27, 2012), 2.

<sup>50</sup> Hagel, Chuck. "Missile Defense Announcement." Pentagon Press Conference. (Washington, DC: Department of Defense, March 15, 2013).

<sup>51</sup> Hagel, Missile Defense Announcement, March 15, 2013.

<sup>52</sup> Stravedis, James. Admiral, US Navy. Combatant Commander, European Command (EUCOM) and Commander, Supreme Headquarters Allied Powers Europe (SHAPE). "FY13 Posture Statement: EUCOM." March 15, 2013. 113<sup>th</sup> Congress: Washington, DC.

<sup>53</sup> Ibid, 7.

<sup>54</sup> Fires Center of Excellence. U.S. Army Fires 2020 Brief. August 28, 2012. Slide 4.

<sup>55</sup> Richmond, Stephen J. Colonel, US Army, "10<sup>th</sup> Army Air and Missile Defense Command Training Management Review (TMR)," Brief for Commanding General, US Army Europe at Rhein Ordnance Barracks, Kaiserslautern, Germany, February 25, 2013. Slide 22.

<sup>56</sup> Delex, *The Role of Army Air and Missile Defense in Joint Operational Access*, 27.

<sup>57</sup> U.S. Department of the Army, *2012 Army Strategic Planning Guidance* (Washington, DC: U.S. Department of the Army, April 19, 2012), 1.

<sup>58</sup> U.S. Army Environmental Command. "Army Releases Programmatic Environmental assessment – Army 2020 Force Structure Realignment." January 18, 2013. Linked from "Army Capabilities Integration Center (ARCIC) Press Highlights" from "Army News Service." <http://www.arcic.army.mil> (accessed January 22, 2013).

<sup>59</sup> Karbler, Daniel L. Brigadier General, U.S. Army. Commandant, ADA Branch, U.S Army Fires Center of Excellence. Fort Sill, OK. E-mail interview on July 20, 2012.

<sup>60</sup> Richmond, Stephen J., "10<sup>th</sup> Army Air and Missile Defense Command Training Management Review (TMR)," Slide 22.

<sup>61</sup> Lennox, Robert P. Lieutenant General, U.S. Army. Principal Deputy, Director of Cost Assessment and Program Evaluation, Office of Secretary of Defense. Telephone interview on December 21, 2012.

<sup>62</sup> Delex, *The Role of Army Air and Missile Defense in Joint Operational Access*, 27.

<sup>63</sup> Delex, *The Role of Army Air and Missile Defense in Joint Operational Access*, 28.

<sup>64</sup> Judson, "Conus-Based Location Chosen for JLENS COCOM Exercise."

<sup>65</sup> Avlon, John. "American Way: it's no longer possible to brand Obama a foe of Israel." March 23, 2013. Linked from "The Telegraph." <http://www.telegraph.co.uk> (accessed March 30, 2013).

<sup>66</sup> Ellison, Riki. Chairman, Missile Defense Advocacy Alliance. Interview on March 7, 2013.

<sup>67</sup> Major General Joseph Anderson, Commanding General, 4<sup>th</sup> Infantry Division, "NTC 13-02 Decisive Action Observations for Senior Leaders," memorandum for record, Fort Carson, Colorado, November 16, 2012.

