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Anti-access/area denial is a prevailing issue for the U.S., specifically in the Asia-Pacific. U.S. strategic security policy has emphasized a need for freedom of access and maneuver in contested areas to address current or emerging threats presented by potential adversaries, such as China. As a result, development of concepts from the joint level and down to the service level emphasize the conduct of operations inside and around these contested areas. To keep pace with emerging threats, the Marine Corps has taken steps to revamp its force to address this issue, through new concepts and design. However, some additional considerations to address the A2/AD issue are analyzed and highlighted in this paper.

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MASTER OF MILITARY STUDIES

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ANALYSIS OF A2/AD IN THE ASIA-PACIFIC REGION AND MARINE CORPS CONCEPT  
DEVELOPMENT AND FORCE DESIGN

SUBMITTED IN PARTIAL FULFILLMENT  
OF THE REQUIREMENTS FOR THE DEGREE OF  
MASTER OF MILITARY STUDIES

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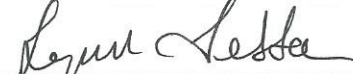
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## Executive Summary

**Title:** Analysis of A2/AD in the Asia-Pacific Region and Marine Corps Concept Development and Force Design

**Author:** Major Marcus Hoffman, United States Marine Corps

**Thesis:** Although the A2/AD threat in the Asia-Pacific region has led to different approaches to concept development, force design, and contributions to the joint force, the Marine Corps' role in countering the A2/AD threat is not adequate, and a more holistic approach from the joint force and sister services is necessary to properly address the challenges of this complex problem set.

**Discussion:** Anti-access/area denial has become a prevailing issue for the United States, specifically in the Asia-Pacific region. The United States' strategic security policy has emphasized a growing need for freedom of access and maneuver in potentially contested areas to address current or emerging threats presented by possible adversaries. China, the predominant power in the Asia-Pacific, has recently accelerated its development and strategy of defense to contest the U.S. presence in the region. As a result, an increased development of concepts, starting at the joint level and down to the individual services, emphasizes the conduct of operations inside and around these contested areas. In order to keep pace with these potential threats, the Marine Corps has taken steps to revamp its force, and much of this transition is geared toward China and the Asia-Pacific region. The Marine Corps' role as a force projector is a major contributing factor to the joint force and is essential to its role in countering this issue. But the question of whether the Marine Corps has adequately addressed this issue is still prevalent, even with long-term plans and changes to its force structure. This paper aims to address what the Marine Corps has done to establish itself in a future fight in a modern contested environment, as well as some contributions and recommendations to better inform the joint force and Marine Corps leaders and planners as to how best to broach this complex problem set.

**Conclusion:** The Marine Corps must make a continuous effort to coordinate and cooperate with other services to better increase the chances of success in overcoming A2/AD in the Asia-Pacific. This starts with a concerted effort at the joint level to identify a more holistic operational concept. Also, the Marine Corps must continue to find ways to enhance its contribution and shaping of future developments of operational concepts at the joint level and by valuing joint billets and PME among its officer corps, which develops a better understanding of sister service requirements and joint enablers.

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THE OPINIONS AND CONCLUSIONS EXPRESSED HEREIN ARE THOSE OF THE INDIVIDUAL STUDENT AUTHOR AND DO NOT NECESSARILY REPRESENT THE VIEWS OF EITHER THE MARINE CORPS COMMAND AND STAFF COLLEGE OR ANY OTHER GOVERNMENTAL AGENCY. REFERENCES TO THIS STUDY SHOULD INCLUDE THE FOREGOING STATEMENT.

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## *Preface*

The A2/AD issue in the Asia-Pacific region has been a direct and indirect part of my military career since I joined. I have spent almost half of my sixteen years in the Marine Corps stationed in the Asia-Pacific region. During my time, I have served on a variety of levels, as a pilot at the squadron level, to a staff officer at the MEF level. I have executed the full gamut of mission sets, from multiple Marine Expeditionary Unit (MEU) deployments with the air combat element (ACE), to air officer at the Marine Expeditionary Brigade (MEB). But it was not until I served as a liaison officer from the Marine Corps Warfighting Lab (MCWL) to the Army's Training and Doctrine Command (TRADOC) that I fully grasped the level of attention and effort directed to concept development and force design. Moreover, as a liaison embedded in another service's major command, I was able to understand more fully the broad range of considerations that the U.S. military must address in order to design a force to combat future threats. It was here where I first heard the term 'A2/AD', and I became fascinated by not only its modern application but also how it has always been utilized in some form through the annals of military history. With this paper, my aim is to focus on A2/AD in the Asia-Pacific region and glean some key characteristics and insights that can be useful in Marine Corps concept development and force design.

I would like to express my gratitude to Dr. Lynn Tesser, LtCol Jarrod Stoutenborough, and Dr. Eric Shibuya. Thank you for all your assistance, insight, and feedback in helping me shape this research and develop a better understanding of the complex topic of A2/AD. I would also like to thank all the other Marine Corps officers and civilians here at MCU and throughout my career for playing a key role in my development as an officer and a professional service member.

## **Introduction**

Anti-access/area denial (A2/AD) has become a prevailing issue for the United States, specifically in the Asia-Pacific region. The United States' policy in the Asia-Pacific region has emphasized a growing need for freedom of access and maneuver in these potentially contested areas in order to address current or emerging threats presented by possible adversaries, notably the People's Republic of China (PRC). China, the predominant power in the Asia-Pacific, has recently accelerated its A2/AD system development and strategy to address the prevalent United States presence in the region. As a result, the demand signal created by China and U.S. policy to counter A2/AD has generated an increased development of concepts, starting at the joint level, with a broad emphasis on conducting operations inside and around these contested areas. This unique problem set has compelled the United States Marine Corps to focus its effort in a more expeditionary and maritime manner in the Asia-Pacific region, after having focused most of the 21<sup>st</sup> century on land-locked operations in the Middle East.

In order to keep pace with these potential threats, the Marine Corps has taken steps to revamp its force, and much of this transition is geared toward China and the Asia-Pacific region. The Marine Corps, as well as other services, has incorporated efforts to counter A2/AD into its concept development and force design planning to a notable degree. The most noteworthy, among others, would be the Marine Corps Expeditionary Advanced Basing Operations (EABO), as its focus most closely pertains to many of the current Marine Corps mission sets and capabilities. The Marine Corps' role as a force projector is a major contributing factor to the joint force and is essential to its role in countering A2/AD in this context. But even with long-term plans and tangible changes to its force structure, has the Marine Corps adequately addressed its role in countering the A2/AD threat in the Asia-Pacific region? If not, what could the Marine Corps do differently to better address this issue? This paper aims to address some of what the

Marine Corps has done (or is planning to do) to establish itself in a future fight in a modern contested environment such as A2/AD. In addition, further research into what the joint force and other services have done shows a deliberate but uncoordinated effort towards addressing this problem in kind. Although the A2/AD threat in the Asia-Pacific region has led to different approaches to concept development, force design, and contributions to the joint force, the Marine Corps' role in countering the A2/AD threat is not adequate, and a more holistic approach from the joint force and sister services is necessary to properly address the challenges of this complex problem set.

The research methodology for this paper consists mainly of a qualitative approach using secondary source documents on the topic, specifically doctrinal publications and concepts by the Department of Defense (DoD) that describe the A2/AD problem and how the United States military is planning to overcome it. Also, articles referencing A2/AD were researched that focused on the problem and how certain nations (specifically China and the United States) are dealing with the issue. In addition, specific books and studies that focus on the A2/AD problem were researched, as well as studies into China's implementation of its A2/AD strategy since it is considered the major arbiter of A2/AD in the region.

To better understand the A2/AD threat, some relevant analysis of the problem set is needed. Sam Tangredi's book *Anti-Access Warfare: Countering A2/AD Strategies* is a main contributing work for defining and identifying the problem set. In his book, Tangredi explores a brief history of A2/AD, listing historical examples, and also describing A2/AD in a conceptual framework of fundamental elements of anti-access (perception of the attacking force, primacy of geography, general predominance of the maritime domain, information and intelligence, and impact of intrinsic events) to help describe some of the characteristics of the problem.<sup>1</sup> This

framework, along with a brief history, are important to understand A2/AD in more broad terms, better apply the development of A2/AD in the Asia-Pacific region, and discern the takeaways for the United States and the Marine Corps.

Part of Chinese strategy in the Asia-Pacific region focuses on A2/AD, its origins, as well as its purpose. The RAND report titled *China's Grand Strategy: Trends, Trajectories, and Long-Term Competition* highlights this point in several aspects, to include origins of the Chinese Communist party, to China's motivation to develop an A2/AD strategy in the late 1990s.<sup>2</sup> As a backdrop to implement its own foreign policy in the region, the report explains several key characteristics of Chinese A2/AD, which are key to understanding the United States' response to addressing the problem at the national and service level.

Before attempting to understand how the Marine Corps addresses the issue, additional insight into joint publications is needed. Some of the major contributions of A2/AD analysis come from a family of United States joint publications that emphasize this problem and offer solutions. These publications include the Joint Operational Access Concept (JOAC), the Joint Concept for Entry Operations (JCEO), and Joint Forcible Entry Operations (JFEO), among others. The prevailing issues center around the need for the United States military to obtain operational access with better freedom of movement in contested areas, acknowledging that growth in A2/AD capabilities among potential adversaries is due to the U.S.'s increased overseas defense posture.<sup>3</sup> As stated, these publications generalize the overall approach to combatting A2/AD, listing broad measures to address the problem at the national level.

To have a better grasp at how the services address this issue individually, one must look at the service-level publications that are derived from the joint publications. From the United States Army, Multi-Domain Operations (MDO) describe several aspects of the A2/AD

environment and how the Army plans to address it. Likewise, the United States Air Force concept of Multi-Domain Command and Control (MDC2) addresses A2/AD in several areas, predominantly in the air, space, and cyber domains. Each conceptual document addresses A2/AD to a certain degree to demonstrate an acknowledgement of this problem set at the individual service level. Although many of these documents address perspectives on the problem set, these perspectives contribute to the somewhat isolated nature of concept development and force design described further when referencing Marine Corps' methods to approach A2/AD.

When focusing specifically on the Marine Corps in this case, additional applications to combatting the A2/AD threat are further refined, with an emphasis on concept development. These concepts, written by a variety of Navy and Marine Corps concept developers, aim to drive the future force design of the Navy and Marine Corps based on the current and future threat of the A2/AD geared toward the Asia-Pacific region. These works include several concepts that are referenced throughout the paper, specifically Distributed Maritime Operations (DMO), Littoral Operations in a Contested Environment (LOCE), and EABO. Although these publications offer a generalized, more generic A2/AD environment with an agnostic setting, much of the focus is on the maritime environment, which alludes most predominately to the Asia-Pacific region. It is important to note that although this paper focuses on concepts geared toward the Asia-Pacific region and China, concepts themselves are inherently not theater or country-specific. For that reason, concepts are typically designed to be agnostic with regard to region, where operation plans (OPLANs) or campaign plans would be geared more toward a theater of operations.<sup>4</sup> Therefore, for the purpose and scope of this paper, it is necessary to explore the role China has in implementing A2/AD in the Asia-Pacific region.

This paper will focus on three areas of research in support of A2/AD in the Asia-Pacific region, as well as the Marine Corps' role in this problem set. First is an analysis of the problem, from scholarly works into A2/AD characteristics and frameworks, to how and why China has developed and postured itself with an A2/AD strategy. Also included in this analysis is how the United States views the problem and why access and maneuver are necessary in the region. Second is a more thorough analysis into the United States' collective approach to A2/AD, with emphasis on Joint, Army, and Air Force concepts to address the A2/AD issue. Third is a focus on the concept development and force design with an emphasis on the Marine Corps and the Navy, and the supporting concepts that have been developed on how to address the A2/AD issue. This analysis will attempt to show the gap that exists in A2/AD concept development, with a focus on how the Marine Corps develops its concepts and force design. Based off this analysis, the paper will postulate some key takeaways and insights for consideration that look at the A2/AD problem more holistically in order to assist in future concept development and design for the Marine Corps.

### **The Problem: The A2/AD Issue**

To help identify and define the problem set faced by the United States and the Marine Corps in the Asia-Pacific region, a more thorough analysis is required into the problem of A2/AD. Using some historical examples, both ancient and modern, to describe the conceptual application of 'anti-access' and 'area denial' will help establish a baseline. The first is the ancient example of the Greek city-states' wars against the Persian Empire, circa 480 B.C., in which the Greek city-states implemented a strategy of land and sea denial tactics in order to restrict movement around the country, and deny freedom of movement and sea lines of

communication that led to the retreat and removal of Persian forces from Greece.<sup>5</sup> The more modern historical example is Operation Desert Storm in 1991, in which the United States and coalition forces demonstrated (through the superiority of modern technology and conventional tactics) what happens when a formidable military force is allowed, with little disruption, into an area of operations.<sup>6</sup> These examples are more thoroughly discussed later when getting into potential adversaries in the Asia-Pacific region (such as China), as well as how and why a future peer competitor develops the idea and logic for A2/AD.

To highlight key points in the problem set of A2/AD for this topic, a conceptual framework to describe anti-access is necessary. This framework is best summed up by Sam Tangredi's five fundamental elements of anti-access. First, there is a perception that the attacking force maintains some form of strategic superiority in a given setting.<sup>7</sup> In this context, the United States is considered the superior force, but it can be any force with some advantage of superiority. Second, the "primacy of geography" is an element regarding time and facilitating the attrition of the enemy.<sup>8</sup> This implies that geographic barriers such as mountains or water features are not necessarily insurmountable, but that geography is a relevant consideration with regard to the type, direction, and scale of military operations.<sup>9</sup> Third, he describes the general predominance of the maritime domain as a space of conflict.<sup>10</sup> This element carries over from the "primacy of geography," highlighting the idea that the vastness of the maritime domain compels a "superior force" to travel across and/or through the maritime domain at some point, as well as be compelled to fight within it.<sup>11</sup> Fourth is the emphasis on information and intelligence, as well as deception, as critical functions of both the anti-access force and the attacking force.<sup>12</sup> In order to establish a successful A2/AD strategy in the long run, this element is more valuable for the anti-access force, so it is important to consider in this context of research.<sup>13</sup> Finally, the

fifth element focuses on the impact of extrinsic events, or those not relating directly to the A2/AD fight at hand, that would typically take place in other regions.<sup>14</sup> This element would typically have more of a detrimental effect on the counter-A2/AD force, such as political or economic issues at home.<sup>15</sup> Although a variety of aspects from this conceptual framework can be considered relevant to the United States and the Marine Corps when addressing A2/AD, the third aspect (the general predominance of the maritime domain as a space of conflict) is the most relevant when it comes to A2/AD in the Asia-Pacific region, and thus can be considered a primary driver for concept development and force design. Although many of these factors are being applied in an A2/AD setting such as geography and the maritime environment, the factors are nothing new when it comes to basic military planning and considerations in an operational area. Ultimately, this conceptual framework is important when considering the potential threat, as well as the Marine Corps' role in combatting A2/AD in the region.

The threat in the Asia-Pacific region centers on one major regional power, China. To understand why this problem set exists in the region, a more in-depth look at Chinese overall strategy is warranted--in particular, the Chinese defense strategy as it applies to A2/AD. When the Chinese Communist Party (CCP) was formed in 1949, it identified the United States as its primary rival.<sup>16</sup> There were a variety of reasons for this, but the most evident was the United States' involvement in the Chinese civil war through its military alliance with the Republic of China government established in Taiwan.<sup>17</sup> The tension culminated into open hostile military engagement on the Korean peninsula shortly afterward, in which the CCP would be firmly tied to its Russian neighbor against the U.S.<sup>18</sup> However, after President Richard Nixon's visit to the PRC in 1972, U.S.-Chinese relations returned to a more friendly status, and the CCP began to regard the Soviet threat as more viable.<sup>19</sup> It was more clear after the Cold War that the Chinese

defense strategy would be geared toward challenging the United States in the Asia-Pacific region. According to Chinese military strategists at the time, the focus toward an A2/AD strategy started to take shape after 1999, when the United States and North Atlantic Treaty Organization (NATO) military actions in Kosovo resulted in the bombing of the Chinese embassy in Belgrade.<sup>20</sup> Essentially, Chinese strategists understood that the United States and its coalition partners could conduct precision strikes that would “rapidly paralyze an adversary’s critical operational and strategic nodes.”<sup>21</sup>

As a result, in 2000 Chinese defense officials generated a white letter that stated the first components of China’s national defense were to focus on “bolstering national defense, resisting invasion, preventing an armed overthrow of the government, and defense through sovereignty, unity, and security of the nation.”<sup>22</sup> Of these components, ‘resisting invasion’ stood out as the most pertinent to A2/AD, which created a more concerted effort toward the Chinese defensive infrastructure. What followed was a coordinated endeavor to structure a ‘defense-in-depth’ that utilized multiple integrated systems and long-range precision fire capabilities, which would

ultimately form the foundations of China’s A2/AD infrastructure. Its general foundation is built on layers of integrated, defensive capabilities that can function in an offensive matter (see Figure 1).<sup>23</sup>

**Figure 1: China's conceptual A2/AD defensive layers in the Asia-Pacific region.**<sup>22</sup>

Also, these A2/AD capabilities provide depth that can deter a potential hostile adversary through increased risk of combat loss. In addition, a focus of effort on what was termed “informatization” was underway, as an idea to drive Chinese military reforms. The term “informatization” is defined by the DoD as “conditions in which modern military forces use advanced computer systems, information technology, and communication networks to gain an operational advantage over an opponent.”<sup>24</sup> As described in the strategy, the aim was to build a “system-of-systems” capability that can enable a complex combination of systems to defeat or paralyze key points and nodes in the enemy’s operational system and decision cycle.<sup>25</sup> Based on analysis of recent United States conflicts, particularly in Operation Desert Storm in 1991, Chinese strategists in the People’s Liberation Army (PLA) recognized the United States’ aim to seize and maintain superiority in the maritime and air domains, and to employ joint systems and capabilities to gain and maintain the initiative.<sup>26</sup> Tipping the balance in the air and maritime domains, even if only slightly, forces U.S. leaders and military planners to reconsider the strategy, risk, and posturing of forces in the Asia-Pacific region. Based on this key development, the PLA has been at work to develop a series of capabilities and operating concepts to “stymie, degrade, and otherwise inhibit” the ability of United States forces to operate freely in these domains.<sup>27</sup> This analysis of China’s A2/AD development is essential to understanding the United States’ approach to addressing the threat, from concept development at the joint level all the way down to force design at the service level.

### **United States, Joint Force, and Other Services’ Approaches**

As China began to develop and modernize its A2/AD capabilities, the United States did recognize the idea of a potential adversary in the Asia-Pacific region. Although the U.S.

acknowledged the idea of great power competition with China in the 2002 National Security Strategy (NSS), the strategy eluded to focusing on China as a regional partner and supported its emergence as “stable, peaceful, and prosperous.”<sup>28</sup> The pivot away from China’s rise in this context was almost exclusively linked to the increase of military operations in Iraq and Afghanistan starting in 2001. After years of military operations in the Middle East, the 2010 NSS developed stronger language and a focus on China and the Asia-Pacific region, but once again not as a regional threat or peer competitor. In fact, it referred to China as a “key center of influence” in the region, and that the United States and China could “cooperate on issues of bilateral and global concern.”<sup>29</sup> The major public threat to United States interest in the region was North Korea at the time, as China was considered a potential ally and partner.<sup>30</sup> However, during the same timeframe, joint documents were drafted, such as the JOAC and JCEO, that begin to highlight growing military proliferation of potential adversaries, and to emphasize the need to operate in contested environments around the globe. The recognition of China as a potential adversary became more public after the release of the 2017 NSS that referred to China as having “mounted a rapid military modernization campaign designed to limit U.S. access to the region.”<sup>31</sup> This premise is further supported by the 2018 National Defense Strategy (NDS), which acknowledged China’s military modernization and potential adversary status, and that premise proliferated among DoD circles.<sup>32</sup> The current NSS and NDS then became the main drivers for concept development and force design plans for the joint force in the coming years.

The U.S. military joint force approach to the A2/AD threat has been analyzed and discussed in several key documents. First the JOAC, published in 2012, lays out a generalized basis for how joint forces should operate in areas of increased anti-access and area denial threats.<sup>33</sup> The JOAC also offers the premise for why the United States and its allies should

address the A2/AD threat. This concept highlights A2/AD as a major strategic security threat to U.S. forces postured all over the globe, and that the U.S. joint force “must maintain the freedom of action to accomplish any assigned mission.”<sup>34</sup> The JOAC offers a broad solution to this issue – a term referred to as *cross-domain synergy*, which infers the application and employment of various joint force enablers across multiple domains (at different times or simultaneously) as the most efficient way to address a the A2/AD problem.<sup>35</sup> The second is JCEO, which was published in 2014. This concept reads very similar to the JOAC, the difference being the JCEO is more focused on gaining and maintaining access within an operational space and securing freedom of maneuver within the hostile area of operations.<sup>36</sup> This concept lays the foundation for a new framework of entry operations, specifically that of “forcible entry” and “establishing a lodgment.” This ties into the JFEO, which is more in-depth in the forcible entry aspect of the previous two concepts. JFEO was first published in 2012, but it was updated in 2018 based on additional joint concept document revisions, such as JCEO and others.<sup>37</sup> JFEO highlights the forcible entry mission by the joint force, which in turn supports strategies like the NSS, and emphasize the United States military’s policy of being “capable of deploying and fighting to gain access to geographical areas controlled by forces hostile to U.S. interests.”<sup>38</sup> Again, the idea of *cross-domain synergy* is touched on, reinforcing a multi-domain, multi-functional approach to gain and maintain access, and seize and hold a lodgment in contested environments.<sup>39</sup> These joint-level documents acknowledge the need to address A2/AD and set a baseline for individual services to plan and design their force structures and capabilities in order to address it.

Other services, specifically the Army and the Air Force, have many examples in the form of concept development to counter the A2/AD threat. The Army’s primary concept document that addresses A2/AD is *The United States Army and Multi-Domain Operations*. It references

the threat of A2/AD as well as the Army's role in combatting it, mainly by penetrating enemy systems using long-range precision fires and exploiting freedom of maneuver to achieve operational and strategic success.<sup>40</sup> The Air Force concept of MDC2 emphasizes similar methodologies in order to accomplish the same operational and strategic end, but its focus is more on air, space, and cyberspace.<sup>41</sup> Although still in development, this concept aims to address many capabilities that are specific to the Air Force that would assist the joint force in countering an A2/AD strategy. While the Navy's concept development is worth a mention, it will be incorporated into the next section when focusing on the Marine Corps, as their concepts are inherently connected in many ways. Other services working on A2/AD highlight awareness of the problem as well as a potential to address it in their own way, another issue that gets to the heart of the research question.

### **USMC Approach**

The United States Marine Corps has been in a period of reflection in recent years, particularly regarding the A2/AD threat in the Asia-Pacific region. This recent period of reflection has led to some significant adjustments in force structure and design. The Commandant's Planning Guidance, released in 2019, emphasizes the "need to establish a more integrated approach to operations in the maritime domain" as a response to "both land and sea-based threats in the global commons."<sup>42</sup> The Asia-Pacific region is highlighted in this context, as the Commandant has explicitly mentioned III Marine Expeditionary Force (MEF) as the "focus-of-effort" in support of Seventh Fleet and the Indo-Pacific Command "with a fight-tonight, stand-in force capability to persist inside an adversary's weapon systems threat range, create a mutually contested space, and facilitate the larger naval campaign."<sup>43</sup> *Force Design 2030*, released in

March 2020, outlines in broad terms the argument for change based on the Commandant's Planning Guidance, specifically addressing A2/AD and the Asia-Pacific region in several areas.<sup>44</sup> First, the document explicitly mentions the "proliferation" of the A2/AD threat capabilities in contested environments, which has already been acknowledged to exist in the Asia-Pacific theater.<sup>45</sup> Also, the document goes on to highlight some of the key characteristics in which to better equip future Marine Corps units, such as "mobile, low-signature sensors and weapons that can provide a landward complement to Navy capabilities for surface warfare, anti-submarine warfare, air and missile defense, and airborne early warning."<sup>46</sup> Moreover, the document states that the original Marine Corps force was designed under different assumptions regarding the threat and the environment, and that it must adjust accordingly in order to keep pace with potential emerging threats in the region. These threats are specifically aimed at "revisionist powers with the technical acumen and economic heft" to employ advanced weaponry with "greater range and lethality" than has ever been observed in the region.<sup>47</sup> More importantly, the document highlights the specific areas in which the Marine Corps lacks – to include long-range precision fires; medium-to-long range air defense systems; long-range intelligence, surveillance, and reconnaissance (ISR) and electronic warfare (EW) capabilities; and disruptive and less-lethal capabilities in the "gray zone."<sup>48</sup> The document stipulates that the objective for this transformation is to design a "new" force that can operate smaller, with a lower signature, using more cost-effective amphibious ships and distributable platforms that will "enable littoral maneuver and provide logistic support in a very challenging theater."<sup>49</sup> Although not explicitly intended to address A2/AD directly, *Force Design 2030* contains several proposed elements and enablers that would address the A2/AD threat, many of which focus on the maritime environment and the Asia-Pacific region.

Along with developing a conceptual framework to overcome the A2/AD threat in the Asia-Pacific region, the Marine Corps' new force design plan emphasizes the need to make this transformation with others on board, specifically the United States Navy. *Force Design 2030* explicitly mentions being in "full partnership with the Navy" during this transformation and has highlighted several operating concepts that were integral in shaping the Marine Corps' vision in restructuring its current force.<sup>50</sup> The first is the Navy's DMO, designed to address the future maritime fight. This operational concept involves integrating distributed, enhanced land and sea forces to deny air and sea lines of communications in the maritime domain, as well as the use of small littoral detachments of forces "distributed" throughout an area of operations to threaten enemy air and naval assets.<sup>51</sup> The second is LOCE, which is an off-shoot of DMO. The Navy and Marine Corps developed this concept collectively, and it has a heavy emphasis on littoral operations in A2/AD environments as well as power projection ashore in contested or denied maritime spaces.<sup>52</sup> The third is EABO, which is a more Marine Corps-centric concept and is derived from the previous two concepts in scale and scope. EABO is generalized in nature but explicitly identifies its operational concept description in combating the "fast-evolving A2/AD military challenge," as well as challenging adversaries' *fait accompli* strategies through advanced basing and distributed operations.<sup>53</sup> Altogether, these concepts aim to inform and direct the future force design actions of the Navy and Marine Corps based on the current and future threat of the A2/AD problem in the Asia-Pacific region. However, the EABO concept is better equipped by design to address A2/AD directly from a Marine Corps perspective and requires some additional analysis.

As stated, EABO is geared more toward addressing the A2/AD problem in the Asia-Pacific region from the Marine Corps' side. First, its *dual-posture* framework, adapted from

another joint concept (Joint Concept for Access and Maneuver in the Global Commons, or JAM-GC), is a key tenet of EABO and its maritime focus. This framework theorizes what the concept describes as an *inside force* and *outside force* simultaneously to combat the A2/AD threat.<sup>54</sup> In essence, the *inside force* would be designed and equipped to operate in forward areas, inside A2/AD threat rings, as well as be able to partner continuously with host nations.<sup>55</sup> These forces would be low-signature and “operationally relevant,” contributing to the mission of sea control and denial.<sup>56</sup> In addition, the *outside force* would operate in a more conventional manner, utilizing legacy systems and infrastructure in order to provide support or countering maneuvers outside A2/AD threat rings.<sup>57</sup> This construct allows layers of depth in the maritime force and provides flexibility to the Marine/Navy team operating in and near an A2/AD threat. This concept is geared almost exclusively to the Asia-Pacific, as the current posture of U.S. forces in the region already have a sizable presence within China’s A2/AD threat rings (South Korea, Japan), as well as on the periphery of China’s A2/AD systems (Guam, see Figure 2). In essence, EABO’s goal is stated very clearly with regard to what it intends to accomplish: “Fundamentally, EABO is about how to create and employ a persistent, resilient, and survivable forward naval force posture that can operate within the arc of adversary long-range precision fires in support of the overall joint force commander (JFC) /JFMCC / fleet commander’s scheme of maneuver.”<sup>58</sup>

The Asia-Pacific region provides an ideal space for application of the EABO concept and its characteristics. As explained in the handbook, much of these capabilities would operate in island archipelagos but could also function afloat, such as on barges, ferries, and small boats.<sup>59</sup> In addition, the proposed mission sets of the EABO concept are inherently maritime-based and seem to fit appropriately with a counter-A2/AD strategy in the Asia-Pacific region. EABO’s mention of “Naval Expeditionary Forces” executing operations to seize key terrain such as



Figure 2: First and Second Island Chains.<sup>60</sup>

islands, archipelagos, and sea areas such as littorals suggests an overwhelming naval and maritime presence during any proposed operations.<sup>60</sup>

Geographically, the most logical position would be the first and second island chains

(see Figure 2).<sup>61</sup> The first chain extends from north to south through Kurile Islands and Mainland Japan, through the Philippines and Borneo; the second extends from the Marianas, Guam, and Micronesia in the Central Pacific.<sup>62</sup> Although the United States has postured forces and built significant infrastructure on some of these islands already (specifically Okinawa and Guam), the goal of seizing key terrain will still be necessary to support these operational concepts. Also, the island nation of Palau (located along the second island chain) has requested the building of a U.S. military base in an effort to respond to growing Chinese influence in the region.<sup>63</sup> On top of this, the concept proposes establishing “mutually-supporting strongpoints adjacent to close and confined seas to conduct tactical maritime defense-in-depth of key maritime terrain.”<sup>64</sup> This includes such functions as proliferating mobile land-based, anti-air, and anti-ship missile defense, as well as providing secure forward locations for rearming and refueling of ships and aircraft if necessary.<sup>65</sup> Again, these characteristics of EABO feed into the

application and function of resilient and modified Navy and Marine forces working in a predominately maritime environment to combat a maritime or littoral adversary. All these conceptual ideas and characteristics demonstrate the feasibility and likelihood of an EABO-type framework to be applied to the Asia-Pacific region, and to be focused on Navy and Marine enablers to combat the threat.

Another aspect of EABO that is important to emphasize is the focus on sea power and sea control. For example, the concept explains the United States Navy as having “presumed sea control” and the United States’ traditional methods of power projection through naval capabilities.<sup>66</sup> From a tactical standpoint much of the characteristics and concepts applied can be effective, but incorporating them into the operational and strategic level requires a broader analysis across joint mission sets and the ends, ways, and means of a comprehensive Asia-Pacific strategy. This involves more than just how naval forces are employed in a given space, or how an anti-air or anti-ship capability helps deter or attrite an adversary in a given engagement. Considering the bigger picture, Marine and Naval forces need to incorporate joint enablers and other service concepts into combatting A2/AD in the Asia-Pacific region, as all the aspects and elements of a joint force are just parts of a larger machine at work to combat the threat. Without this consideration, concept development and force design tend to exist in a vacuum and planning is inherently biased to each individual service, which creates gaps in the strategy.

### **Considerations/Recommendations**

In many of these documents and publications, the Navy and Marine Corps (mentioned collectively as a team) are attempting to solve a complex issue of how to win the fight of sea control and sea denial. Many of the previously mentioned publications propose this with a

combination of flexible, dispersed, low-signature forces that can operate and sustain themselves within an adversary's A2/AD system (inside force), while at the same time utilizing legacy forces and infrastructure (outside force) to support those inside forces and/or mass their capabilities, if necessary, to disrupt or defeat an adversary in the Asia-Pacific region. But what is missing in this scenario? Something indirectly implied here is that the joint force capabilities and other technologies that will be present and operating within this region if hostilities break out. As mentioned, the United States Air Force is developing concepts (MDC2) and capabilities (air, space, cyber) to combat A2/AD systems, and it has sizable forces and capabilities in the Asia-Pacific region, specifically in the Republic of Korea, Japan, Guam, and Hawaii. Also, the United States Army is developing concepts and capabilities to counter adversary A2/AD and has sizable forces in many of the locations previously listed. Based on the evidence and research, the A2/AD problem cannot be solved by one or two services alone, and that a joint, all-domain approach is the only viable solution to addressing it. However, it is a collective challenge to infer that all services, especially those with a significant contribution to operations in a specific region, should work closer together in development of concepts, capabilities, and force design to ensure the maximum efficient use of resources and planning against a perceived threat. But the U.S. military's current planning cycles and funding challenges will force the hand of each individual service to do what is in its best interest to remain relevant at the enterprise level of the DoD. If development of these concepts and capabilities continue to operate, plan, and design their individual forces in a vacuum, progress toward overcoming a regional challenge of this magnitude will be impeded.

One recommendation would be to adopt an operational warfighting concept that is more inherently joint, taking into consideration all the concepts and capabilities necessary to combat

A2/AD from across the joint force at large. This effort becomes vital when trying to overcome a complex problem set like A2/AD in a vast region such as the Asia-Pacific. The joint force has been working on a new joint warfighting concept; however, delays with the current global pandemic have inhibited progress towards its publication, as several large-scale wargames are necessary before the concept reaches its first level of maturity.<sup>67</sup> In the meantime, many of the service-level concepts already mentioned are geared toward addressing this issue, but all are essentially planning for the same problem within the construct of their own capabilities and command structures. As previously mentioned, each service is doing its part to develop and design its forces and establish an identity for relevance. Each addresses A2/AD in some form; however, these concepts are all developed using a “bottom-up” approach that focuses primarily on their own individual forces and capabilities.<sup>68</sup> All of these efforts are ideally strung together to support the “cross-domain synergy” idea proposed in the JOAC, which would support a holistic joint approach to the A2/AD problem. The Marine Corps’ role would still be the forward-deployed, maritime land force that can support the joint force in a multitude of ways described in the above concepts, specifically EABO. However, the Marine Corps must continue to enhance its concepts to promote the shaping of these larger future developments because until these parallel efforts cross over, separate services within the DoD will continue to develop inside the proverbial vacuum.

Another recommendation would be to incorporate joint enablers more frequently into planning, wargaming, and operational billets to have a better product to address the complexity of A2/AD. Much of the thought process for addressing an assigned mission is to think of what capabilities a given service has at its disposal and what command and control (C2) structure is in place in order to accomplish that mission. Each service needs to think bigger during the

development and design phases of planning so it is not constrained to its own capabilities, and also so it is not trying to reciprocate a similar capability or enabler that another service already has (i.e. global ISR, space, and cyber capabilities of the Air Force, long-range precision fires from the Army, anti-submarine warfare from the Navy). Every service is required to get its equities into the fight, but big picture consideration of how all enablers contribute is key to the approaching this problem. This can be accomplished and better understood by valuing joint billet assignments across all services, but especially the Marine Corps, as well as joint professional military education that enhances the overall knowledge of joint warfighters.

Shared operational billets would also be another way to gain vital cross-functional experience of joint enablers. For example, combat arms Marines could be assigned to an Army Infantry or Stryker Brigade Combat Team (BCT) prior to assuming key billets to gain the knowledge and understanding of how the Army fights and deploys its major maneuver elements. In addition, a Marine air officer could be assigned to an Air Force air operation center (AOC), or an Air and Space Expeditionary Force (AEF) to better understand how the Air Force fights and deploys its enablers. As far as rank/grade, this cross-functional experience would be ideal at the early field grade level, as military professionals have attained sufficient experience in their operational specialties and have most likely obtained some type of career designation that extends past their initial commissioned contract. This will allow greater knowledge-sharing and a better understanding of each service's capabilities and contributions to the joint fight. Knowing joint force partners' capability and application within a given operational space is key to supporting the idea of freedom of maneuver within contested environments, as proposed in the joint mission concepts already mentioned. Consequently, a major part of the change that is

needed comes from a holistic thought process of which service and what strategy would work best to address A2/AD before resorting to internal solutions at the individual service level.

However, the Marine Corps cannot hope to compel the joint force or the DoD to institute such measures. It first must come to terms with its current mission set and capabilities to better posture itself as a key contributor to the A2/AD threat and resist the temptation to overreach. *Force Design 2030* provides the bulk of the planning for implementation. For example, the Marine Corps' underlying goal is to improve or strengthen areas of its force, identified as shortfalls in the current operating environment (i.e. modernization). These shortfalls were mentioned earlier, but are worth underscoring based on their relevance to the proposed recommendation; expeditionary long-range fires, medium to long-range air defense, long-range unmanned systems with ISR, and disruptive and less-lethal capabilities that fall under the "gray zone" spectrum of conflict.<sup>69</sup> The changes and adjustments proposed by this force design measure may be necessary, but to combat A2/AD in the Asia-Pacific region, the smallest Title 10-armed service with the smallest budget will most likely struggle to attain the resources to develop the proposed capability improvements. In that light, prioritization of effort is needed to identify those key enablers that support the joint force as well as the Marine Corps' assigned mission set. It is vital that Marine Corps leaders and planners become more knowledgeable about what joint enablers can help complement their assigned mission sets, as well how to request and utilize them to the maximum extent possible in the future contested environments of the Asia-Pacific region.

## **Conclusion**

In conclusion, the A2/AD problem in the Asia-Pacific region is an inherently complex issue. Based on some analysis of the threat and the region, it is safe to assume that China is considered the predominant instigator of A2/AD in the region, a region consisting of the geographic hurdles of vast distances of maritime territory, island chains, and scattered archipelagos. The Marine Corps, as the United States' primary maritime force projector on land from the sea, provides the joint force with the concepts and capabilities necessary to allow freedom of maneuver in the potentially contested environments. Nevertheless, the Marine Corps must make a continuous effort to coordinate and cooperate with other services (not just the Navy) to better increase the chances of success in overcoming A2/AD in the Asia-Pacific. This starts with a concerted effort at the joint level to identify a more holistic operational concept that includes requirements for all services and their contributions to the A2/AD problem set. Not only will this assist in Marine Corps concept development and force design, but it will also provide better direction and intent to other services in their respective contributions to A2/AD. To help support this, the Marine Corps must continue to find ways to enhance its contribution and shaping of future developments of operational concepts at the joint level. The Marine Corps can better inform its planners and decision makers by valuing joint billets among its officer corps. To develop a better understanding of sister service requirements and joint enablers, Marines must jettison institutional constraints and educate those leading the fight against potential adversaries in an A2/AD environment. Limiting these future planners and leaders to the Fleet Marine Force (FMF) only truncates the progress of concept development and force design with key players in the A2/AD fight. While the answer to how this is accomplished properly and effectively is beyond the scope of this paper, it is evident that a joint all-domain approach by the U.S. is the

only logical approach to address the complexities of A2/AD. Furthermore, efforts into how the Marine Corps can be better postured to combat the A2/AD issue in the Asia-Pacific region are tied to how well-coordinated each service's effort are into the problem, as well as the development and nurturing of Marine officers who better understand this problem set and the joint enablers needed to combat it.

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## **Glossary**

A2/AD	Anti-Access, Area Denial
C2	Command and Control
CCP	Chinese Communist Party
DMO	Distributed Maritime Operations
DoD	Department of Defense
EABO	Expeditionary Advanced Basing Operations
FMF	Fleet Marine Force
ISR	Intelligence, Surveillance, Reconnaissance
JAM-GC	Joint Concept for Access and Maneuver in the Global Commons
JCEO	Joint Concept for Entry Operations
JFEO	Joint Forcible Entry Operations
JFC	Joint Force Commander
JFMCC	Joint Force Maritime Component Commander
JOAC	Joint Operational Access Concept
LOCE	Littoral Operations in a Contested Environment
MDC2	Multi-Domain Command and Control
MDO	Multi-Domain Operations
NATO	North Atlantic Treaty Organization
NDS	National Defense Strategy
NSS	National Security Strategy
PLA	People's Liberation Army
PRC	People's Republic of China

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