

WARFIGHTING IN URBANIZED COASTAL TERRAIN: VIABILITY AND APPLICATION  
FOR AMPHIBIOUS FIGHTING FORCES IN THE PACIFIC

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## **ABSTRACT**

Charles Jacob Anspach: Warfighting In Urbanized Coastal Terrain: Viability and Application for Amphibious Fighting Forces in the Pacific (Under the direction of Joseph Caddell)

Urban warfare has posed a dilemma for conventional fighting forces since the advent of urbanization, generally viewed as something to be avoided to the maximum possible extent and thus only being conducted when necessary. Amphibious warfare has a comparable history, with amphibious assaults historically limited by tactical, technical, and operational concerns. The United States Marine Corps has conducted operations in both venues. With increasing urbanization along most littorals, however, a situation is emerging wherein amphibious forces will be required to land in and conduct warfighting in coastal cities, made worse with emerging “megacities” and “shantytowns” already found on the Asia-Pacific Rim. The scale of this problem can be found in statistics and analysis of present urbanization trends in the Asia-Pacific region (given American foreign policy’s ongoing “pivot to Asia”). This is further illustrated in previous urban-amphibious operations conducted by the United States Marine Corps (USMC) and other military organizations. In order to provide a clear picture of what the execution of said operations will look like. Finally, based on this evidence and analysis, it is clear that a Marine Corps Urban Warfare Training Center and dedicated urban warfare support forces are necessary to complement current littoral-focused Marine Corps forces and training.

## **ACKNOWLEDGEMENTS**

I would like to express gratitude to Dr. Joseph Caddell, whose classes formed the basis of my interest and who has offered nothing but support for my continued work; to the staff of the Marine Corps Warfighting Laboratory/Futures Directorate – particularly the Marines of the NCO Fellowship – for inspiring and guiding my research; and to Captain Shannon Stanich, USMC, for her mentorship and reinforcement of my continued personal and academic development. This project would not exist without each of these acts of support.

## PREFACE

The basis for this project was, originally, a dialectic essay I wrote in Dr. Caddell's course on air power in the fall of 2018, focusing on the potential for aviation support in contemporary urban operations. This essay attracted the interest of the Marine Corps Warfighting Laboratory Futures Directorate (MCWL) sometime later, and I was privileged to work on the MCWL's Project Metropolis II over the summer of 2019. This thesis is based, in part, on the conclusions reached while conducting research there.

Having witnessed the magnitude of urbanization in the Asia-Pacific after studying in Taipei, I recognized the need for increased analysis of the impact of urbanized littoral zones on U.S. Marine Corps doctrine. This need is made acute by the increased tensions between the United States and China. The objective here is to raise awareness regarding deficiencies of training and preparedness for operations in this terrain within the Marine Corps doctrine. An increased appreciation of the problems associated with urban warfare will allow the Marine Corps to anticipate future operations better. This will help the Marine Corps avoid the tragic results that have often arisen whenever Marines were expected to fight and win in unexpected environments.

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## LIST OF ABBREVIATIONS

A2/AD	Antiaccess/Area Denial
AAV	Amphibious Assault Vehicle
ACV	Amphibious Combat Vehicle
CAS	Close Air Support
CRBN	Chemical, Radiological, Biological, and Nuclear
DPRK	Democratic Peoples' Republic of Korea ("North Korea")
DUO	Dense Urban Operations
EABO	Expeditionary Advanced Base Operations
FON	Freedom of Navigation
IDF	Israeli Defense Forces
JILC	Joint Island Landing Campaign
JSDF	Japanese Self-Defense Force
JGSDF-ARDB	Japanese Ground Self-Defense Force – Amphibious Rapid Deployment Brigade
KOCSA	Key terrain, Observation and fields of fire, Cover and concealment, Obstacles, and Avenues of approach
MCRP	Marine Corps Reference Publication
MCTP	Marine Corps Tactical Publication
MCWL	Marine Corps Warfighting Laboratory
METT-TC	Missions, Enemy, Terrain, Troops, Time, and Civilians

MLR	Marine Littoral Regiment
MOOTW	Military Operations Other Than War
MOUT	Military Operations in Urban Terrain
MTTP	Multiservice Tactics, Techniques, and Procedures
PLA	People’s Liberation Army
PLAN	People’s Liberation Army Navy
PLANMC	People’s Liberation Army Navy Marine Corps
PLO	Palestine Liberation Organization
PRC	People’s Republic of China (“China”)
ROC	Republic of China (“Taiwan”)
ROCA	Republic of China Army
ROCMC	Republic of China Marine Corps
ROK	Republic of Korea (“South Korea”)
TTECG	Tactical Training and Exercise Control Group
USMC	United States Marine Corps
USN	United States Navy
UWTC	Urban Warfare Training Center





## INTRODUCTION

At the turn of the 21<sup>st</sup> century, most cities of political significance outside NATO or the former Warsaw Pact – upwards of 75% or above – were within 150 miles of a coastline. A smaller but still considerable number – around 60% overall - were within 12 miles.<sup>1</sup> This remains the case for both U.S.-aligned states and states formerly aligned with the Soviet Union. The two largest metropolitan areas - Los Angeles, California, and New York City, New York - are both coastal cities within the United States' mainland. Washington, D.C. is only twenty or so miles away from the Chesapeake Bay. U.S. peer competitors have comparable situations: Beijing, Shanghai, Shenzhen, and many other major mainland Chinese cities are coastal, and St. Petersburg in Russia lies on the Gulf of Finland (Moscow is an exception, being some hundreds of miles away from any coastline).

This trend remains the case with smaller competitor states. Like D.C., Pyongyang in the Democratic People's Republic of Korea (DPRK) is only twenty or so miles away from the nearest coast, and Havana, Cuba is a port city. This trend towards coastal urbanization is considerable in the Asia-Pacific: the aforementioned cities in the mainland People's Republic of China (PRC) make up one example, but similar situations are found with Taipei and Tainan in the Republic of China (ROC or, unofficially, Taiwan); Tokyo, Japan; Singapore; Manila, Philippines; Sydney, Australia; Seoul, Republic of Korea (RoK); and so on. Some of these urbanized coastlines in the Asia-Pacific already border contested territory. Much of the

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<sup>1</sup> United States Marine Corps (USMC). 1998. *MCRP 12-10B.1: Military Operations on Urbanized Terrain (MOUT)*. Washington, D.C.

Philippines, Vietnam, and the entirety of Taiwan are near or within the PRC's territorial claims in the South China Sea,<sup>2</sup> with each of the three nations possessing often heavily urbanized coastlines. Indeed, it becomes clear that, as U.S. Naval War College professor Richard Norton states, "if three-quarters of the world will live in cities, and we still fight wars, then wars are going to be fought in this environment."<sup>3</sup>

With the United States' foreign policy "pivot to Asia," this situation presents complex challenges to U.S. forces operating in the region, particularly the U.S. Marine Corps. In order to prepare for conflict in the Asia-Pacific, Marine Corps doctrine has begun to make necessary changes. This is seen in disbanding its remaining tank battalions, replacing several howitzer batteries with newer and more mobile High Mobility Artillery Rocket System batteries, emphasizing a lighter infantry force, and starting the experimental Marine Littoral Regiment (MLR).<sup>4</sup> These solutions seem to fit the Pacific-oriented nature of the Marine Corps. It also reflects its history of island-hopping campaigns in the Pacific theatre of the Second World War and consistently stressing maneuver-centered doctrine.<sup>5</sup>

Nevertheless, a problem remains. The terrain of the Asia-Pacific is not the same as it was in the 1940s. Scattered islands and vast beachheads remain as key topographic features, but the populations and their settlements have drastically changed in the past century.<sup>6</sup> The cyber, informational, and cultural terrains have evolved as well, but this paper will focus primarily on

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<sup>2</sup> Asia Maritime Transparency Initiative. 2016. "Maritime Claims of the Indo-Pacific." AMTI. Center for Strategic and International Studies. <https://amti.csis.org/maritime-claims-map/>.

<sup>3</sup> Flavia Krause-Jackson and Nicole Gaouette. 2014. "Homemade Tank Powered by Game Boy Fights Wars of Future," Bloomberg.

<sup>4</sup> United States Marine Corps. 2020. "Force Design 2030." <https://www.hqmc.marines.mil/Portals/142/Docs/CMC38%20Force%20Design%202030%20Report%20Phase%20I%20and%20II.pdf?ver=2020-03-26-121328-460>.

<sup>5</sup> United States Marine Corps. (1997) 2018. *MCDP 1 Warfighting*. Washington, D.C.: Headquarters, USMC

<sup>6</sup> United Nations, Department of Economic and Social Affairs, Population Division. 2019. *World Urbanization Prospects: The 2018 Revision*. New York City, NY: UN. <https://population.un.org/wup/Publications/Files/WUP2018-Report.pdf>.

the expansion of urban development in the Asia-Pacific region. It will seek to answer the following questions: what role does urban warfare play in contemporary operations? Under what situations contexts is it unavoidable? Is the United States Marine Corps prepared for amphibious operations in the urbanized littorals? If not, how ought they to prepare?

Of course, the first two questions will require extensive analysis and synthesis of data. However the latter last two questions can be answered more succinctly. These last questions form the basis of my thesis: The Marine Corps is generally prepared for limited amphibious operations, *but unprepared for amphibious operations in the urbanized littorals of the Asia-Pacific*. USMC publications ultimately agree with this assessment, with the 2016 Marine Corps Operating Concept stating that they must “ensure [Marine Corps] materiel decisions take into account the highest-risk challenge against peer or near-peer competitors in urban littoral environments.”<sup>7</sup> Despite this, few steps have been taken to remedy this potential weakness. As a result, the Marine Corps needs to establish an Urban Warfare Training Center, as well as units to train and to complement the developing Marine Littoral Regiments.

The first chapter of this paper will discuss the characteristics of the Asia-Pacific’s urbanized littorals and the geopolitical situations confronting states invested in the region. The second will discuss and analyze the complex nature of urban warfare and amphibious operations, alongside a few case studies. The third will outline problems that the U.S. Marine Corps and other amphibious forces (such as the Peoples’ Liberation Army Navy Marine Corps (PLANMC)) face in amphibious and urban operations. This will include assessing the technology, doctrine, training, and other solutions that currently exist. This chapter will largely focus on the USMC and urban warfare, as fewer shortcomings in doctrine and training exist regarding the U.S.

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<sup>7</sup> United States Marine Corps. 2016. *The Marine Corps Operating Concept: How an Expeditionary Force Operates in the 21st Century*. Washington, D.C.: Headquarters, USMC.

Marine Corps' amphibious operations. The fourth and final chapter will consist of an analysis of the above case studies, Asia-Pacific terrain, regional marine forces, and U.S. Marine Corps doctrine. In this chapter these factors will be correlated and will lead to conclusions and recommendations.

## CHAPTER 1: THE ASIA-PACIFIC URBAN LITTORAL

### Introduction

As noted strategist Lieutenant Colonel David Kilcullin of the Australian Army writes, the future's urban centers - and, by extension, the centers of urban warfighting - will be "crowded, complex, and coastal"<sup>8</sup> for both their residents and combatant forces. This seems to be especially true for the Asia-Pacific region, which has witnessed perhaps the most dramatic urbanization of any region over the past century. In fact it possesses what is unquestionably the highest numerical population (and population density) on Earth. The social effects of this urbanization, and the actual, physical manifestations of these social effects (such as the presence of "shantytowns" alongside urban growth in more impoverished regions)<sup>9</sup> must be taken into account by both strategists and future urban warfighters. Conducting operations within such uncertain, complex physical terrain by itself makes operational- or tactical-level actions much more difficult. This further complicates more abstract issues (e.g. ethical operations in war). Beyond the operational level, urbanization simultaneously has affected rising competition and regional power struggles in the Asia-Pacific.

Given urbanization's historical relationship to industrialization and economic development, longstanding geopolitical issues have simultaneously risen in intensity as states

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<sup>8</sup> Kilcullin, David. 2015. *Out of the Mountains: The Coming Age of the Urban Guerrilla*. Oxford, UK: Oxford University Press, 232.

<sup>9</sup> World Bank Group. 2017. *East Asia and Pacific Cities: Expanding Opportunities for the Urban Poor*. Edited by Gauri U. Gadgil and Judy L. Baker. Washington, D.C.: World Bank Publications.

have attempted to adapt to an industrial-to-post-industrial, urban environment. This chapter will discuss the terrain and related problems facing contemporary amphibious military forces operating in the Asia-Pacific, as well as what geopolitical situations may catalyze conflict in the region in the foreseeable future.

### **Terrain in the Asia-Pacific Urban Littorals**

As stated, urbanization continues to spread in the Asia-Pacific region. Two particular physical phenomena are of special note when considering near-future urban warfare. First, is the development of impoverished “slum cities” around mostly industrial urban centers. Second is the growth of “megacities” – which are defined as being massive cities with populations of 10-20 million – and the even larger “metacities” that possess in excess of 20 million residents.<sup>10</sup>

The aforementioned “slum cities” are described by the U.N. as housing multiple individuals who lack durable housing, sufficient living space, access to safe drinking water, sufficient sanitation, and/or any degree of housing security.<sup>11</sup> These slums tend to be disorganized and crowded, often built intending to be temporary shelters for migrant workers or refugees, with very little organized planning behind them.

These factors lead to confusing, maze-like corridors and alleyways between poorly-built shacks, often with little or no room between them. Slums in the Asia-Pacific region constitute a significant portion of the urban residences in the region, with some 332 million individuals living in or around slums in 2014. While the proportion of those living in slums in the region declined from 2004 to 2014, the number of inhabitants increased, simply due to massive population growth that outnumbered the localities’ abilities to construct low-cost housing. Despite the

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<sup>10</sup> UN, 2018 *World Urbanization Prospects*, 75.

<sup>11</sup> United Nations. 2007. “Slums: Some Definitions.” UN-HABITAT. [https://mirror.unhabitat.org/documents/media\\_centre/sowcr2006/SOWCR%205.pdf](https://mirror.unhabitat.org/documents/media_centre/sowcr2006/SOWCR%205.pdf).

efforts of some states to curb the growth of slums or to eliminate them, it seems that slums will continue to constitute a significant portion of the urban-dwelling population for some time.<sup>12</sup>

Unlike slums, which have been present since the beginnings of urbanization, megacities are a somewhat more recent phenomenon. The first three emerged in the 1970s, namely Tokyo, New York-Newark, and Osaka.<sup>13</sup> The number of megacities has grown significantly since then, however. By 2018, there were 33 megacities, located in Latin America, South America, Europe, Africa, and, most notably, Asia, with multiple more megacities projected to emerge within the next decade.<sup>14</sup> The “big brother” of megacities, called metacities, are an even more recent – and more dramatic – phenomenon, being even more populated than the already-densely packed megacities. Having already reached a population of over 20 million, Tokyo became the first of these in the 1960s, with five more emerging by 2018, and, based on UN population projections, three more by 2021. Two-thirds of these are in the Asia-Pacific region, and all but one are coastal.<sup>15</sup>

Both megacities and metacities are extremely dense urban terrain, typically with one or more high-traffic centers with extensive skylines and a wide metropolitan area that slowly diffuses into less-compact suburban and exurban areas. Given their massive populations, complex and heterogeneous sociocultural systems also exist within these cities, with local, regional, and national governments providing varying degrees of services (plumbing, healthcare, law enforcement, etc.) on massive scales. Private organizations often invest heavily into marketing or development within these huge consumer-bases as well.<sup>16</sup>

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<sup>12</sup> Ibid.

<sup>13</sup> UN, *2018 World Urbanization Prospects*, 63.

<sup>14</sup> Ibid, 55.

<sup>15</sup> Ibid, 75-79.

<sup>16</sup> Jensen, Benjamin M., Alexandra V. Gerbracht, David E. Johnson, M. Wade Markel, Erin M. Simpson, Jonathon T. Frerichs, Robert D. Barbaree III, et al. 2019. *Complex Terrain: Megacities and the Changing Character of Urban*



In poor to middle-income countries, a fusion of the above two urban phenomena is common. Manila, the capital of the Philippines and its sole megacity, has a considerable slum-dwelling population, numbering somewhere around 2.5 million – more than a tenth of the city’s total.<sup>17</sup> The city is extremely coastal and is a vital economic port alongside its roles as the political and cultural capital of the Philippines.

Combining the chaotic characteristics of a slum and the enormous scale of a megacity, a picture of an incredibly complex environment already begins to emerge, dubbed the “nightmare battlespace” by some.<sup>18</sup> Such a battlespace would be characterized by huge numbers of noncombatants packed within relatively small spaces with little solid cover for residents or warfighters; collateral damage in huge numbers would be unavoidable in any hypothetical combat scenario. The city’s “shanties” would likely interfere with signal strength, creating communications problems for anyone operating in such an environment, combatant or otherwise. Six-foot-wide, mazelike footpaths, tunnels, and alleyways make up the travel routes unless one bypasses the slums entirely. Given the poor construction of these slums, any method of advance must be able to adapt as collapsing shacks and other buildings could become literally “dynamic” under the duress of combat, weather, etc.<sup>19</sup>

Some of the smaller Pacific islands have also urbanized, albeit on a much smaller scale. So-called “urban villages” have arisen on these Pacific island nations, reflecting the growth of and reliance on geographically centralized financial centers following economic development alongside population growth. These island-based urban villages exhibit many characteristics of

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*Combat*. Edited by Henrik Breitenbauch and Brandon Valeriano. Quantico, Virginia: Marine Corps University Press.

<sup>17</sup> Yulu, “Slums of Southeast Asia”, 176.

<sup>18</sup> O’Neill, Robert D. 2015. “The Nightmare Battlespace.” *Marine Corps Gazette*, December 1, 2015. Marine Corps Association. <https://mca-marines.org/blog/gazette/the-nightmare-battlespace/>.

<sup>19</sup> *Ibid*.

other developing cities within the Asia-Pacific, such as growing slums dominated by migratory rural workers.<sup>20</sup> The urbanization rate is relatively high, at an average of 49%,<sup>21</sup> and six out of seven economies in Micronesia, for example, have over 40% of their populations living in urban areas.<sup>22</sup>

While perhaps not as heavily urbanized as other, larger states in the Asia-Pacific, these trends nonetheless indicate the development of significantly different terrain than was encountered a century ago. South Tarawa, for instance, which was far less densely populated during the massive amphibious battle between the USMC and Imperial Japanese in the Second World War, is now one of the most densely populated in the Pacific Islands, with around 3,500 persons per km<sup>2</sup> and an even higher density in its townships.<sup>23</sup> These descriptions have only detailed the *urban* characteristics of Asian-Pacific urbanized littorals, however; the natural terrain, while less dynamic, nonetheless remains significant.

Given the large and highly variable geography of the Asia-Pacific, few specific qualities can be universally assigned to populations or terrain. To the north, as found in Korea, are temperate climates with mountainous terrain, getting colder as one approaches the arctic. To the south are tropical conditions, dominated by island chains and rainforests, as found in the Philippines and the numerous small Pacific island-states. Perhaps the only geographically dominant characteristic of many Asia-Pacific nations is a shared coastal nature. With the exceptions of inland China, northern India, a few landlocked regions between the two, and inner Australia, practically all of the population of the Asia-Pacific is coastal or near-coastal. In East

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<sup>20</sup> Asian Development Bank. 2017. *The Emergence of Pacific Urban Villages: Urbanization Trends in the Pacific Islands*. IDEAS. Mandaluyong City, Philippines. <https://ideas.repec.org/p/ess/wpaper/id11743.html>, 3.

<sup>21</sup> *Ibid*, 11.

<sup>22</sup> *Ibid*, 13.

<sup>23</sup> *Ibid*.

Asia alone, approximately 1.5 billion people – who are simultaneously heavily urbanized – live within 100 km of a coastline, amounting to roughly 77% of the total population. Similarly, at least eight of the Asia-Pacific’s megacities are coastal – amounting to a large majority of them.<sup>24</sup>

The contemporary Asia-Pacific poses a multi-pronged terrain challenge for any force that has to operate within and around it on a large scale. Such a force must be capable of expertly executing complex military operations in urbanized terrain (MOUT) and dense urban operations (DUO) – including uncertain environments like slums. Said force must also be capable of integrating naval and air support in order to conduct offensive amphibious operations and area/sea denial. What situations would justify military operations from U.S. or other forces? And what does the military/geopolitical terrain in the region look like?

### **Geopolitical Issues in the Asia-Pacific**

The past few years in the Asia-Pacific have been marked by rising peer competition between the United States and China. This has created serious strains on the relationship between the two countries and their regional allies. The Spratly Islands and South China Sea claim disputes, for instance, have been longstanding causes of regional tension due to the multitude of claimants. Vietnam, Taiwan, the Philippines, Malaysia, Brunei, Indonesia, and the PRC possess competing claims to various islands within the sea alongside overlapping claims of the sea itself. While a period of relative normalization had held in place for decades over the South China Sea, island dredging by China in 2014 enflamed tensions and led to a continuation of territorial disputes. These tensions have continued to rise as, in 2015, China built a military runway on one of its islands while continuing to dredge and build other islands elsewhere, leading to outrage

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<sup>24</sup> Partnerships in Environmental Management for the Seas of East Asia. 2015. “Sustainable Development Strategy for the Seas of East Asia 2015.” Quezon City, Philippines: PEMSEA.  
[http://www.pemsea.org/sites/default/files/SDS-SEA%202015%20FINAL%2011272015%20FULL%20rev\\_1.pdf](http://www.pemsea.org/sites/default/files/SDS-SEA%202015%20FINAL%2011272015%20FULL%20rev_1.pdf).

from other nations.<sup>25</sup> While primarily relevant thus far to U.S. economic interests in the region and allied states, the disputes and resulting actions from China more significantly signify a growing willingness from the PRC to outwardly project its strategic interests, a trend which continued to grow from 2015-2021.

Alongside the South China Sea disputes, longstanding issues over Taiwanese sovereignty and recognition have very notably resurfaced during the presidency of Xi Jinping. While support for Taiwan from the U.S. and allies has increased in the face of rising peer competition between the United States and PRC, other states have been more interested with the economic and diplomatic opportunities provided by the rising PRC, with Nicaragua severing ties with Taiwan and realigning to China as recently as December 10, 2021, and other states having similarly realigned in recent years.<sup>26</sup>

Simultaneously, People's Liberation Army Navy (PLAN) ships and aircraft have increased their presence in and around the Taiwan Strait and the South China Sea, leading to correlatively increasing U.S. Navy (USN) freedom of navigation (FON) exercises in the region. This increased presence has led to, from May 2017 to September 2021, at least 33 encounters between the two naval forces, some of which have been described as "unsafe" or "unprofessional" by the USN.<sup>27</sup> The basis for these USN "Taiwan Strait Transits" comes from the original 1979 Taiwan Relations Act, which sets a policy of strategic ambiguity over Taiwanese defense while establishing that the US will maintain the "capacity" to act in Taiwan's

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<sup>25</sup> Congressional Research Service. 2021. "U.S.-China Strategic Competition in South and East China Seas: Background and Issues for Congress." Washington, D.C.: CRS. <https://sgp.fas.org/crs/row/R42784.pdf>.

<sup>26</sup> Wang, Joyu. 2021. "Nicaragua Breaks off Ties with Taiwan, Switching Allegiance to Beijing." *Wall Street Journal*, December 10, 2021. <https://www.wsj.com/articles/nicaragua-breaks-off-ties-with-taiwan-switching-allegiance-to-beijing-11639117114>.

<sup>27</sup> CRS, "U.S.-China Strategic Competition in South and East China Seas", 36-41.

defense.<sup>28</sup> These transits exist as a show of force to demonstrate said capacity. Recent events have seemingly put this act into question, however.

As stated, the PRC's interest in reunification has grown under the presidency of Xi Jinping, with Xi himself stating that "should the separatist forces for Taiwan independence provoke us, force our hands or even cross the red line, we will be compelled to take resolute measures."<sup>29</sup> Outwardly, this appears to be a reaction to the government of Taiwanese president Cai Yingwen, who emerged victorious against longstanding leadership under the Kuomintang with her pro-independence Democratic Progress Party in 2016, and who was subsequently reelected in 2020. President Cai has indicated further moves toward relative Taiwanese political independence, stating, for instance, that the future of Taiwan "must be decided in accordance with the will of the Taiwanese people."<sup>30</sup>

This contrasts strongly with statements from President Xi Jinping, who has also made statements indicating a growing will for cross-strait reunification by any means necessary. In *The Governance of China* – a collection of President Xi Jinping's writings and speeches – President Xi repeatedly states that the Taiwanese are "inseparable members of the extended family of the Chinese nation"<sup>31</sup> who "belong to one and same China, which is an indivisible whole"<sup>32</sup> that "share the same destiny."<sup>33</sup> President Xi Jinping further argues that "weak and divided [China] will be disastrous,"<sup>34</sup> that pro-Taiwanese independence forces could be the cause of such a disaster, and that, in response, China must firmly oppose any such moves towards

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<sup>28</sup> Lawrence, Susan V. 2021. "Taiwan: Political and Security Issues." Washington, D.C.: Congressional Research Service. <https://sgp.fas.org/crs/row/IF10275.pdf>.

<sup>29</sup> Ibid.

<sup>30</sup> Ibid.

<sup>31</sup> Xi, Jinping. 2014. *The Governance of China*. Translated by Window To China. Vol. I. Beijing, China: Foreign Languages Press, 265.

<sup>32</sup> Ibid, 261.

<sup>33</sup> Ibid, 264.

<sup>34</sup> Ibid.

independence.<sup>35</sup> In practice, this has taken the form of increased military pressure on Taiwan alongside the November 2021 blacklisting of Taiwanese public officials.<sup>36</sup>

In response to these Chinese and Taiwanese changes in leadership and cross-strait policy, the U.S. has similarly moved towards change. After a long-standing policy of strategic ambiguity over defense of Taiwanese, the Biden administration has made statements favoring the defense of Taiwan in the case of PLA-led invasion, moving towards some strategic clarity in October 2021 after President Biden himself stated that the U.S. is committed to defending Taiwan.

Contradictory statements by President Biden, however, have simultaneously said that the U.S. does not recognize Taiwan as independent. Some stress over violent cross-strait reunification is present within the U.S. intelligence and defense communities, with Admiral Davidson, USN, then the Commander of the U.S. Indo-Pacific Command, stating in March 2021 that PLA military action against Taiwan could take place in the next six years.<sup>37</sup> These changes have occurred concurrently with other strains on Sino-American relations, including disagreements on trade policies, U.S. concern over a growing PLA, disagreements over the status of Hong Kong, and accusations of human rights violations in the Chinese province of Xinjiang.<sup>38</sup>

To the north of the South China Sea and Taiwan, the Korean peninsula has been a near-constant area of concern for the United States since the armistice that ended the Korean War, as no formal peace treaty was signed between the UN and the DPRK. Of particular concern over the past decade has been the development of the DPRK's nuclear weapons program, including the successful testing of nuclear devices and missile delivery systems, which have been priorities

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<sup>35</sup> Ibid, 262.

<sup>36</sup> Lawrence, "Taiwan: Political and Security Issues."

<sup>37</sup> Ibid.

<sup>38</sup> Lawrence, Susan V., and Karen M. Sutter. 2021. "China Primer: U.S.-China Relations." Washington, D.C.: Congressional Research Service. <https://crsreports.congress.gov/product/pdf/IF/IF10119>.

of current leader Kim Jong-un. Diplomatically tense periods occurred at multiple points in the 2010s, with these tests often at the forefront of the UN's issues with the North Koreans. Tests on long-range missiles were halted after summits in 2017, but resumed in late 2021, despite protests from the UN and in violation of moratoriums.

Additionally, the DPRK announced its intent earlier in 2021 to develop tactical nuclear weapons. Heavy sanctions on DPRK leadership exist due to these disagreements, as well as various human rights violations, with the state possessing hostile relations with most states except China.<sup>39</sup> The relative isolation of the DPRK alongside its extreme militarization and aggressive state make the Korean Peninsula a near-constant location for potential destabilization.

Beyond these points of interest, a number of other geopolitical relationships and disagreements exist between the various competing regional states located in the Asia-Pacific. Some incidents of note include disputes between China and Japan over ownership of the Senkaku or Diaoyu Islands,<sup>40</sup> lasting border disputes in Kashmir between China and India,<sup>41</sup> Islamic terrorism in Southeast Asia and elsewhere,<sup>42</sup> among others. American investment in the region seems uncompromising, however, and thus many if not most conflicts in the Asia-Pacific have and will, in some form, feature US involvement. Given the unpredictable nature of war it's ultimately impossible to tell where or when the United States or some other entity will see violent confrontations and/or humanitarian crises on a large scale next. While the Asia-Pacific

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<sup>39</sup> Manyin, Mark E., Emma Chanlett-Avery, Mary Beth D. Nikitin, and Dianne E. Rennack. 2021. "Diplomacy with North Korea: A Status Report." Washington, D.C.: Congressional Research Service. <https://crsreports.congress.gov/product/pdf/IF/IF11415>.

<sup>40</sup> Manyin, Mark E. 2021. "The Senkakus (Diaoyu/Diaoyutai) Dispute: U.S. Treaty Obligations." Washington, D.C.: Congressional Research Service. <https://sgp.fas.org/crs/row/R42761.pdf>.

<sup>41</sup> Campbell, Caitlin, and K. Alan Kronstadt. 2020. "Conflict at the China-India Frontier." Washington, D.C.: Congressional Research Service. <https://crsreports.congress.gov/product/pdf/IN/IN11425>.

<sup>42</sup> Chinyong, Joseph. 2016. "ISIS in the Pacific: Assessing Terrorism in Southeast Asia and the Threat to the Homeland." presented at the testimony before the House Subcommittee on Counterterrorism and Intelligence on the Islamic State's reach in Southeast Asia. <https://www.brookings.edu/testimonies/isis-in-the-pacific-assessing-terrorism-in-southeast-asia-and-the-threat-to-the-homeland/>.

appears to have specific areas of concern, the region is geopolitically dynamic. Instead, any operational force in the region is likely better off preparing for more general challenges than focusing on one particular possibility.



## CHAPTER 2: URBAN AND LITTORAL WARFARE

### Introduction

Despite the more dramatic characteristics of 21<sup>st</sup> century cities, comparatively smaller and, by extension, “simpler” urban areas in history still posed a challenge to military forces. As explained in the previous chapter, the complexity of urbanized terrain forced military leadership to adapt and modify existing doctrine. Quite unlike normal terrain features found in jungles, fields, forests, or mountains, large roads in cities canalize troops between structures that can easily be hiding entrenched hostiles, or into a mine-laden park, or into the corridor of a machine gunner – so on and so forth. Perhaps the most differentiating quality is that warfighters, in an urban environment, can be almost anywhere and still have sufficient cover and concealment to ambush a mentally overwhelmed and unprepared enemy easily. Issues like these have persuaded some military leaders that attacking a city is not worth the risk or the effort.<sup>43</sup>

Some have argued that bypassing and surrounding enemy cities is a superior decision, opting to attempt to draw out enemy forces through cutting off supply lines or by some other means. Others have, perhaps more controversially, argued in favor of simply flattening cities such that enemy occupants could no longer possibly pose a threat. Nonetheless, attempts to avoid urban warfare have either proven to be operationally flawed or violate modern ethical norms in

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<sup>43</sup> United States Marine Corps, and United States Army. 2017. *ATP 3-06/MCTP 12-10B Urban Operations*. Army Publications Directorate. Washington, DC: Headquarters, USMC; Headquarters, USA. [https://armypubs.army.mil/epubs/DR\\_pubs/DR\\_a/pdf/web/ARN6452\\_ATP%203-06%20FINAL%20WEB.pdf](https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/ARN6452_ATP%203-06%20FINAL%20WEB.pdf), 2-6.

regards to respecting human life and minimizing unnecessary collateral damage and civilian casualties.<sup>44</sup>

Historically outside the realm of urban warfare, littoral operations – which primarily consist of amphibious ground forces working alongside naval support – come with their own set of challenges. Antiaccess/area denial (A2/AD) capabilities pose considerable problems to any amphibious force facing an opposing military force. Additionally, air superiority plays a vital part in protecting or eliminating operations in the littoral. Even assuming military superiority, problems with unexpected or insurmountable natural or artificial terrain can prevent the success of an amphibious force. Finally, assuming a successful landing, naval and naval aviation support must be able to provide sufficient fire support to protect vulnerable landing forces. While these problems have plagued amphibious operations for over a century, increasingly precise and lethal technological advancements in A2/AD capabilities have further complicated matters.<sup>45</sup>

A combination of the above two types of operations – urban and littoral – creates a severe and complex challenge to any amphibious force. Commanders in such situations will have to juggle the complexities of safely maneuvering forces ship-to-shore followed by demanding urban maneuvers. The risks posed are considerable but – in the case of the Asia-Pacific – potentially inevitable given the terrain that currently exists in regions of potential friction.

Warfighting doctrine has gradually emerged from these challenges as vital lessons from combat experiences were learned. This chapter will first provide an overview of the complexities and challenges of urban warfare. Afterwards, a similar, shorter overview of the problems facing amphibious operations will be provided. Finally, three short case studies will be presented.

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<sup>44</sup> Ibid, 2-4.

<sup>45</sup> Yeadon, Steven. 2020. “The Problems Facing United States Marine Corps Amphibious Assaults.” *Journal of Advanced Military Studies* 11 (2): 141–73. <https://doi.org/10.21140/mcu.j.20201102008>.

## Complexity of Urban Warfare

Contemporary urban warfare shares many characteristics with urban warfare half a century ago. Cities – both on the scale of metacities and regional cities with populations in the hundreds of thousands – globally consist, typically, of a few shared characteristics that must be considered by the urban warfighter. The most highly developed is usually the “city core” or downtown of a given city, made up of densely-packed high-rises. Outside of this core is a “core periphery” of smaller high-rises and/or two- or three-story buildings, often mixed but dependent on the city of a given city. High-rises in both the core and its periphery are a mix of residential, office, and commercial spaces. Beyond the core and its periphery are “commercial ribbons” which consist of two- or three-story shops, malls, etc. A “residential sprawl” of houses, townhomes, and apartments typically exists beyond these commercial areas but may be mixed in.<sup>46</sup> Slums may be found in any of these areas.<sup>47</sup> In some cities, an outlying industrial area and outlying but more sparsely-placed high-rises may be found. On coastal cities, a port area (often but not always connected to an outlying industrial area) is also present. These areas and characteristics provide a complex battlespace for any urban war. Almost universally, however, “the defender possesses key advantages over the attacker...” and can utilize “...the natural restrictions and obstacles found in the urban environment...” to potentially “...successfully resist a numerically superior force.”<sup>48</sup> What advantages are these? And how can a defending force use them?

Three types of general terrain are found in all cities: ground- or street-level terrain, such as streets or parks; above ground- or building-level terrain, such as buildings; and below ground-

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<sup>46</sup> USMC, *MCRP 12-10B.1 MOUT*, 1-4 – 1-8.

<sup>47</sup> UN, “Slums: Some Definitions.”

<sup>48</sup> USMC, *MCRP 12-10B.1 MOUT*, 3-1.

or subterranean-level terrain, typically consisting of sewers, subways, and maintenance tunnels. Each of the three, while separate, are interdependent.<sup>49</sup> Building-level terrain is perhaps the most key to the defense of a city. Infantrymen within or around a building – particularly larger buildings typically found in contemporary cities – are provided considerable cover and concealment. Taller buildings simultaneously provide superior fields of observation and fire on their higher levels. Just as well, tightly-placed buildings forcibly and dramatically canalize practically all mechanized forces; building rubble can also be used to restrict or block these same forces. Taller buildings can be used by antitank teams to exploit the limitations of a tank’s gun’s movement, with practically all tanks possessing a limited y-axis range of motion. Anti-air weapons may also be more easily concealed behind buildings, enabling a threatening defense against aviation support. Attacking infantry, disconnected from mechanized support, can be made vulnerable under these conditions.<sup>50</sup>

Street-level terrain, while more permissive of movement, is also typically canalized by buildings. Due to this, and due to the usually grid-like development of modern cities, enemy movement may be more easily controlled through road-blocking obstacles (rubble, Czech hedgehogs, cars, etc.) and led into traps or ambushes. Limited space on either side of most city streets prevents vehicles from going too far off-road, and attackers may be more likely to encounter well-placed anti-vehicle mines. Abandoned cars may also provide cover and concealment for defending infantry.<sup>51</sup>

Finally, subterranean terrain may pose the most complex challenges. This underground urban terrain often consists of sewers, flood pipes, utility tunnels, basements, and, in the case of

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<sup>49</sup> Ibid, 3-3.

<sup>50</sup> Ibid, 1-3.

<sup>51</sup> Ibid.

larger cities, subways and sub-level roads. Los Vegas, for instance, has over 200 miles of flood tunnels alone<sup>52</sup> – a figure which does not include sewage tunnels, utility tunnels, or any other sort of subterranean structure. Compared to many cities in the Asia-Pacific, Los Vegas is a relatively new and relatively small metropolis. It is not unreasonable to think that the mileage of tunnels in, for instance, Shanghai, may dwarf the size of those in Los Vegas. Effectively all subterranean structures are, at the very least, totally inaccessible to vehicles and highly canalizing. Many more are claustrophically tight and confusingly maze-like. Tunnels of any sort may be very easily booby-trapped, and are often conducive to ambushes owing to the difficulty of conducting recon within them. Subterranean terrain has the potential to be effectively utilized by both defenders and attackers. While defenders could be more familiar with underground tunnel systems and can similarly place traps within them, poorly-guarded subterranean terrain may just as easily prove highly beneficial to attackers, who can use it to infiltrate cities and bypass building- and street-level terrain. Conversely, defenders who effectively utilize subterranean terrain can use it as cover and concealment or to covertly launch counterattacks.<sup>53</sup>

Once again, however, it is vital to remember that urban warfare connects all three types of terrain; rarely is an urban battle purely subterranean or solely fought on the streets. For example, a two-person pair of urban defenders – one armed with a light machinegun and the other with some other small arm – may effectively take on a much larger force provided they possess sufficient urban training and familiarity with the surrounding terrain. The two men are located on a long, canalized street with buildings on either side of the road and a T-intersection towards the end. Before a squad-sized element of attackers arrive, the two may work together to

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<sup>52</sup> Schoenmann, Joe. 2021. “Flood Spells Tragedy for Tunnel Dwellers.” Nevada Public Radio. National Public Radio. July 21, 2021. <https://knpr.org/knpr/2016-08/flood-spells-tragedy-tunnel-dwellers>.

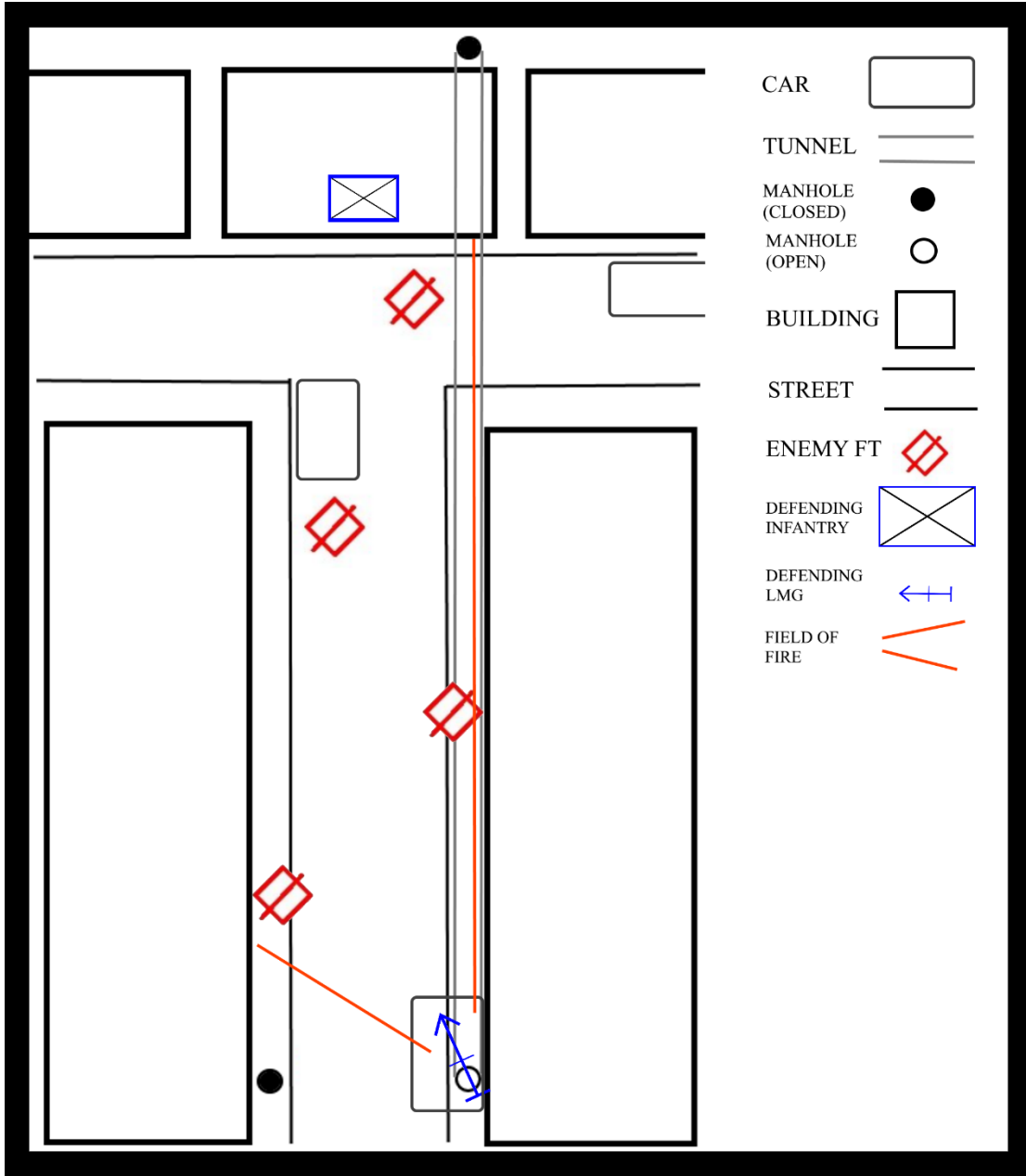
<sup>53</sup> USMC, *MCRP 12-10B.1 MOUT*, E-1 - E-2.

push a car (with sufficient ground clearance) over an uncovered manhole. The man with the machinegun, either through another manhole or by some other means, may move to that uncovered manhole (now under a car) and lie in wait. The other man may take up his position in the building at the end of the street/intersection. Once the squad enters the canalized street, the infantryman fires upon the approaching squad, drawing their fires and movement towards him. As they pass the car with the open manhole under it, the machine-gunner, unnoticed, climbs out of the manhole – using the car above him as cover and concealment – and sets up his machinegun unnoticed. Once he has an effective field of fire, and the enemy fireteams have moved far enough away, he opens fire to devastating effect to the unsuspecting enemy squad. When necessary, both retreat back underground and seemingly, to the shocked attackers, vanish. The pair is able to escape and thus set up a similar ambush elsewhere. This example is illustrated below in Figure 1 and demonstrates the advantages that even a small team of well-prepared urban defenders possess, with this pair of soldiers capable of defeating or at least interfering with a much larger unit.

An additional but non-physical type of terrain may also exist to the advantage of some defensive (or, potentially, offensive) force, namely that of the “ethical terrain.” A force with no qualms about collateral damage or civilian casualties may attempt to set up armed defenses in areas heavily populated by noncombatants, likely in the urban core or residential sprawl. The ethically-driven avoidance of civilian casualties by many Western militaries may, then, negate superior firepower.<sup>54</sup>

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<sup>54</sup> McCarthy, Dayton. 2018. “The Worst of Both Worlds: An Analysis of Urban Littoral Combat.” *Australian Army Research Centre*. Australian Army Research Centre. [https://researchcentre.army.gov.au/sites/default/files/the\\_worst\\_of\\_both\\_worlds.pdf](https://researchcentre.army.gov.au/sites/default/files/the_worst_of_both_worlds.pdf).



(Figure 1). Infantryman takes position in a building at the end of the T-intersection and draws fire and movement from the enemy squad. The machine-gunner under the car waits for the enemy squad to pass, establishes a sufficient field of fire, and fires upon the passing squad. Both may retreat underground to nearby sewer openings when necessary.

Defending forces in urban warfare seem to have an upper hand. The difficulty even in just the above example for the attacking force cannot be understated; well-prepared defensive forces are readily capable of setting up ambushes and traps that can easily be overlooked, to devastating effect. What advantages may an assaulting force possess, however? And how can they leverage those advantages in an urban offensive?

In the case of a well-trained offensive force, subterranean terrain provides a considerable opportunity to infiltrate, surprise, and confuse a smaller or less-prepared defending enemy force. Proper intelligence – varying from existing maps to measurement and signals intelligence – on the tunnel systems, alongside extensive prior training for subterranean warfare, is necessary for conduct. Commanders would additionally have to be aware of the limitations of subterranean warfare, such as its tight conditions and inability to utilize vehicles. Subterranean warfare is, thus, best suited for small, light, highly-trained teams of forward-operating warfighters conducting reconnaissance or raids.<sup>55</sup>

While infantry is key in urban operations, combined-arms use of armor may also prove beneficial to an attacking force. Tanks and, in the case of amphibious urban assaults, Amphibious Assault Vehicles, can provide considerable support to armored infantry operating on street-level terrain. Although infantry typically should avoid any presence on street-level terrain due to its considerable exposure, armor can provide the cover and firepower required to maneuver down a street effectively. Smoke and firepower-based concealment may also be provided.<sup>56</sup> In contested terrain, however, all armor must be supported by dismounted infantry,

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<sup>55</sup> Bowes, Joshua S., Mark T. Newdigate, Pedro J. Rosario, and Davis D. Tindoll. 2013. “The Enemy Below: Preparing Ground Forces for Subterranean Warfare.” *Calhoun: The NPS Institutional Archive DSpace Repository*. Monterey, CA: Naval Postgraduate School. [https://calhoun.nps.edu/bitstream/handle/10945/38883/13Dec\\_Bowes\\_Newdigate\\_Rosario\\_Tindoll.pdf?sequence=1&isAllowed=y](https://calhoun.nps.edu/bitstream/handle/10945/38883/13Dec_Bowes_Newdigate_Rosario_Tindoll.pdf?sequence=1&isAllowed=y), 90-94.

<sup>56</sup> USMC, *MCRP 12-10B.1 MOUT*, 4-9 – 4-10.



as tanks and other vehicles may otherwise be susceptible to small teams armed with anti-armor weapons attacking from buildings.<sup>57</sup> Beyond the use of tanks, self-propelled anti-aircraft guns may be as well or better suited for urban combat, as they commonly possess sufficient armor to deflect small arms, rapid-firing guns with a caliber large enough to penetrate nearly all buildings, and a quick-moving turret with a far greater elevating ability than that of tanks. Forces carrying out an urban offensive may find these more useful in intimidating and eliminating opponents in urban environments that possess particularly tall buildings.<sup>58</sup>

As a more recent development, the use of “swarms” of small, handheld drones for either intelligence, surveillance, and reconnaissance or for direct combat use (i.e. “kamikaze” drones) could be utilized to analyze or clear buildings where defending forces may be in. This could have psychological consequences for opposing forces, acting simultaneously as a force-multiplier and tool. This option requires electronic warfare support capabilities, however, as frequencies could be tampered with by a sufficiently advanced opponent.<sup>59</sup>

Air support and indirect fire may also be useful on the urban offensive, particularly to forces unconcerned with collateral damage. Sufficient firepower to cause structural collapse can annihilate defensive strongholds on all levels of urban terrain, and subsequent rubble can provide cover and concealment to approaching friendly forces. These effects on the terrain (or enemy forces themselves) may prove particularly effective in shaping the battlefield to the offensive force’s advantage, as urban terrain otherwise leans towards the defender’s advantage. The height of buildings, type of buildings, concentration of buildings, and concentration of civilians in a

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<sup>57</sup> Marine Corps Intelligence Activity. 1999. “Urban Warfare Study: City Case Studies Compilation.” *Small Wars Journal*. MCI A. <https://smallwarsjournal.com/documents/urbancasestudies.pdf>, 14.

<sup>58</sup> Ibid, 31.

<sup>59</sup> Spencer, John. 2017. “How Drone Swarms Could Change Urban Warfare.” C4ISRNET. Sightline Media Group. December 11, 2017. <https://www.c4isrnet.com/opinion/the-compass/net-defense-blogs/2017/12/11/how-drone-swarms-could-change-urban-warfare-commentary/>.

given area all effect the use of fire support, however. Tall buildings may, for instance, “mask” the fire of artillery or mortars for some distance, as the rounds are blocked by the building acting as a sort of wall.

Additionally, superiority in firepower may be limited among Western militaries due to strict ethical standards regarding the avoidance of collateral damage and civilian casualties. This is made clear in existing doctrine, with MCRP 3-35.3A *Aviation Urban Operations* recommending “isolating and bypassing urban areas when possible due to the costs involved”<sup>60</sup> and MCTP 10-12B *Urban Operations* stating that “destroying an urban area to save it is not an option for commanders.” These ethical standards typically align with strategic objectives, which may dissuade the use of urban indirect fire altogether, despite whatever tactical advantages it may provide.<sup>61</sup>

Methods beyond the use of arms may also be useful to urban attackers. Almost recalling tactics used for siege warfare, the disruption of key infrastructure can burden any force occupying a given city. Cutting off one or two major water sources, for instance, will occupy the defending force with water-rationing and potentially a sufficient enough crisis to overwhelm them as civilians either flee or become disruptive. Going a step further, a truly committed force could tamper with a water supply to poison anyone using it within city limits via a biological agent, chemical agent, or both.

Similarly, in regards to the electronic spectrum, electronic warfare weaponry can tamper with local frequency allocations to disrupt navigation, air traffic communications, etc.<sup>62</sup>

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<sup>60</sup> United States Marine Corps. 2004. *MCRP 3-35.3A Aviation Urban Operations*. Washington, D.C.: Headquarters, USMC. I-1.

<sup>61</sup> USMC and USA, *MCTP 12-10B Urban Operations*, 2-4.

<sup>62</sup> Goldfein, David L. 2013. “Joint Urban Operations.” Joint Chiefs of Staff. November 20, 2013. [https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3\\_06.pdf](https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_06.pdf), II-8 – II-9.

Disregarding the ethical concerns, both methods have potential drawbacks: an invading force could have to deal with a humanitarian crisis of their own creation should they tamper with the water supply, and disrupted communications can go both ways. Additionally, these “nonlethal” methods of attack may take more time than an offensive force is willing to give.

Logistics are an important consideration for offensive forces. Urban combat tends to have an extremely high rate of ammunition expenditure, and a consistent source of resupply is needed. Conversely, fuel is used less due to the shorter distances armored vehicles need to travel, however these vehicles will nonetheless need to be eventually refueled. Damaged equipment and vehicles are likely to be lost completely in an urban environment without the tools or personnel to repair or recall them. Food is a constant requirement in any battlespace, however the need in an urban environment is magnified due to the exhaustion warfighters will face from dismounted patrols, scaling buildings, etc. As such, a well-defended and planned-out supply line is necessary for any successful urban offensive.<sup>63</sup> Similar challenges and needs exist for the evacuation and treatment of casualties.<sup>64</sup>

While some characteristics of the urban battlefield may prove helpful to the offensive or the defensive force, others merely amplify the fog of war to either side’s advantage or disadvantage. Compared to the past, cyber and information operations domains have become a far greater element of any battlespace, let alone the highly-connected urban terrain. Covert networks – physical or electronic – can be more easily established within dense urban terrain by insurgents or other groups, blending in with noncombatant civilians.<sup>65</sup> Urban populations can also consist of several groups and subgroups that could cooperate and compete with one another,

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<sup>63</sup> USMC, *MCRP 12-10B.1 MOUT*, 5-1 – 5-4.

<sup>64</sup> *Ibid*, 5-4 – 5-6.

<sup>65</sup> Jensen et al., *Complex Terrain*, 266.

the city's occupiers, and the city's invaders. Cultural differences may amplify competition or animosity.

These situations may create strategic consequences out of tactical events. Forces on the urban offensive may need robust civil affairs support, and defending forces could be disrupted by competing locals.<sup>66</sup> Criminals, although often ignored, can pose risks to supply lines and individual troops – a criminal group in control of merely one district of a megacity, for instance, has control over potentially hundreds of thousands of residents and corresponding resources.<sup>67</sup> Infrastructure can vary dramatically not only between cities, but even between parts of a single city, requiring any urban warfighters to be extremely adaptable to changing terrain. This could be due to the aforementioned cultural variations, different eras of construction, or simply the variable preferences held between individual engineers and architects.<sup>68</sup> The close-quarters and complex nature of urban terrain shortens the available time commanders have to make decisions, almost inevitably forcing command down to the lowest levels.<sup>69</sup> The offensive force may use small teams of specialists or special forces to infiltrate and disable key operational targets, or by defending forces to carry out dispersed “hit-and-run” operations against approaching forces.<sup>70</sup> Larger, occupying forces will have to cover more terrain than typically; an infantry company, for instance, which could occupy 1,500 to 2,000 meters in other sorts of terrain, may only be able to occupy a frontage of 300 to 800 meters in an urban environment.<sup>71</sup> Weather – varying from fog to torrential typhoons – can significantly impact the effectiveness of both defenders and attackers

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<sup>66</sup> Goldfein, “Joint Urban Operations”, II-5.

<sup>67</sup> Ibid, II-6 – II-7.

<sup>68</sup> Ibid, II-8.

<sup>69</sup> USMC and USA, *MCTP 12-10B Urban Operations*, 3-18.

<sup>70</sup> Marine Corps Intelligence Activity. “Urban Warfare Study,” 14.

<sup>71</sup> USMC and USA, *MCTP 12-10B Urban Operations*, 5-6 – 5-7.

by altering visibility or even the terrain itself. Updrafts and downdrafts created by artificial “urban canyons” can impact aircraft.<sup>72</sup> And so on.

A full list of all known potential complications a contemporary warfighter might face – on the offensive side, defensive, or whatever else – with accompanying explanations could go on for a length far beyond the scope of this thesis. What’s clear is as follows: firstly, that defensive forces have a slight upper hand when it comes to most urban battlespaces. Secondly, that offensive forces are not totally disadvantaged. Thirdly, that urban battlespaces can vary dramatically in all varieties of terrain. And, finally, that urban warfare is far more complex than the sort of war seen fought on plains, deserts, mountains, jungles, forests, or anywhere else that an infantryman may realistically go.<sup>73</sup>

### **Complexity of Amphibious Operations**

Amphibious operations are as complex, if no more so, than urban operations. All points of an amphibious operation are rife with the potential to fail, anywhere from ship to shore. These potential points of friction apply in particular to the attacker. Indeed, much like urban operations, amphibious operations also possess a unique set of challenges that tend to benefit the defender over an attacker. In amphibious operation, the defender has enormous advantages, able to use their A2/AD capabilities to potentially repel or destroy oncoming amphibious invaders.

The amphibious force, on the other hand, must rely on direct and indirect fire support from naval fires and naval aviation during their most vulnerable points on the sea.<sup>74</sup> This, however, like urban warfare, also raises the Clausewitzian dilemma: any defense, by nature,

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<sup>72</sup> USMC, *MCRP 12-10B.1 MOUT*, 2-5 – 2-6.

<sup>73</sup> Glenn, Russell W. 2004. *Managing Complexity during Military Urban Operations: Visualizing the Elephant*. RAND Corporation, 5.

<sup>74</sup> Yeadon, Steven. 2020. “The Problems Facing United States Marine Corps Amphibious Assaults.” *Journal of Advanced Military Studies* 11 (2): 141–73. <https://doi.org/10.21140/mcu.20201102008>.

possesses significant potential advantages, but the offensive tends to be the stronger force in reality, as, otherwise, the defending force would likely be on the offensive instead.<sup>75</sup> As such, amphibious operations are not totally hopeless affairs, and several types of specialized amphibious operation have been developed in order to optimize the performance of a given mission set by an amphibious force.

There are five primary types of amphibious operation: amphibious *raid*, amphibious *demonstration*, amphibious *assault*, amphibious *withdrawal*, and amphibious *support/military operation other than war* (MOOTW). An *assault* takes the form of an amphibious force launching from a ship, reaching a targeted shore, and taking that shore by forcible entry. This is often to permit follow-on forces to be able to move ship-to-shore without coming under enemy fire, and could be conducted for any number of reasons.

An amphibious *withdrawal* involves the embarkation of forces on a shore back onto a ship. These forces need not necessarily be amphibious forces, but rather any group withdrawing from a hostile inland foe.

*Raids* consist of a swift assault on an objective that is rapid and temporary. A withdrawal takes place not long after the objective is taken (or entered into) and the given mission is complete. A raid could be conducted, for instance, to gather intelligence, capture persons of value, or sabotage certain infrastructure.

An amphibious *demonstration* is essentially a form of military deception wherein an amphibious operation is a show of force. Its purpose is to deceive an enemy into carrying out a

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<sup>75</sup> Sumida, Jon T. 2009. "The Clausewitz Problem." *Army History*, 17–21.  
<https://www.clausewitzstudies.org/bibl/Sumida-TheClausewitzProblem.pdf>.

favorable course of action (i.e. focusing on the demonstration rather than an actual center of gravity).

Finally, amphibious *MOOTW* is, as the name suggests, any amphibious operation outside the realm of warfare. An example could be delivering supplies ship-to-shore as a part of disaster relief support.<sup>76</sup> Each of these come with their own sets of potential challenges and benefits, however the amphibious assault is of the most note, as it is possibly both the most challenging and the most important form of amphibious operation, permitting an attacking force grounded access to territories in possession of a defending force.

Challenges to amphibious forces carrying out an assault are multi-tiered. Moving from the high seas to the area of operations, an embarked amphibious force will already need to deal with various threats. Sea denial A2/AD capabilities, such as precision strike anti-ship missiles (including, potentially, hypersonic and ballistic missiles) will quickly threaten an amphibious force before even moving to the ship-to-shore phase. Submarines and low-signature ships, similarly, pose a significant threat, alongside unmanned aerial vehicles and manned anti-ship aircraft.<sup>77</sup>

Operating from “Over The Horizon” offers a partial solution to these threats, as most anti-ship missiles possess limited ranges, and longer distances provide more time for detecting and evading or neutralizing anti-ship fires, or for staying off enemy radar/signature detection. This solution is only partial, however, because most amphibious ship-to-shore vehicles

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<sup>76</sup> Office of the Chairman of the Joint Chiefs of Staff. 2021. “Joint Publication 3-02 Amphibious Operations.” Washington, D.C. [https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3\\_02.pdf](https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_02.pdf).

<sup>77</sup> Yeadon, Steven. 2020. “The Problems Facing United States Marine Corps Amphibious Assaults.” *Journal of Advanced Military Studies* 11 (2): 141–73. <https://doi.org/10.21140/mcu.j.20201102008>, 143-150.

themselves possess limited ranges. Naval mines may also pose a threat both here and at the subsequent ship-to-shore phase.<sup>78</sup>

Before even moving ship-to-shore, an amphibious force must prepare a landing area through supporting fires, or else they will be vulnerable to considerable shore-based A2/AD threats. This is done typically through naval fires and naval aviation. Both – but especially naval aviation – require air superiority over the landing area to be effective. As such, both will need to contend with enemy aircraft, enemy ships, enemy anti-ship capabilities, and enemy anti-aircraft. Only around 14% of amphibious operations have successfully been conducted without air superiority.<sup>79</sup>

Having prepared the landing area, the landing element of an amphibious force is ready to move ship-to-shore. This, of course, poses its own set of challenges as well. Naval mines, submarines, aircraft, and shorter-range anti-ship or even anti-vehicle missiles pose threats. Should any A2/AD capabilities actually successfully disable or destroy a large portion of an amphibious landing force, operational failure could occur, as the landing force may shrink to untenably small numbers. “Surface connectors” (i.e. ship-to-shore landing craft) are particularly vulnerable, as they typically possess a limited ability to protect themselves against precision-guided threats.<sup>80</sup> Should an amphibious assault be successful in its initial stages, operational tempo may yet be stalled or halted if surface connectors cannot resupply amphibious troops on the ground.<sup>81</sup>

Finally, the actual landing force itself has to conduct forcible entry through the littoral and establish control of a beachhead to carry out the mission set of an amphibious assault.

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<sup>78</sup> Ibid.

<sup>79</sup> Ibid, 151-155; 150.

<sup>80</sup> Ibid, 157-160.

<sup>81</sup> Ibid, 165.



Entrenched infantry and armor, while ideally weakened by friendly naval fires/aviation, will likely still pose a threat to the landing force. Traditional massed fires through mortars and artillery can have a devastating effect on relatively uncovered landing craft and infantry, alongside precision-guided fires. The situation becomes far graver for the amphibious landing force if air superiority is lost (or was never possessed in the first place).<sup>82</sup>

Ultimately, then, amphibious operations possess a level of complexity similar to urban operations. It becomes clear that operations in the urban littoral may constitute a “worst of both worlds” scenario wherein the offensive force has to contend with some of the difficulties of amphibious operations alongside those of urban warfare. Such a situation is very obviously undesirable on the operational level to military planners,<sup>83</sup> however the contemporary terrain of the Asia-Pacific makes evading it difficult for any amphibious force. However, a few cases exist of operations that have been, to varying degrees, amphibious and urban.

### **Case Studies**

Within the past century, urban battles have proliferated as urban populations have grown and expanded. Some common characteristics have emerged alongside new challenges, in part introduced by developing warfighting technologies. Many of these urban battles have occurred within the Asia-Pacific, although simultaneously many of those same battles occurred long enough ago that they did not include many of the challenges that would be seen in a contemporary urban battlespace. As such, two relatively recent events – the 1994-1995 Battle of Grozny and the 2017 Battle of Mosul – will be analyzed in the context of a purely urban battle. Afterward, Operation PEACE FOR GALILEE will be analyzed as one that is both urban and amphibious.

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<sup>82</sup> Ibid, 160-165.

<sup>83</sup> McCarthy, Dayton. “The Worst of Both Worlds: An Analysis of Urban Littoral Combat.”

The 1994-1995 Battle of Grozny is perhaps the most extensively studied of the battles listed in this section and later sections. In 1994, not long after the collapse of the Soviet Union, Chechnya attempted to form a breakaway republic. This secession attempt, carried out largely by experienced Chechen Soviet army veterans who had fought in the Soviet-Afghan War the decade prior, showed initial successes, as the newly-established Russian Federation was greatly weakened by the collapse of the Soviet Union only a few years earlier. A military force – consisting primarily of poorly-trained, poorly-equipped conscripts – was sent south to Chechnya to quash the secession attempt. Russian troops eventually reached the city and capital of Grozny, initially expecting limited resistance. Instead, they quickly discovered that the Chechen resistance was heavily entrenched within the city, having had considerable time to prepare an urban defense against the Russian invaders.<sup>84</sup>

The first Russian assault on Grozny was violently repelled. Russian conscript forces, totally unprepared for fierce urban combat, were massacred by tank-hunter teams, snipers, and constant ambushes. Russian forces retreated and were halted for some time by the unanticipated resistance. The city was eventually mercilessly shelled by Russian artillery, and, after some months, Russian military personnel much more cautiously entered the city and were able to retake it.<sup>85</sup>

Multiple key lessons can be gleaned from these combat experiences. First, armor in cities is extremely vulnerable without dismounted infantry support. During the initial attempt to retake Grozny, armored units entered the city alone and without any protection from Chechen infantry. They were promptly annihilated by small teams of “tank hunters” armed with RPGs. Second, possessing functional urban warfighting doctrine is good but doesn’t make up for lack of

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<sup>84</sup> Marine Corps Intelligence Activity. “Urban Warfare Study,” 5-20.

<sup>85</sup> Ibid.

training. By this point, the Russian (and previously Soviet) military had considerable experience in MOUT, however this experience wasn't utilized due to the poor training of conscripts. These conscripts could barely conduct basic combat drills, let alone complicated urban warfare tactics.

Third, overwhelming firepower is effective in urban war – if the user is willing to disregard collateral damage. Russian rules of engagement initially prevented any harm upon Chechen civilians, however this was reversed after Russian forces took heavy casualties. After the failed first attempt to retake the city, the Russians shelled it, which was ultimately effective but led to many civilian casualties.

Finally, hit-and-run ambushes carried out by the Chechen defenders were highly effective. As mentioned, small Chechen teams of “tank hunters” were able to rapidly assault Russian armor and retreat before going after other armor. Despite this, the Russians themselves failed to utilize their special forces in any meaningful capacity.<sup>86</sup> This may have been a missed opportunity; special forces teams could've provided the Russians much-needed advanced intelligence on the situation in Grozny, and, similarly, could've been used to go after Chechen command and control.<sup>87</sup>

The Battle of Mosul occurred more recently during the civil war in Iraq. Notable for the destruction resulting from the drawn-out battle, the Battle of Mosul war carried out by the Iraqi government and its Kurdish allies against Islamic State occupiers in Mosul, Iraq's second largest city. The Islamic State had seized the city in 2014 following its rise to power in northern Iraq, pursuing collapsing Iraqi forces. After two years' occupation, a combined force of the Iraqi Army, the Kurdish Peshmerga, and Coalition forces under Operation Inherent Resolve made an effort to retake the city, with the Iraqi Army as the main effort. Over the course of several

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<sup>86</sup> Ibid.

<sup>87</sup> USMC, *MCRP 12-10B.1 MOUT*, J-1 – J-8.

months' fighting, Islamic State fighters were expelled from the city, though not without enormous damage to the city's infrastructure and many civilian casualties.<sup>88</sup> Even years after being retaken, Mosul remains mine-laden and in partial ruins.<sup>89</sup>

Following the battle, a study was conducted by the U.S. Army Asymmetric Warfare Group to determine what key lessons could be learned from Mosul in order to understand possible near-future battles of a similar magnitude. The study first found that cities are essentially “alive” and ever-changing in physical and social/cultural terrain. This results from both the literal, destructive use of violence, as well as what impact that violence (alongside nonphysical violence, i.e. information warfare) has on the city's civilians and warfighters.

Similarly, the study also concluded that refugees and internally displaced persons provide an additional challenge beyond direct combat. Finally, and perhaps most notably in terms of actual warfighting, urban war is simultaneously primitive – relying on “boots-on-the-ground” infantry to take and hold key points or structure – and yet also inviting of inviting innovative technology (or at least the innovative use of technology). Old, new, and even makeshift technologies (including weapons, munitions, and vehicles) can be utilized in whatever way is needed to fit a certain need or situation. For instance, in the assault on Mosul, engineer platforms (e.g. bulldozers) were used frequently to break through problematic obstacles on frontlines, displaying the use of a civilian vehicle utilized for a military purpose. These finds are not radical

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<sup>88</sup> Mosul Study Group. 2020. *What the Battle for Mosul Teaches the Force*. Asymmetric Warfare Group. [https://www.armyupress.army.mil/Portals/7/Primer-on-Urban-Operation/Documents/Mosul%20\(Public%20Release\).pdf](https://www.armyupress.army.mil/Portals/7/Primer-on-Urban-Operation/Documents/Mosul%20(Public%20Release).pdf).

The Asymmetric Warfare Group was a U.S. Army unit focused on conducting research on asymmetric warfare (i.e. counterterrorism) and advising Army leadership on relevant doctrine and training.

<sup>89</sup> Bassist, Rina. 2022. “UNESCO Makes Progress in Reconstruction of Mosul Monuments - Al-Monitor: The Pulse of the Middle East.” Al-Monitor. February 8, 2022. <https://www.al-monitor.com/originals/2022/02/unesco-makes-progress-reconstruction-mosul-monuments>.

but, rather, reaffirm what is already known about urban war: it's complex physically and socially and composed of many different, moving parts.<sup>90</sup>

Both of the above cases, while informative, have two shared characteristics: one, they were fought between a conventional force and an insurgent force, and, two, this characteristic led to widespread destruction in both cities. Between 1992-2022, there were few to no cases of direct urban conflict on the ground between large, modern, conventional militaries organized by two states competing in war. In early 2022, however, the Russo-Ukrainian War and subsequent invasion of Ukraine led to urban battles in the cities of Mariupol, Kiev, and elsewhere.<sup>91</sup> The results of the battles have yet to be seen, however, as do academic analyses of their characteristics.

In the early 80s, a situation had developed within Lebanon wherein the Palestine Liberation Organization (PLO) and the Israeli Defense Force (IDF) had violated various ceasefires. The former organization had taken up a base of operations in Lebanon, shelling Israelis and, on at least one occasion, attempting to assassinate Israeli officials. The IDF had similarly broken ceasefires. The PLO was, by this point, influential in the fractured Lebanese government, which was still in shambled following years of civil turmoil. The PLO additionally had allies in the neighboring Syria.<sup>92</sup>

Following an increase in mutual hostilities, an IDF operation, named "Operation PEACE FOR GALILEE," was planned. The operation's intent was to rapidly strike and occupy southern Lebanon in order to destroy and expel PLO forces from the Israel-Lebanon border, particularly

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<sup>90</sup> Mosul Study Group. *What the Battle for Mosul Teaches the Force*.

<sup>91</sup> Brown, David. 2022. "Ukraine Invasion: Russia's Attack in Maps." *BBC News*, February 24, 2022, sec. Europe. <https://www.bbc.com/news/world-europe-60506682>.

<sup>92</sup> Thomas, Wilbert E. 1998. "Operation Peace for Galilee: An Operational Analysis with Relevance Today." *Defense Technical Information Center*. Newport, RI: Naval War College. <https://apps.dtic.mil/sti/citations/ADA348640>.

from a few key cities including Beirut, Sidon, Tyre, and others. While intended to be short, the operation was ultimately drawn out over several months. These operational goals, while strained, were eventually met, despite expanding to an invasion of the entirety of Lebanon.<sup>93</sup>

Operation PEACE FOR GALILEE was primarily a conflict fought on the ground. However, for the purposes of studying amphibious and/or urban operations, the “Western Force” of the IDF is of particular interest, as they carried out both amphibious assaults and MOUT.<sup>94</sup> In Sidon in particular, amphibiously-capable brigade-sized forces carried out a large amphibious assault on the north side of Sidon. At the same time, troops from Israel moved in from the south, intending to surprise and surround and overwhelm PLO forces defending the city. This operation was ultimately successful despite a limited number of landing craft available to the IDF and heavy resistance.<sup>95</sup>

A few key lessons can be taken away from the landings at Sidon during PEACE FOR GALILEE. First, unlike in Grozny, armored vehicles performed well, as dismounted infantry provided critical support and protection from PLO fights in the urban terrain of Sidon. Second, that amphibious operations do, indeed, have a place in urban warfare, even with small numbers. After assaulting and taking the coast north of Sidon, naval infantry were able to surprise the PLO and establish a permanent beachhead for follow-on forces and supplies. Third, naval forces are valuable in urban operations, both (in this case) in carrying out the above amphibious operations and in transporting supplies, providing fire support, and in patrolling the urbanized littoral/coast for any attempts at a sea-based withdrawal or reinforcement from the enemy.<sup>96</sup>

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<sup>93</sup> Ibid.

<sup>94</sup> Marine Corps Intelligence Activity. “Urban Warfare Study,” 22.

<sup>95</sup> Gabriel, Richard A. 1984. *Operation Peace for Galilee: The Israeli-PLO War in Lebanon*. New York City, N.Y.: Hill and Wang, 76-92.

<sup>96</sup> Marine Corps Intelligence Activity. “Urban Warfare Study,” 27.

It is also worth mentioning that one of the United States Marine Corps' most recent large-scale amphibious assault – the Battle of Inchon in 1950 – was both an urban and an amphibious operation. Inchon, the location of the assault, was a city of around a quarter-million people, and has since ballooned to over ten times that number.<sup>97</sup> Inchon remains near the DPRK and RoK's “demilitarized zone” and near Seoul, two potential areas of friction in the event of a renewed conflict on the Korean peninsula.<sup>98</sup>

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<sup>97</sup> UN, *2018 World Urbanization Prospects*.

<sup>98</sup> Simmons, Edwin H. 2000. *Over the Seawall: U.S. Marines at Inchon*. Washington, D.C.: Marine Corps Historical Center.

## CHAPTER 3: EXISTING DOCTRINE AND CAPABILITIES

### Introduction

Owing to the severity of urban war and operations in the littoral, practically all marine forces have amphibious doctrine and most have some level of urban doctrine. In the Asia-Pacific, the need for such doctrine is intensified owing to the heavily urbanized littorals that permeate the coastlines. Of these marine forces, the U.S. Marine Corps and PLANMC are without question the most notable in terms of size and strength;<sup>99</sup> following them, the Republic of China Marine Corps (ROCMC), Republic of China Marine Corps (ROKMC), Philippine Marine Corps, Indonesian Marine Corps, Royal Thai Marine Corps,<sup>100</sup> and the newly-established Japanese Ground Self Defense Force Amphibious Rapid Deployment Brigade (JGSDF-ARDB) maintain notable amphibious-oriented strength and training.<sup>101</sup> Other states – such as Australia, India, and North Korea – operate smaller amphibious battalions as a part of their armies.<sup>102</sup>

Because their doctrine (and, in several cases, even aesthetic and culture) has influenced many, if not most, of the aforementioned marine forces, the U.S. Marine Corps' doctrine, training, and capabilities will be independently analyzed in this chapter. Potential problems will also be discussed. Afterward, due to their proximity to regions of potential escalation and

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<sup>99</sup> Hanson, Michael A. 2020. "China's Marine Corps Is on the Rise." U.S. Naval Institute. April 1, 2020. <https://www.usni.org/magazines/proceedings/2020/april/chinas-marine-corps-rise>.

<sup>100</sup> The International Institute for Strategic Studies (IISS). 2021. *The Military Balance 2021*. London, UK: Routledge.

<sup>101</sup> Harold, Scott, Koichiro Bansho, Jeffrey Hornung, Koichi Isobe, and Richard Simcock. 2018. *U.S.-Japan Alliance Conference: Meeting the Challenge of Amphibious Operations*. RAND Corporation.

<sup>102</sup> IISS, *The Military Balance 2021*.



independent strength, the PLANMC, ROCMC, ROKMC, and ARDB will be additionally analyzed in that order. The analyses will include an overview of the existing doctrine, training, and/or capabilities of each, alongside what purposes they may serve.

### **U.S. Marine Corps Doctrine and Capabilities**

The United States Marine Corps is presently transforming its role and makeup, spanning a ten-year period from 2020 to 2030. Focusing on the threat of China and other powers in the Pacific (and elsewhere), the USMC, reflecting its historical nature of an amphibious and expeditionary force, is divesting from Vietnam- and War on Terror-era doctrine and instead aiming to become a lighter, smaller, more elite expeditionary force focused on amphibious operations in coordination with the U.S. Navy. Results of this transformation include the removal of its tank battalions, a reduction in the number of infantry battalions and howitzer batteries, and the acquisition of anti-ship missiles.<sup>103</sup> In the longer-term, goals include developing and acquiring newer, lighter amphibious warships more capable of evading enemy A2/AD capabilities and creating Marine Littoral Regiments focused on amphibious operations.<sup>104</sup>

The United States Marine Corps' current urban warfare doctrine is based on both experience and experiments. At present, there are three publications that primarily guide its overall urban warfare doctrine: Marine Corps Tactical Publication (MCTP) 12-10 *Urban Operations*, a 2017 joint publication between the Army and Marine Corps on urban operations; Joint Publication (JP) 30-6 *Joint Urban Operations*, a 2013 joint publication on operational-level organization in an urban war; and the aging Marine Corps Reference Publication (MCRP) (formerly Marine Corps Warfighting Publication) 12-10B.1 *Military Operations in Urban*

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<sup>103</sup> USMC, "Force Design 2030."

<sup>104</sup> Feickert, Andrew. 2021a. "New U.S. Marine Corps Force Design Initiatives." Washington, D.C.: Congressional Research Service. [https://www.everycrsreport.com/files/2021-03-02\\_IN11281\\_6a6604a5022acde7b5cd03dcebb5d2926ef0d8c1.pdf](https://www.everycrsreport.com/files/2021-03-02_IN11281_6a6604a5022acde7b5cd03dcebb5d2926ef0d8c1.pdf).

*Terrain* (MOUT), a detailed 1998 tactical manual on carrying out urban operations. JP 30-6 is more so a strategic to operational-level guide for joint commanders, while MCTP 12-10 is perhaps the best source of present operational and tactical-level doctrine, with MCRP 12-10B.1 as a supporting reference manual.

An additional reference manual called MCRP 3-35.3A *Multiservice Tactics, Techniques, and Procedures (MTTP) for Aviation Urban Operations* exists as a guide for air support during urban operations. Beyond the realm of pure doctrine, the Marine Corps has also done significant research into urban warfare, namely taking the form of Project Metropolis I & II, urban experiments carried out by the Marine Corps Warfighting Laboratory (MCWL) Futures Directorate.<sup>105</sup>

In the realm of amphibious operations, the USMC has a more extensive list of publications and experience, given they are the primary doctrine-holders for U.S. amphibious operations. There is no specific public, succinct, and recent Marine Corps-specific doctrinal guide for amphibious operations comparable to those used for urban operations, however several specific technical documents and, most notably, a joint publication called JP 3-02 *Amphibious Operations*. Notably, the USMC has also carried out several recent large-scale experiments as they attempt to refocus back on amphibious operations following two decades focused on counterinsurgency operations. Stemming from these changes has been the development of the experimental Marine Littoral Regiment, which will consist of approximately 2000 marines and sailors working in support of an infantry battalion conducting amphibious operations.<sup>106</sup>

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<sup>105</sup> Harkins, Gina. 2019. "Inside Project Metropolis, the Marine Corps' Plan to Wage War in the Cities of Tomorrow." Task & Purpose. June 24, 2019. <https://taskandpurpose.com/news/marine-corps-project-metropolis/>.

<sup>106</sup> Feickert, Andrew, "New USMC Force Design Initiatives."

Beginning in the realm of urban warfare, the first and foremost source of the USMC's present urban doctrine comes from MCTP 12-10B *Urban Operations*. The document – intended for both U.S. Army and Marine Corps commanders – begins with elaborating on the characteristics of urban terrain. This includes key urban areas (the city's core, outlying industrial areas, etc.) and other characteristics of an “urban environment,” to include cultural, informational, and demographic elements, among others. The publication goes on to describe what situations justify urban combat. As of 2017 and, according to MCTP 12-10B, then, the Army and Marine Corps finds urban warfare necessary in the following situations: firstly, to gain a tactical advantage over a battlespace, particularly if an enemy force's base of operations is in a city and it can be cut off from outlying troops through urban offensive operations; secondly, if a city is of significant political importance, particularly if it houses government leadership; thirdly, if a city is an important economic asset to enemy forces, and taking it over denies enemy forces the ability to wage war in the future (and, by extension, benefits friendly forces through the use of its economic resources); and, finally, if the occupying enemy force within a city poses an operational risk to friendly forces. Any or all of these reasons may justify urban operations.<sup>107</sup> Overall, however, the publication recommends that, “since urban operations are often high in risk, commanders consider [courses of action] that provide alternatives”<sup>108</sup> after going over some operational and tactical risks facing soldiers or marines in urban warfare. Issues that could affect commanders on a higher operational or strategic level are also discussed, to include possible political and media impacts of urban combat, the necessity of a strong mission command system

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<sup>107</sup> USMC and USA, *MCTP 12-10B Urban Operations*, 2-2.

<sup>108</sup> *Ibid*, 2-6.

capable of enduring strenuous urban terrain and subsequent decentralization, and the negative effects of urban infrastructure on information/communication systems.<sup>109</sup>

MCTP 12-10B begins, at this point, to shift more towards the actual conduct of urban operations rather than simply an overview of what they may consist of. It goes on to describe conducting urban operations as maneuver warfare, one of the USMC's six key warfighting functions, and is defined as being "the movement of forces for the purpose of gaining an advantage over the enemy,"<sup>110</sup> or, in other terms, the exploitation of enemy critical vulnerabilities through the use of one's own centers of gravity.<sup>111</sup> Of particular issue is that the canalizing and compartmentalizing nature of urban terrain makes maneuver (in both the literal and in the warfighting sense) incredibly difficult. The use of breaching through obstacles and buildings, alongside assault support aviation, is encouraged as possible solutions in enabling maneuver. The author does concede in saying that helicopters and tiltrotors are particularly vulnerable in urban terrain, but redirects to MCRP 3-35.3A for further information on conduct.

Combined arms is noted as a necessity, with combat engineers being critical in breaching buildings. Due to the vulnerability of moving via street in urban terrain, breaching the walls between buildings and destroying obstacles that would otherwise shape marines in ways advantageous to enemy forces is seen as important. Elaborating further, the MCTP 12-10B encourages the targeted destruction of urban infrastructure through the use of on-the-ground combat engineers to totally circumvent "urban canyons" and canalization entirely to the advantage of the marines present. Combat engineers and combined arms forces in general may also be better prepared for countermobility operations against a defending foe; MCTP 12-10B

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<sup>109</sup> Ibid, 3-1 – 3-5.

<sup>110</sup> Ibid, 3-5.

<sup>111</sup> USMC, *MCDP 1 Warfighting*, 72-76.

states that repositioning of large numbers of defensive troops in an urban environment is difficult to begin with, and intentionally creating or modifying obstacles, even when on the offensive, may prove fruitful in preventing enemy maneuver.

At the platoon level, for every two armored vehicles, MCTP 12-10B argues that there should be one engineer vehicle with a squad of supporting combat engineers. At the company level, the number of combat engineers, more generally speaking, should meet the mission, enemy, terrain, troops available, time, and civilian considerations (METT-TC) for the given urban environment. This is alongside typical elements of a combined arms company such as artillery, intelligence, reconnaissance, and so on. Civil affairs is also noted as being an important element of a combined arms urban combat company, alongside human intelligence in particular.<sup>112</sup>

Fire support in the forms of air support and indirect fire (from artillery, mortars, etc.) remains an important component of a combined arms force in an urban environment, but is subject to unique conditions. MCTP 12-10B stresses the importance of avoiding collateral damage to buildings, alongside, even more importantly, avoiding civilian collateral damage. In place of the total annihilation of a city (as seen in Grozny), the publication instead states that, should the situation call for it, guided and precision munitions should be used rather than mass artillery barrages. Should the risk of collateral damage be too high, civilians should be warned to evacuate a given area, or the use of indirect fire should be called off entirely. Nonlethal munitions, such as smokes or illumination rounds, may also prove useful, however wind gusts caused by urban canyons and tall buildings may impact their effectiveness respectively.<sup>113</sup>

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<sup>112</sup> USMC and USA, *MCTP 12-10B Urban Operations*, 3-6 – 3-12.

<sup>113</sup> *Ibid*, 3-12 – 3-16.

Force protection – consisting of both defending friendly centers of gravity and protecting or eliminating friendly critical vulnerabilities – is challenging and vital to U.S. marines in an urban battlespace. On the smallest scale, marines have to be equipped with proper anti-ballistic body armor, alongside, should the situation call for it, CRBN protective gear, riot control gear, and firefighting equipment. Temporary shelters may need to be built by combat engineers for civilians or marines, depending on the humanitarian situation. Air and missile defense should be considered by urban commanders, as aircraft varying from handheld drones to helicopters may be used by enemy forces in either lethal or nonlethal roles. Local civilian populations should be made aware of and encouraged to prepare for intermediate rocket threats. MCTP 12-10B once again defers to MCRP 3-35.3A in terms of deterring enemy aviation threats, however.<sup>114</sup>

The close-quarters terrain of the urban environment requires commanders to relinquish stand-off weapons due to the need for extreme precision and rapid employment. Similarly, standoff engagement of forces that are usually considerable distances from their targets (as is typically the case for armor, for instance) is precluded due to the dense, close-quarters terrain of cities. The use of snipers and designated marksmen is also encouraged. Additionally, some USMC radar systems are rendered useless or impaired due to the urban terrain interfering with signals.<sup>115</sup>

In the realm of an offensive urban operation, both MCTP 12-10B and MCRP 12-10B.1 have doctrinal guidelines in terms of conduct. MCRP 12-10B.1 *Military Operations in Urban Terrain*, while dated, still provides considerable insight into USMC doctrine on challenges not covered by MCTP 12-10B. In essence, it acts as a supplemental manual for commanders to

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<sup>114</sup> Ibid, 3-16 – 3-18.

<sup>115</sup> Ibid, 3-19 – 3-20.

consider. MCTP 12-10B highlights four key characteristics as decisive when conducting offensive urban operations.

The first of these is *surprise*, which it further separates into operational and tactical surprise. On the operational level, it defines surprise particularly as an “attack against urban areas that the enemy believes will provide sanctuary from the technological advantages of [U.S.] Army/Marine Corps forces...” in order to “...deny the enemy time to prepare and establish a defense.”<sup>116</sup> This can be achieved in various ways, however amphibious assaults are explicitly listed as a possibility. At the lower, tactical level this involves “attacking using creative methods against which the enemy cannot respond to effectively” or, in another words, carrying out unexpected tactical actions.<sup>117</sup>

Following *surprise* is *concentration*, which involves concentrating combat power to achieve the desired effect despite the otherwise compartmentalizing effects of urban terrain. *Tempo* is next, and is defined as the speed and rhythm of friendly forces compared to that of the enemy. MCTP 12-10B emphasizes the need for a generally high tempo during urban operations, as the combat tempo in urban war tends to be very high. The use of reserves and a consistent logistics line are mentioned as being necessary to maintain such a high tempo.<sup>118</sup> Finally, *audacity* is listed as the last of the four key concepts, itself consisting of the bold execution of tactical or operational plans.<sup>119</sup>

MCRP 12-10B.1 *Military Operations in Urban Terrain* supplements these basic offensive urban operation concepts. It emphasizes that Marine commanders analyze the METT-TC situation within the urban environment which, again, consists of its mission, enemy, terrain,

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<sup>116</sup> Ibid, 4-1.

<sup>117</sup> Ibid.

<sup>118</sup> Ibid, 4-2.

<sup>119</sup> Ibid, 4-3.

troops available, time, and civilian considerations.<sup>120</sup> Clearly defined and understood commanders' intent is also considered necessary to success due to the inevitability of compartmentalization and small-unit leadership during urban war.<sup>121</sup> Former USMC commandant General Charles Krulak, who also originally encouraged the development of updated urban warfighting doctrine following the obvious tactical and operational disasters in Grozny, emphasized the "strategic corporal" concept to partially resolve these problems. This concept essentially concluded that leadership would be deferred to the lowest points (i.e. a Corporal and his fireteam) and that, given the rapid spread of information in the contemporary era and the impact that media can have on operations, the decisions made by these tactical-level leaders can have strategic-level impacts.<sup>122</sup> In essence, then, low-level leaders within USMC units operating in urban terrain must be prepared to take change, and commander's intent must be fully understood in order to meet operational goals using many small units.

MCTP 12-10B thereafter discusses the six forms of offense maneuver to be carried out in urban war. *Envelopment*, wherein an enemy is isolated and attacked from both the front and the flank or rear, is considered difficult for traditional ground forces (due to buildings impeding speed) but a worthwhile consideration for amphibious forces,<sup>123</sup> as was seen in Operation Peace for Galilee above. A *turning movement*, which consists of seizing objectives behind the enemy's main force, is noted as being similarly effective in permissive urban warfare situations, particularly when communication lines can be cut. *Infiltration* is recommended for smaller, dismounted operations, as it permits infantrymen to stealthily bypass the enemy's main forces

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<sup>120</sup> USMC, *MCRP 12-10B.1 MOUT*, 2-3.

<sup>121</sup> USMC and USA, *MCTP 12-10B Urban Operations*, 4-3 – 4-4.

<sup>122</sup> Krulak, Charles C. "The Strategic Corporal: Leadership in the Three-Block War." *Marine Corps Gazette & Leatherneck Magazine of the Marines*, January 1999.

<sup>123</sup> USMC and USA, *MCTP 12-10B Urban Operations*, 4-5.



and take key objectives to the enemy's disadvantage. *Penetration* is a modified frontal attack on the weak points of an otherwise prepared and well-defended force. It is heavily reliant on a combined arms team to achieve the speed and firepower needed for success in an urban environment. Once penetrated, weaker flanks can be attacked. A traditional *frontal attack* on a defending enemy force is generally discouraged by USMC doctrine unless the enemy force poses little to no serious threat. A *flank attack* exploits possible weaknesses in an urban defender's flanks to achieve surprise and avoid the enemy's center of gravity, however this form of maneuver requires speed and excellent intelligence to bypass the problems of a frontal attack.<sup>124</sup>

Offensive tasks are also discussed in MCTP 12-10B. These are fairly standard tasks, – *movement to contact, attack, exploitation, and pursuit* – however MCTP 12-10B notes special considerations in an urban environment. *Movement to contact* is noted as likely only occurring when the enemy situation is unclear which, in urban terrain, is likely to occur. A more hasty direct *attack* will follow, however hasty attacks by larger units are made more difficult in an urban environment. Subsequently, the *exploitation* during/after an attack is important, and MCTP 12-10B recommends commanders establish specific urban centers as objectives in order to disrupt the remaining enemy forces in the area of operations. Following the enemy's defeat, the *pursuit* of the remnants of enemy forces will commence. Due to the complex nature of urban terrain, this is trickier, as enemy forces may attempt to take refuge in buildings, split up Marine units down urban canals, or otherwise disrupt any attempt at pursuit. In order to avoid said disruption, fleeing enemy forces must not be permitted the time required to flee. Additionally, air support is recommended to assist in pursuit.<sup>125</sup>

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<sup>124</sup> Ibid, 4-5 – 4-6.

<sup>125</sup> Ibid, 4-8 – 4-9.

MCTP 10-12B lists several other important considerations for commanders conducting offensive urban operations. Understanding the urban environment and utilizing integrated surveillance and reconnaissance are necessary to assess how to prepare for an urban offensive operations. Shaping and isolating enemy forces and thus making use of the characteristics of an urban environment are also noted as being necessary for success. This is conducted through fires and maneuver of which the commander must prepare and be closely familiar with. Enemy and civilian reactions to these fires must be carefully watched for. Direct action by special operations forces (e.g. attacks on urban infrastructure, command systems, supply centers, etc.) are noted as being particularly effective.

Information operations against enemy forces in urban terrain tend to take the form of deception, specifically taking the form of fabrication (false information presented as true) or manipulation (true information presented out of context)<sup>126</sup>, as the confusing and complex urban environment permits deception easier.<sup>127</sup> Detailed leader reconnaissance, adaptable mission orders, and effective task organization are all necessary for successful urban operations, and require small unit-level direction and on-the-ground Marine leadership due to the complex and rapidly-changing terrain. All engagement must consist of “rapid and bold maneuver” in an urban environment, of which amphibious operations are mentioned as a possible supporting effort. Various other, more detailed recommendations to U.S. Marine commanders conducting an urban offensive are listed in the publication.<sup>128</sup>

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<sup>126</sup> Caddell, Joseph W. 2004. *Deception 101: Primer on Deception*. Carlisle Barracks, P.A.: Strategic Studies Institute, U.S. Army War College.

<sup>127</sup> USMC and USA, *MCTP 12-10B Urban Operations*

<sup>128</sup> *Ibid*, 4-17 – 4-23.

MCRP 12-10B.1 supplements all of the above information with more specific recommendations for commanders from the battalion level down to the platoon level.<sup>129</sup> For instance, on the most basic level, MCRP 12-10B.1 describes moving down the street in an urban environment. A leading mechanized platoon in a lightly defended area proceeds slowly along a street while two squads of dismounted infantry move along the edges of the street or, ideally, building-to-building, searching out any possible dangers or enemy forces. Mounted Marines trailing behind the forward-moving dismounted squads provide an “overwatch” and supporting fires should they engage the enemy.<sup>130</sup> Similar descriptions are found elsewhere for different forces and situations.

MCTP 12-10B additionally details urban defensive operations. As the U.S. Marine Corps is, by nature, an expeditionary force centered on its doctrine of maneuver warfare,<sup>131</sup> it tends towards carrying out offensive operations even in a defensive posture. Nonetheless MCTP 12-10B informs Marine Corps doctrine in a hypothetical urban defense.

The characteristics that dominate an urban defense to MCTP 12-10B include *preparation, security, disruption, massing effects, and flexibility*. In regards to *preparation*, force protection is the primary concern, with buildings, by nature, providing most of this physical protection with little preparation needed. MCTP 12-10B encourages the planning of logistical routes through avenues most protected by buildings. The creation of defensive strong points with significant cover and observation, and/or that canalize attacking forces, is also recommended. Ultimately, the goal is for Marines to prevent enemy maneuver through the use of the urban environment. The *security* of defending Marines is reliant on the attitude of local civilians towards the

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<sup>129</sup> USMC, *MCRP 12-10B.1 MOUT*, 2-24 – 2-39.

<sup>130</sup> *Ibid*, 2-37 – 2-39.

<sup>131</sup> USMC, *MCDP 1 Warfighting*, 36-39.

USMC's occupation of the city, as a hostile civilian population can jeopardize any security measures taken by Marines.<sup>132</sup> Commanders are told to "consider removing potentially hostile civilians" whenever possible, however the exact meaning here is unclear.<sup>133</sup> *Disruption* focuses on eliminating enemy maneuver through the use of the urban terrain, such as interrupting tactical communication and movement through a combination of canalization and covered and concealed counterattacking forces. *Massing effects* refer to the massing of centers of gravity within an urban environment that can counteract a presumably large attacking force. The leveraging of urban terrain is once again recommended. Commanders are told to remove any obstacles – up to and including buildings – that stand in the path of tactically advantageous fields of fire, direct or indirect. Finding advantageous locations for indirect fires is also encouraged, as well-positioned indirect fires can bypass urban obstacles and reach enemy areas of operation. Marines who leverage these advantages can devastate even a numerically far larger force. *Flexibility* emphasizes planning for quick adaptation in a rapidly changing combat scenario. More specifically, MCTP 12-10B suggests USMC commanders plan out options for counterattacks, which should be plentifully available given the advantages urban terrain provides to defenders. Defending a city from outside the urban area is suggested whenever possible, such as when natural terrain aids the defense and if Marines have sufficient resources, as this permits long-range engagement and protection from fires.<sup>134</sup>

Types of urban defenses are shortly discussed in MCTP 12-10B. Traditional area defense is mentioned as a typical possibility within an urban combat scenario. Mobile defense, which is more favored by the USMC, is strongly suggested and includes the use of maneuver on all levels

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<sup>132</sup> USMC and USA, *MCTP 12-10B Urban Operations*, 5-1 – 5-2.

<sup>133</sup> *Ibid*, 5-2.

<sup>134</sup> *Ibid*, 5-2 – 5-3.

of urban terrain to rapidly seek out and destroy the enemy force's critical vulnerabilities. For instance, a combination of dismounted combined arms on the ground level alongside anti-armor fires from flanks and top-down is suggested for eliminating the maneuver of a quick-moving mounted enemy force. Retrograde defense is recommended when necessary, and MCTP 12-10B states that the urban environment is optimal for delaying enemy advances given the multitude of repositioning options available for Marines.<sup>135</sup>

Many other considerations for an urban defense are mentioned in MCTP 12-10B. Understanding the enemy force and the urban environment is noted as being vital for USMC commanders. An overall METT-T analysis is necessary for a comprehensive understanding. It allows commanders decide the best possible key terrain, observation and fields of fire, cover and concealment, obstacles, and avenues of approach (KOCOA). Shaping operations, as previously mentioned, are important to prevent isolation of forces, separate attacking forces from defending resources, creating opportunities for maneuver, economy of force, conducting counterattacks, and managing local civilian populations.

When engaging the enemy, USMC commanders must collect key intelligence about the attacking force's capabilities and movement, create depth to prevent penetration, heavily utilize obstacles to disrupt enemy maneuver, and coordinate counterattacks whenever reasonable. Commanders must consolidate forces to create centers of gravity that can effectively exploit the critical vulnerabilities of attackers. Finally, commanders must be prepared to transition into an urban offensive once the enemy has been weakened or repelled enough to do so, likely consisting of identifying units that are most appropriately prepared to carry out an offensive. Transitioning into stability operations are also mentioned as an important consideration, and include

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<sup>135</sup> Ibid, 5-4 – 5-6.

demilitarization of leftover munitions, clearing obstacles created defensively or through destruction, and seeking out and destroying remaining enemy pockets of resistance. In the longer term, civil-military tasks such as the restoration of the rule of law and other key services must be considered.<sup>136</sup>

MCRP 12-10B.1 also provides supporting recommendations to defending commanders in a manner similar to urban offensive operations. While the general principles of an urban defense largely align with those found in MCTP 12-10B, the recommendations to battalion-, company-, and platoon-level commanders go into far more detail and provide USMC commanders specific tactical and operational insight into the ideal conduct of an urban defense in various scenarios.<sup>137</sup> MCRP 12-10B, for instance, provides recommendations for company commanders in defending a city block, suggesting the preparation of ambushes along enemy avenues of approach, covering obstacles (created by engineers or destruction) with fires, building defenses inside buildings, and, anachronistically, utilizing tanks as direct-fire support against attacking forces.

Presently, the USMC carries out limited urban warfare training. This primarily consists of the Urban Section of the Tactical Training and Exercise Control Group (TTECG) of the yearly Integrated Training Exercise hosted at the Marine Corps Air Ground Combat Center Twentynine Palms. The TTECG MOUT training consists of range walks and classroom instruction on infantry patrols in urban terrain, infantry-armor integration, urban assault and clearing, dealing with IEDs, small unmanned aerial systems, and the clearing of tunnels, which are thereafter applied during a 3-day MOUT exercise.<sup>138</sup>

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<sup>136</sup> Ibid, 5-6 – 6-13.

<sup>137</sup> USMC, *MCRP 12-10B.1 MOUT*, 3-1 – 3-30.

<sup>138</sup> Hanson, Michael A. 2021. “Urban Warfare Training Center.” *Marine Corps Gazette*, January 2021. <https://mca-marines.org/wp-content/uploads/MCG-January-2021.pdf>

The 15-day Urban Leader Course and Advanced Urban Combat Course additionally provide introductory tactical-level MOU training, teaching basic actions in urban warfighting like room clearing and urban marksmanship.<sup>139</sup> Many “MOU towns” also exist across USMC bases, the most notable being the “Infantry Immersion Trainers” located at Marine Corps Base Camps Pendleton and Lejeune, which provide varying levels of urban terrain for MOU training. The Infantry Immersion Trainers, however, are the most recent and advanced urban warfare/terrain simulators in the USMC’s possession, able to more accurately replicate the sights, sounds, and even smells of a small city.<sup>140</sup>

### **U.S. Marine Corps MOU Preparedness Challenges**

A few notable problems exist within MCTP 12-10B, and far more significant issues persist within MCRP 12-10B.1. Perhaps most foremost, neither doctrine discusses at length the conduct of amphibious operations in or along urban littorals, despite both mentioning the plausibility and utility of such operations.<sup>141, 142</sup> This creates problems for commanders who are not otherwise aware of the best possible execution of, or methods of planning for, such a complex synthetic operation. This creates many questions. In regards to combat engineers and vehicles, for instance, are they currently capable of an amphibious landing in an urban environment? Can they be loaded on and off landing craft at all after having been prepared for an urban battlespace? If not, does this mean the key advantages provided by combat engineers in urban warfare are reduced or even, in some situations, moot? Similar questions remain regarding

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<sup>139</sup> United States Marine Corps. 2015. “Bringing Knowledge to New Urban Leaders.” United States Marine Corps Flagship. Headquarters, USMC. 2015. <https://www.marines.mil/News/News-Display/Article/631482/bringing-knowledge-to-new-urban-leaders/>.

<sup>140</sup> United States Marine Corps. 2018. “Inside the Infantry Immersion Trainer.” United States Marine Corps Flagship. Headquarters, USMC. 2018. <https://www.marines.mil/News/News-Display/Article/1572841/inside-the-infantry-immersion-trainer/>.

<sup>141</sup> Ibid, 3-35.

<sup>142</sup> USMC and USA, *MCTP 12-10B Urban Operations*, 1-5.

other capabilities, and these questions pose challenges to the USMC's shift to focusing on amphibious operations.

Regarding MCRP 12-10B.1 specifically, the publication itself is outdated, having been published in the late 1990s. It does not (and cannot) encompass or consider the use of current technologies on the tactical level whatsoever, as potentially effective new technologies (e.g. handheld UAVs) did not exist at the time of publication. Entirely new forms of war – most notably cyber-war – have developed since the time of MCRP 12-10B.1's publication, putting commanders who refer to MCRP 12-10B.1 at risk of ignoring or not fully comprehending the possible risks and opportunities that cyber operations pose in an urban battlespace. Very notably, even MCRP 12-10B.1's tactical recommendations are questionable, as many rely on the combined arms use of M1A1 Abrams tank<sup>143</sup> – which is no longer utilized whatsoever by the USMC.<sup>144</sup> Ultimately, then, the datedness of MCRP 12-10B.1 and the limited applicability of MCTP 12-10B pose a problem for the USMC in preparing to operate in the heavily urbanized littorals of the Asia-Pacific.

Similarly, as MCRP 12-10B.1 included the USMC's primary "doctrine" (to a very limited degree) on subterranean warfare, this information is also outdated, possessing comparable flaws.<sup>145</sup> Beyond MCRP 12-10B.1, the Marine Corps possesses no subterranean warfare doctrine or training, as compared to the limited doctrine and training for urban war. These problems are interconnected, as "subterranean warfare is certainly part of the urban-terrain problem set," but still distinct.<sup>146</sup>

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<sup>143</sup> USMC, *MCRP 12-10B.1 MOUT*.

<sup>144</sup> USMC, "Force Design 2030."

<sup>145</sup> USMC, *MCRP 12-10B.1 MOUT*, E-1 – E-5.

<sup>146</sup> Mills, Walker. 2019. "The Elephant in the Tunnel: Preparing to Fight and Win Underground." Modern War Institute. United States Military Academy. March 19, 2019. <https://mwi.usma.edu/elephant-tunnel-preparing-fight-win-underground/>.



In regards to training, currently existing USMC MOUT training is not comprehensive. The 5 to 15 day training courses are only able to cover basic MOUT tactical doctrine, with more complex forms of urban warfare (i.e. training to fight in megacities, training to fight in urbanized littorals, etc.) left out entirely, alongside any training with potentially innovative urban operation-enhancing technologies. By comparison, the USMC Mountain Warfare Training Center in California and the Jungle Warfare Training Center in Okinawa possess specialized, permanent instructor cadre that provide a variety of more in-depth mountain- and jungle-related warfighting courses to Marines. No such equivalency presently exists for urban warfare.<sup>147</sup>

Recently, the MCWL's DUO-focused Project Metropolis II attempted to remedy some of the USMC's flaws in MOUT doctrine, training, and equipment. The project, which began in 2019 and was intended to last 4 years, tested existing USMC doctrine alongside new technologies at various MOUT centers owned by the Army. Project Metropolis II's predecessor, Project Metropolis I, alongside the even earlier Operation Urban Warrior, had worked to reaffirm and innovate the doctrine set out by MCRP 12-10B.1 (then MCWP 3-35.3). Project Metropolis II instead worked to overcome the admitted shortcomings in urban war preparedness by the 2016 Marine Corps Operating Concept and potentially update aging urban warfare doctrine, alongside other recommendations.<sup>148</sup> Project Metropolis II was cancelled prematurely in 2020 however, as the focus was shifted towards creating experimental Marine Littoral Regiments.<sup>149</sup>

The Marine Littoral Regiment is a culmination of the national foreign policy “pivot to Asia,” the USMC's renewed focus on the Pacific, great power competition, and amphibious

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<sup>147</sup> Hanson, Michael A. “Urban Warfare Training Center.”

<sup>148</sup> Harkins, Gina. “Inside Project Metropolis.”

<sup>149</sup> South, Todd. 2020. “Corps Cancels Dense Urban Warfare Experiment to Focus on Marine Littoral Regiment.” Marine Corps Times. Sightline Media Group. October 8, 2020. <https://www.marinecorpstimes.com/news/your-marine-corps/2020/10/08/corps-cancels-dense-urban-warfare-experiment-to-focus-on-marine-littoral-regiment/>.

operations, and updated amphibious doctrine that reflects the aforementioned focuses. The first of these was officially stood up in March of 2022, replacing the former 3<sup>rd</sup> Marine Regiment.<sup>150</sup> The MLR is designed to be a low-signature, light, highly mobile naval formation capable of amphibiously penetrating enemy A2/AD capabilities. MLRs will uniquely be capable of conducting Expeditionary Advanced Base Operations (EABO),<sup>151</sup> consisting of a series of temporary bases ashore or inshore on subsequent islands in contested areas, ultimately permitting and supporting power projection and forward deployment.<sup>152</sup>

EABO is comparable to “island hopping,” which appears to be the target capability of MLRs. To successfully carry out an EABO, MLRs will tentatively operate on dispersed, low-signature Light Amphibious Warships.<sup>153</sup> MLRs will be additionally capable of conducting strikes, coordinating air and missile defense, supporting maritime domain awareness, supporting naval surface warfare operations, and supporting information operations. Each MLR will consist of a Littoral Combat Team (an infantry battalion supported by an anti-ship battery), Littoral Anti-Air Battalion, and a Combat Logistics Battalion, totaling 1800-2000 Marines and USN sailors. In comparison, the former 3<sup>rd</sup> Marine Regiment was almost twice as large, numbering 3400 personnel.<sup>154</sup> Once again, this is in order to create a lighter and lower-signature force. In

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<sup>150</sup> 3rd Marine Division. 2022. “Redesignated: 3rd Marine Regiment Becomes 3rd Marine Littoral Regiment.” U.S. Indo-Pacific Command. United States Marine Corps. March 4, 2022. <https://www.pacom.mil/Media/News/News-Article-View/Article/2955826/redesignated-3rd-marine-regiment-becomes-3rd-marine-littoral-regiment/>.

<sup>151</sup> United States Marine Corps. 2021b. “Marine Littoral Regiment.” United States Marine Corps Flagship. Headquarters, USMC. August 2, 2021. <https://www.marines.mil/News/News-Display/Article/2708146/marine-littoral-regiment-mlr/>.

<sup>152</sup> United States Marine Corps. 2021a. “Expeditionary Advanced Base Operations (EABO).” United States Marine Corps Flagship. Headquarters, USMC. August 2, 2021. <https://www.marines.mil/News/News-Display/Article/2708120/expeditionary-advanced-base-operations-cabo/>.

<sup>153</sup> Eckstein, Megan. 2020. “Navy Officials Reveal Details of New \$100M Light Amphibious Warship Concept.” USNI News. United States Naval Institute. November 19, 2020. <https://news.usni.org/2020/11/19/navy-officials-reveal-details-of-new-100m-light-amphibious-warship-concept>.

<sup>154</sup> USMC, “Marine Littoral Regiment.”

terms of size, this is comparable to a Marine Expeditionary Unit – a versatile regiment-sized (~2200 personnel) unit that is not as heavily oriented towards amphibious operations.<sup>155</sup>

Assessments of the MLR are only now beginning and, as such, the effectiveness and capacities of the MLR not entirely known.<sup>156</sup> What is known, given the preceding paragraph, is that the purpose of the MLR is to be a light, low-signature, rapid amphibious force capable of evading or eliminating A2/AD threats, with a focus on operating in the Pacific against rival states – an innovative force meant to update USMC amphibious operational capabilities.<sup>157</sup> The MLR may very well possess the qualities of a light amphibious regiment able to outmaneuver rival near-peer mature precision strike capabilities in the Pacific – this, again, remains to be seen – but what is clear is that any MLR unprepared for urban war will run into serious difficulties upon landing anywhere in the Asia-Pacific. No official effort to train or equip MLRs for urban warfighting is presently known by public-facing sources.

Simultaneously, the USMC is retiring its aging Amphibious Assault Vehicle (AAV, or officially AAVP7A1) and replacing it with the new Amphibious Combat Vehicle (ACV).<sup>158</sup> Unlike the AAV, the ACV can provide 30mm direct fire support to dismounted infantry, provide considerable force protection while both inland and shore-bound, and conduct inland combat operations, up to and including MOUT.<sup>159</sup> This is in stark contrast to the AAV; MCTP 3-10C *Employment of Amphibious Assault Vehicles (AAVs)* explicitly states that “AAVs have a limited

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<sup>155</sup> Ibid.

<sup>156</sup> USMC, “Force Design 2030.”

<sup>157</sup> Feickert, Andrew, “New USMC Force Design Initiatives.”

<sup>158</sup> Feickert, Andrew. 2020. “Marine Corps Amphibious Combat Vehicle (ACV): Background and Issues for Congress.” Washington, D.C.: Congressional Research Service. <https://sgp.fas.org/crs/weapons/R42723.pdf>.

<sup>159</sup> Feickert, Andrew. 2021b. “The Marine Corps’ Amphibious Combat Vehicle (ACV).” Washington, D.C.: Congressional Research Service. <https://sgp.fas.org/crs/weapons/IF11755.pdf>.

capability to operate in military operations on urbanized terrain,” as, “vulnerable to AT fire, AAVs make good targets if employed improperly.”<sup>160</sup>

While the publication that dictates the use of the ACV, MCRP 3-10C.1 *Amphibious Combat Vehicle Employment*, is not presently available to the general public,<sup>161</sup> it can be assumed that the increased combat viability of the platform over the AAV<sup>162</sup> makes it far more capable of combined arms operations in urban terrain. While this appears to be a promising development, overall shortcomings in doctrine regarding operations in the urban littoral makes the precise use of the ACV in urban war unclear. Once again, this lack of comprehensive, up-to-date urban warfighting doctrine and training for a lighter and more amphibious USMC will create serious challenges for commanders who find themselves facing war in the urbanized littorals of the Asia-Pacific.

### **Other Marine Forces in the Asia-Pacific**

Not all militaries in the Asia-Pacific, let alone globally, possess amphibious capabilities. As General Berger, 38<sup>th</sup> Commandant of the USMC, notes in a recent interview on the lack of Russian amphibious operations during the 2022 invasion of Ukraine, “no other operation that I know of is more complicated, more complex, takes more preparation, practice, rehearsal than an amphibious operation, which is why not all forces can do them.”<sup>163</sup> Given a near-peer state’s hesitation to amphibiously assault a nearby state, it goes without saying that smaller, less equipped states will be similarly unwilling or hesitant, however the ocean-centered nature of the

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<sup>160</sup> United States Marine Corps. (2003) 2016. *MCTP 3-10C Employment of Amphibious Assault Vehicles*. Washington, D.C.: Headquarters, USMC.

<sup>161</sup> Note: MCRP 3-10C.1 *Amphibious Combat Vehicle Employment* is presently FOUO/DISTRIBUTION STATEMENT C and information from the document has thus been omitted.

<sup>162</sup> Feickert, Andrew. “Marine Corps ACV: Background & Issues for Congress.”

<sup>163</sup> Berger, David H. 2022. Transcript: The Path Forward: Gen. David H. Berger Interview by David Ignatius. *Washington Post Live*. The Washington Post. <https://www.washingtonpost.com/washington-post-live/2022/03/16/transcript-path-forward-gen-david-h-berger/>.

Asia-Pacific makes this avoidance difficult. As such, many smaller states have developed amphibious “marine” forces with varying levels of capability.

Most of note in the Asia-Pacific is the PLANMC. Operating as the Chinese PLA’s elite, amphibious, and expeditionary force able to carry out “all-domain operations” (全域作战), the PLANMC presently exists as a branch of the overall PLAN.<sup>164</sup> With growing economic and military power, the PRC has begun to look outwards for power projection, and has noted the important role that the USMC plays in doing so for the United States.<sup>165</sup> Simultaneously, Xi Jinping’s presidency has put more pressure on dealing with an increasingly independence-minded Taiwan (with the corresponding presidency of Cai Yingwen) – up to and including a possible invasion, which would be unavoidably amphibious in nature.<sup>166</sup> As such, the PLANMC is of particular interest to PLA leadership, and has undergone significant changes since 2017.

These changes have taken several forms. Perhaps most prominently, the PLANMC has grown from two brigades to eight. Numbering only 10000 PLAN marines in 2017, this number has grown significantly to 40000 and rising, with each brigade possessing ~5000 marines.<sup>167</sup> At the same time, the PLAN has built multiple amphibious ships to carry these marines, which are comparable in size and capability to current USN amphibs. The PLAN also operates two different vehicles for amphibious operations, the Type 05 and Type 08, which roughly correlate with the USMC AAV and ACV respectively in role. PLANMC doctrine and training similarly appear to approximate that of the USMC.<sup>168</sup> As a growing amphibious force, the PLANMC

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<sup>164</sup> Kennedy, Conor. 2021. “The New Chinese Marine Corps: A ‘Strategic Dagger’ in a Cross-Strait Invasion.” *China Maritime Reports*. Newport, R.I.: U.S. Naval War College China Maritime Studies Institute. <https://digital-commons.usnwc.edu/cgi/viewcontent.cgi?article=1014&context=cmsi-maritime-reports>.

<sup>165</sup> Hanson, Michael A. “China’s Marine Corps Is on the Rise.”

<sup>166</sup> Lawrence, Susan V. “Taiwan: Political and Security Issues.”

<sup>167</sup> Office of the Secretary of Defense. 2021. “Military and Security Developments Involving the People’s Republic of China.” Washington, D.C. <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>, 162.

<sup>168</sup> Hanson, Michael A. “China’s Marine Corps Is on the Rise.”

seems to be among the most formidable currently in the Asia-Pacific, possibly second only to the USMC.

The “new” PLANMC seems to serve two primary purposes: one, to be able to project overseas to protect Chinese citizens and Chinese national interests<sup>169</sup> and, two, to carry out amphibious operations against the ROC or, officially, a “Joint Island Landing Campaign” (JILC). Within the JILC, the PLANMC will be expected to sabotage and/or break through any coastal defenses that the ROC has prepared, establish a beachhead, and thus permit the larger PLA to land in greater numbers, the latter being the main effort. As such, the PLANMC is expected to fill the role of a rapid strike force capable of overtaking parts of the ROC’s coast in support of the greater PLA.<sup>170</sup> While its present ability to carry out this mission is questionable (due to an insufficient number of amphibious ships and the recent nature of these drastic changes),<sup>171</sup> the current trajectory of the PLANMC suggests it may be capable of carrying out a JILC in the future.

Urban combat is a new concept for the PLANMC, but it has been one of several emerging focuses as a part of the “new” PLANMC’s preparation for “all-domain operations.” As a JILC on Taiwan (or in the Asia-Pacific in general) would inevitably require MOUT, the PLANMC has begun to refine urban warfighting doctrine and training. In one such instance, the PLANMC has conducted urban warfare training at the PLA’s Zhurihe Combined Tactics Training Base, which itself possesses a model MOUT town of central Taipei, in order to practice “offensive combat by PLANMC combined arms assault groups against a coastal city.”<sup>172</sup> From this, it appears that the PLANMC is indeed preparing for operations in the urban littoral.

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<sup>169</sup> Office of the Secretary of Defense, “PRC Military and Security Developments,” 53.

<sup>170</sup> Kennedy, Conor. “The New Chinese Marine Corps,” 17-20.

<sup>171</sup> Ibid.

<sup>172</sup> Ibid, 22.

Competing against the PLANMC is the ROCMC, serving as the amphibious force of the far smaller Republic of China on Taiwan and its surrounding islands. Numbering only 10000 and fielding primarily the aging AAV (purchased from the USMC),<sup>173</sup> the comparatively small ROCMC's existence has reportedly come into question in the past decade, particularly under the former presidential administration of the ROC.<sup>174</sup> While the ROCMC maintains an expeditionary, amphibious mission<sup>175</sup> – implicitly to retake China wholesale – the current purpose of the ROCMC is not entirely clear, as any assault on China would be very obviously hopeless, and the political consequences of power projection elsewhere would be serious. As the ROCMC currently exists in a state a limbo, it may eventually shift to a counter-amphibious role as the PLANMC grows in size, strength, and aggression. This remains to be seen, however.<sup>176</sup> Presently, the ROC Army seems to be the force primarily trained for combat in Taiwan's very heavily urbanized terrain<sup>177</sup> – which, given Taiwan's largely defensive strategic posture, seems sensible.

The ROKMC, like its Taiwanese counterpart, exists primarily to counter the forces of the DPRK to the north. The DPRK itself does not possess an amphibiously-oriented marine force itself. Instead, the navy of the DPRK possesses several landing craft, and amphibious operations would be carried out by special operations-capable elements of the Korean People's Army.<sup>178</sup>

Conversely, the ROKMC is an elite amphibious strike force, consisting of around 29000

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<sup>173</sup> Hunzeker, Michael A, Alexander Lanoszka, Brian Davis, Matthew Fay, Erik Goepner, Joe Petrucelli, and Erica Seng-White. 2018. *A Question of Time: Enhancing Taiwan's Conventional Deterrence Posture*. Fairfax, V.A.: Center for Security Policy Studies, Schar School of Policy and Government, George Mason University, 88.

<sup>174</sup> Newsham, Grant, and Kerry Gershaneck. 2015. "Saving Taiwan's Marine Corps." *The Diplomat*. 2015. <https://thediplomat.com/2015/11/saving-the-taiwan-marine-corps/>.

<sup>175</sup> Hunzeker et al. *A Question of Time*, 75.

<sup>176</sup> Ibid.

<sup>177</sup> Yu, Matt, and Joseph Yeh. 2022. "Taiwan Military Showcases Urban Terrain Operations in Kaohsiung Mock Town." *Focus Taiwan*. Central News Agency of the Republic of China. January 6, 2022. <https://focustaiwan.tw/politics/202201060014>.

<sup>178</sup> Office of the Secretary of Defense. 2014. "Military and Security Developments Involving the Democratic People's Republic of Korea 2013." Washington, D.C. <https://apps.dtic.mil/sti/pdfs/ADA596219.pdf>.

marines, operating AAVs acquired from the USMC, tanks, artillery, and a specialized “Spartan” decapitation-oriented regiment of 3000 marines.<sup>179</sup> Unlike the ROCMC, then, the ROKMC does have the intention of amphibiously assaulting their rivals to the north, alongside carrying out special offensive operations against DPRK infrastructure and leadership.<sup>180</sup> The ROKMC seems to have the potential to do so. Possessing far more modernized equipment than their rivals, rigorous training, and refined doctrine handed down from the USMC,<sup>181</sup> the ROKMC stands as one of the more powerful marine forces in the Asia-Pacific. Having fought in bloody urban battles during the Korean War (e.g. in Seoul) and possessing a mission set that includes sabotaging urban infrastructure and leadership, the ROKMC similarly possesses some level of urban warfighting-centric capability and training.<sup>182</sup>

In Japan, no independent “Japanese Marine Corps” presently exists. Article 9 of the Japanese constitution strictly forbids the creation of an offensively-oriented military, let alone an expeditionary force.<sup>183</sup> Despite this, the Japanese state operates several “defense forces” that essentially constitute military forces, which includes the JGSDF. Until recently, the JGSDF did not possess any tangible capacity for amphibious operations. However, reflecting the rise of Chinese economic, political, and military power, frequent missile testing near Japan by the DPRK, and shortcomings in natural disaster response along coastlines in the Asia-Pacific, the Japanese government has begun to recognize the need for an amphibious force and, as such, stood up the ARDB under the JGSDF in 2018.<sup>184</sup> Officially, the role of the ARDB is to defend

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<sup>179</sup> Gady, Franz-Stefan. 2016. “South Korea Unveils New Elite Unit of Marines.” *The Diplomat*. May 24, 2016. <https://thediplomat.com/2016/03/south-korea-unveils-new-elite-unit-of-marines/>.

<sup>180</sup> *Ibid.*

<sup>181</sup> Daugherty, Leo J. 2003. *Train Wreckers and Ghost Killers: Allied Marines in the Korean War*. Washington, D.C.: History and Museums Division, Headquarters, USMC.

<sup>182</sup> *Ibid.*

<sup>183</sup> The Government of Japan. 1947. *The Constitution of Japan*. Tokyo.

<sup>184</sup> Harold, Scott et al. *U.S.-Japan Alliance Conference*, 1-6; 18-24.



Japanese islands – such as the disputed Senkaku/Diaoyu Islands – and to carry out humanitarian missions when required. Despite this limited role, the ARDB is a growing force, starting in 2018 with two regiments and acquiring a third in 2023.<sup>185</sup> The ARDB operates USMC-derived equipment (e.g. the AAV and V-22 Osprey), trains with U.S. Marines, and seems to be adapting USMC doctrine for their own use.<sup>186</sup> Given how new the ARDB is and its unique situation, its operational effectiveness remains to be seen, however these developments seem to indicate the gradual creation of an independent Japanese amphibious force.<sup>187</sup>

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<sup>185</sup> Kyodo News. 2021. “GSDF, U.S. Agreed in 2015 to Station Amphibious Unit in Okinawa.” Kyodo News+. January 25, 2021. <https://english.kyodonews.net/news/2021/01/de70d7801060-gsdf-us-agreed-in-2015-to-station-amphibious-unit-in-okinawa.html>.

<sup>186</sup> Harold, Scott et al. *U.S.-Japan Alliance Conference*, 6-16.

<sup>187</sup> *Ibid*, 14-15; 17-24.

## CHAPTER 4: CONCLUSIONS

As stated by former commandant General Charles Krulak at the beginning of the U.S. Marine Corps' cornerstone doctrinal publication, MCDP 1 *Warfighting*, "military doctrine cannot be allowed to stagnate, especially an adaptive doctrine like maneuver warfare. Doctrine must continue to evolve based on growing experience, advancements in theory, and the changing face of war itself."<sup>188</sup> The current Sergeant Major of the Marine Corps, Sergeant Major Troy Black, seems to agree with this sentiment, stating in a February 2022 memo titled "To stand ready, we cannot stand still" that the USMC must leverage "interwar periods to apply the right changes at the right time to ensure our success in future conflict."<sup>189</sup> Based on the evidence presented in preceding chapters, this analysis possesses four key components:

1. The U.S. Marine Corps is focused on amphibious operations in the Asia-Pacific
  - a. This is in order to strategically counter a rising PRC/PLA and protect U.S. allies and interests.
2. The Asia-Pacific possesses heavily urbanized littorals, alongside frequently urbanized terrain in general.
3. The U.S. Marine Corps, thus, must be prepared to operate in urbanized littorals.
4. Based on its current doctrine and training, the USMC possesses serious shortcomings in preparing for the MOUT element of operations in the urban littorals of the Asia-Pacific.

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<sup>188</sup> USMC, *MCDP 1 Warfighting*, ii.

<sup>189</sup> Black, Troy E. 2022. "To Stand Ready, We Cannot Stand Still." Washington, D.C.: Headquarters, USMC.

- a. It is, however, comprehensively preparing for the purely amphibious element of said operations (i.e. through the creation of the MLR).

From this basic outline, it becomes evident that the U.S. Marine Corps must better prepare for urban operations should it anticipate operating in the Asia-Pacific. What steps can be taken to do so?

### **Recommendations**

A multi-step process will be required to overcome the Marine Corps' weaknesses in MOUT preparation. Urban warfare experiments and studies, like those seen in Project Metropolis I, II, and Operation Urban Warrior, should be utilized to overhaul MCRP 12-10B.1 and other existing doctrinal/tactical publications the Marine Corps utilized for urban operations. The reality of the growing "urban littoral" should be *especially* taken into consideration, and this renewed urban warfighting doctrine should thus incorporate the serious possibility of amphibious operations on or near cities.

In other words, some level of synthesis between existing amphibious doctrine and new urban doctrine must be done. New urban terrain considerations, such as the growth of megacities and how to operate within and around them, should also be included. Alongside recognizing a changing urban landscape, a changing *technological* landscape and the positive and negative effects it has on MOUT should additionally be discussed within any updated doctrine, varying from the use of small unmanned aerial systems in a city to the possible impacts of the internet on information warfare within an urban battlespace. Subterranean doctrine and training should also be developed to complement these updates.

Once a renewed urban warfighting doctrine is established, it must be incorporated into USMC training. Captain Michael Hanson, a current Marine Corps officer, has suggested the

building of an Urban Warfare Training Center (UWTC). This center would have a full “Urban Warfare Support and Training” cadre focused on training Marines for urban warfighting, and could be partially adapted from existing training, such as that seen from the TTECG and at Integrated Training Exercises. Some of the staff that would support a UWTC could be taken from recently decommissioned units, such as the USMC’s former tank battalions or howitzer batteries. Should a UWTC be a joint effort, funding and staffing could also come from the Army and/or Navy. A UWTC would enable advanced urban warfare training far beyond what presently exists for the U.S. Marine Corps, including more experimental training with newer technologies and specialty training within an urban context. MLRs, in particular, could benefit from this training as they prepare to operate in the Asia-Pacific. A UWTC near or along a coastline, in particular, would permit highly specialized and realistic training for ACV operators, Marine infantry, and MLR-based support units.<sup>190</sup>

Ultimately, as Captain Hanson concludes after suggesting the establishment of a UWTC, “perhaps if the Marine Corps had done this after Hue City, then Fallujah and Ramadi would not have cost so much in blood.” Repeating past mistakes and ignoring the realities of urban war must be avoided. While avoiding operations in urbanized littorals altogether is certainly preferable, the potential future operating environments of the Marine Corps in the Asia-Pacific make this difficult or impossible. Now is the time to prepare for an increasingly urban reality in the Marine Corps’ future littoral operating environments.<sup>191</sup>

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<sup>190</sup> Hanson, Michael A. “Urban Warfare Training Center.”

<sup>191</sup> Ibid.

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