



Adapting the Army to Win Decisively in Megacities

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"Our Army has experience throughout its history of operating in urban environments...We have not, however, operated in urban areas with populations of over 10 million people."¹

-General Ray Odierno, Chief of Staff of the Army

Introduction: Impact of Urban Growth on Military Strategy

There is an unprecedented global transition happening where the world's populations are migrating toward urban environments, creating sprawling, densely populated, overloaded, and loosely governed megacities. The Army's current force does not facilitate deployment to, nor engagement in, urban environments. To conduct expeditionary urban operations within the megacity operational environment (OE), the Army must make the following organizational changes: **first, create urban engagement teams (UETs); and second, redesign the reconnaissance, surveillance, and target acquisition (RSTA) squadrons.**

Background: Understanding Urban Growth

The defining factor of megacities is population size. Megacities have 10 million or more inhabitants.² Over the past 60



years global migration trends show populations moving from rural to urban areas. From 1950 to 2014, the urban global population increased from 30 to 54 percent of world population. United Nations studies project that by 2050, this number will further increase to 66 percent. This continuing population growth and urbanization will add 2.5 billion people to urban areas, with 90 percent of this growth occurring in Asia and Africa. Urban growth in India, China, and Nigeria will account for 37 percent, or 908 million people, of the global urbanization by 2050.³ This rapid urbanization has tripled the number of megacities since 1990. By 2030, the total number of megacities will increase from 28 to 41.⁴

Rapid and predominantly unplanned, urban growth threatens sustainable development because critical infrastructure is overstressed and unequally distributed. In some cities, this expansion leads to urban sprawl, poor government oversight and reach, and unsustainable production and consumption patterns.⁵ These factors allow violent extremist organizations, non-state actors, and local and transnational criminal organizations the ability to influence local underserved populations and the freedom of maneuver to operate un-checked and blended-in.⁶

Megacities have strategic relevance because the stability of these cities is critical to ensuring global peace and prosperity. Megacities occupy key strategic terrain. For



example, 24 of the current megacities exist in littoral zones— amalgamations of land, air, space, and cyberspace that can be engaged using sea-based weapon systems and platforms.⁷ These littoral megacities are epicenters of the networked global economy and are conduits to critical natural resources.⁸ Unstable epicenters will likely create conditions that necessitate outside intervention. Due to the complexity and size of megacities, any form of future effective American intervention would require the use of ground forces in densely populated spaces.

Competitive OEs: A New Way to Wage War

During the past 15 years of combat and stability operations in Afghanistan, Army and coalition forces have continued to compete with Taliban forces for control of and support from local populations. The Army has made considerable investments into infrastructure projects, attempting to win support from Afghani villages and towns; however, the Government of the Islamic Republic of Afghanistan (GoIRA) has not been able to institute effective or predictable social services for the local populations.

The Taliban, exploiting the failures of GoIRA social services, executed brutal law-and-order, land dispute resolution, and ended illegal highway taxation to shape and



control the same populations. In his 2013 book, *Out of the Mountains*, David Kilcullen describes this as competitive control environment, or controlling populations through normative systems.⁹ Kilcullen describes local Afghanis' perceptions of the GoIRA and the Taliban services as follows:

[Afghanistan's] Government courts take months to resolve the smallest dispute, cost thousands of dollars in bribes, and render judgements that always favor the most influential power brokers, who can simply ignore the judgment anyway if they don't like it.¹⁰

Kilcullen states, "Many people don't like the Taliban...but at least you know what you're getting: they're consistent and fair. You know what to expect from them."¹¹ As such, Afghanis continue to accept coalition investments, yet maintain support and acceptance of the Taliban. This presents a new challenge for the Army—a competitive control environment where Army forces must provide social services to control and influence the population while deterring local hostilities.

The competitive control environment is not unique to rural Afghanistan nor the U.S. Army. In Jamaica's Tivoli Gardens, a peri-urban slum of Kingston, a group named Shadow Posse, created a competitive control environment with the Jamaican government. Similar to the Afghanistan example, the Shadow Posse provided



social services in urban settings where the Jamaican government was incapable of providing such services.

Jamaica's infrastructure failed to accommodate urban migration, allowing Shadow Posse to exert control and influence in the slums.

To restore order, the Jamaican Defense Forces conducted full spectrum operations, including light infantry, indirect fire, and heavy bulldozers, to break the civilian fortifications, and in the end, destroy the community.¹² The challenges presented in this example highlight the extreme repercussions when a government cannot provide adequate social services for a population. Specialized understanding of the social dynamics of megacity populations will allow Army forces to address and dominate competitive control environments.

Developing Army Megacity OE Response: Creating UETs

To conduct expeditionary urban operations within the megacity OE, the Army must make an organizational change to be able to create UETs. The role of the UET would be to assess, shape, and if necessary, exploit the megacity OE to ensure freedom of maneuver for Army forces. This capability allows theater army commanders the ability to maintain regional expertise over the multiple domains of the megacities within their AOR.



Situational Awareness and Assessment

UETs must engage in a comprehensive understanding of the environment prior to the arrival of forces. Unlike a traditional urban environment, the megacity environment is a threat in and of itself.¹³ Assessments of the local infrastructure (e.g., roads, waterways, sanitation, energy production, and cellular and internet connectivity) are necessary to understand the Army's required operational capabilities. Following the infrastructure assessment, UETs must determine what effect infrastructure service disruption will have on the population, as well as the population's effect in a services degraded environment.

Likewise, understanding the current reach, perceptions, and influence of local law enforcement, government services, non-state actors, and TCOs will help leaders prevent a power vacuum once Army forces transition combat and stability operations to local governance. Finally, understanding the cultural, social, and religious dynamics of the megacity will ensure Army forces develop the correct messaging. If this is not accomplished, sections of the population may be inadvertently ostracized.

Skills Required for UET shaping of Megacity OEs



Inherent in the complexity of assessing and shaping the megacity environment, the UETs will require a robust and assuring presence, as well as multiple and diverse skillsets. Unlike planning a traditional operation, megacity UETs will have to plan for how Army forces will operate within megacities and how Army forces will provide services to the local population. To be effective, each UET will require a combination of the following assets: military police; combat and civil engineers; staff judge advocates; chaplains, multifunctional logisticians; intelligence specialists; medical service specialists; force managers; adjutants general; signal and cyber personnel; civil affairs, psychological operations, and information operations personnel; and maneuver officers. In other words, each UET will have to cover all seven of the warfighting functions.

UETs would be modified table of organization and equipment units that would deploy in support of the joint task force headquarters and act as the Army's liaison with the joint, interagency, intergovernmental, and multinational (JIIM) partners, and non-governmental organizations.¹⁴ UETs should be assigned to each Army service component command in support of each geographic combatant command. Once employed, the UETs would become the subject matter experts on the megacities within each combat command's area of responsibility. Once on the



ground in a megacity, the UETs would have the capability to assess the environment, align and integrate into the host nation functions, advise and assist in each phase of the operation, and recommend the proper flow of forces to execute follow-on missions.

UETs solve Army Warfighting Challenges

Establishing these megacity UETs addresses and provides solutions to several of the Army Warfighting Challenges (AWfC) outlined in the Army Operating Concept. As a solution to the AWfC, "shaping the security environment," UETs could provide subject matter experts across all Army capabilities to ensure sufficient and timely security environment planning. As a solution to the AWfC, "ensuring interoperability and operating in a joint, interorganizational, and multinational environment," the capabilities resident within the UET would align to the required capabilities to ensure unity of effort across the organization.¹⁵

Missing from the current AWfC, but positively impacted by UETs, would be engagement challenges. The AWfC, "provide security force assistance," details the special operations tasks in planning and providing such assistance; however, the engagement functional concept outlines required capabilities that need to be addressed by special and conventional forces.



Specifically, the Special Operations Center of Excellence needs to address how Army forces develop the capability to ensure effective communication and coordination of enemy, friendly, civilian intelligence and information as well as political, military, economic, social, infrastructure, and information variables.

Additionally, the Army Capabilities and Integration Center (ARCIC) must develop and outline how special operations and conventional forces integrate knowledge of the theater environment, such as culture, terrain, weather, infrastructure, demographics, and neutral entities through the development of UETs. In particular, ARCIC must develop an understanding of the perceptions of partners and other human elements of the environment to develop the situation through action and exert psychological and technical influence.¹⁶ These required capabilities address the competitive control environment and will allow Army forces to plan for and shape the local populations.

Redesign RSTA Squadrons

If brigade combat teams are required to operate within a megacity, reconnaissance, surveillance, and target acquisition (RSTA) squadrons will face new challenges to doctrinal



reconnaissance and security tasks. The survivability of brigade combat teams employed within megacities requires RSTA organizational design changes to ensure freedom of maneuver and protection of Army forces.

The size and density of the megacity will require new airborne intelligence, surveillance, and reconnaissance (ISR) capabilities. Human and signals intelligence collection assets that are traditionally at echelons-above-brigade will need to be re-organized to tactical reconnaissance scout units. To maintain freedom of maneuver in megacities, RSTA squadrons will require new mobility and ISR platforms.

Addressing RSTA Weakness in Megacity OEs

The megacity environment also produces multiple doctrinal dilemmas for RSTA squadrons. Fundamental to the recon and security mission set is the ability to gain and maintain contact with enemy formations. However, when applied to the multi-layered megacity terrain, RSTA squadrons are not equipped to cover the subsurface, surface, elevated superstructure, and airspace. Scout elements are also under-equipped to execute precision target acquisition and intelligence collection within megacities.

Changes to the RSTA squadrons will also answer the AWfC presented in the Army Operating Concept. Organizational changes



and materiel solutions could address the following AWfCs: “developing situational understanding”; “conducting air-ground reconnaissance;” and “conducting wide area security.” These changes support the joint task force commander’s execution in and beyond megacities. To mitigate these megacity reconnaissance and security gaps, RSTA squadrons will require a mix of materiel and non-materiel solutions.

Due to the size and complexity of megacities, traditional Department of Defense information collection techniques are not robust enough to understand the rapidly changing urban environment. The increasing demand and budgetary uncertainty requires a renewed look at the structure and direction of intelligence collection and procedures.¹⁷ Hostile and denied areas compound this gap.¹⁸ Current airborne ISR platforms designed to loiter, observe, and acquire targets, were developed for the smaller urban and rural areas of Iraq and Afghanistan. When these platforms are employed in the multi-layered terrain of megacities, there will be gaps when trying to conduct airborne ISR of the subsurface and elevated areas.¹⁹

RSTA squadrons are currently fielding a small, hand-launched airborne ISR platform which has a low vertical ceiling and would not be effective amidst the large buildings within megacities. Circular loiter patterns are also ineffective for



megacity target identification. For an airborne ISR platform to be effective within megacities, the platform must be capable of vertical take-off and landing, hovering, and horizontal movement and loitering. These capabilities, already in development in the public sector, would allow scout formations the ability to identify targets within large vertical buildings or subterranean tunnels without exposing themselves to the possible threats within the buildings.

The size and complexity of the megacity OE can limit the effectiveness of the RSTA squadron's ability to execute doctrinal tasks. Remote sensors alone are not sufficient to analyze social dynamics of megacities, and there is a significant gap in tactical intelligence collection.²⁰ To execute reconnaissance tasks, such as gathering threat information, supporting lethal and non-lethal targeting, and developing situational awareness, brigade combat team RSTA squadrons require capabilities that are traditionally located in military intelligence units.

The human intelligence collection capabilities in the brigade military intelligence company will help scout formations assess and develop the human dimension and counter possible competitive control environments. Giving RSTA squadrons the



signals intelligence (SIGINT) collection capabilities found in echelons above brigade units allows scouts the capability to discriminate SIGINT sources at the tactical level to close with and engage the correct enemy. Megacities that are moderately to highly integrated will have multiple networked signal, cellular, or internet capabilities which validate this gap. Stryker brigade combat teams (SBCT) have the PROPHET SIGINT collection system organic to SBCT RSTA squadrons; however, this capability must become standard across all Army RSTA formations.²¹ Megacities will challenge RSTA squadrons to execute security tasks. As such, RSTA squadrons will require augmentation to execute within megacities.²²

One such augmentation would be tactical mobility assets. The megacity poses threats to tactical mobility in the form of environmental anti-access and area denial (A2/AD). High population density and civilian transportation infrastructure may prohibit the use of current tactical vehicles. The Maneuver Center of Excellence (MCoE) has identified a capability gap to transport reconnaissance forces over long ranges: "mounted elements lack an all-terrain vehicle capable of transport by Army Aviation units and capable of airdrop to conduct Unified Land Operations in all environments."²³ This capability gap is magnified when RSTA formations are required to operate within



multi-layered megacities and face potential environmental A2/AD challenges.

Currently, the MCoE is pursuing the lightweight reconnaissance vehicle, maximizing protection and lethality. However, this six-soldier vehicle would still have a mobility gap inside a megacity.²⁴ To mitigate this gap the MCoE and ARCIC need to develop a megacity-specific transportation solution. Scout platoons should be outfitted with an all-terrain motorbike to maximize mobility. These light and highly mobile vehicles allow scout elements the freedom of maneuver across multi-layered terrain and easily counter environmental A2/AD obstacles.

When a brigade combat team engages in combat operations or incident response, RSTA squadrons and their reconnaissance and surveillance tasks and functions are vital to survivability and freedom of maneuver. These functions and tasks are severely challenged if RSTA squadrons are deployed in the megacity OE. By redistributing the intelligence collection capabilities and development of new platforms to counter environmental A2/AD, the redesigned RSTA formations become capable of expeditionary reconnaissance and security within megacities.

Conclusion



Urbanization is a global trend that presents new and unique challenges to the Army. Extreme population growth and migration are creating megacities that are rapidly becoming global hubs for economic expansion, access to natural resources, and potential safe havens for various adversarial non-state actors. Each megacity is unique, and the Army must develop situational understanding to operate effectively. The unprecedented size of megacities presents unfamiliar challenges for the Army for which historical scenarios do not apply. The Army must make two organizational changes to conduct expeditionary megacity operations: first, create UETs; and second, redesign RSTA squadrons.

UETs will develop situational awareness, shape the security environment, and serve as the Army's inter-institutional liaison in support of joint task force missions and priorities. Once Army forces are committed to a megacity, the enhanced capabilities of redesigned RSTA squadrons will enable tactical intelligence collection, rapid maneuver, and the ability to gain and maintain contact with enemy forces. The creation of the UETs and the expansion of the RSTA squadrons gives strategic and tactical leaders the tools and required skillsets to make timely and well informed decisions while operating within megacities. The success of these organizational changes requires investment not only in re-organization and research and development, but



also acknowledging the dynamic and growing challenges that the megacity operational environment provides to Army and joint forces.



ENDNOTES

- ¹ Chief of Staff of the Army (CSA), Strategic Studies Group (SSG), *Megacities and the United States Army Preparing for a Complex and Uncertain future*, June 2014, 2.
- ² Ibid., 3.
- ³ United Nations, Department of Economic and Social Affairs, Population Division, *World Urbanization Prospects, The 2014 Revision: Highlights*, 2014, 1.
- ⁴ Ibid., 2.
- ⁵ Ibid., 3.
- ⁶ CSA SSG, 5.
- ⁷ David Kilcullen, *Out of the Mountains* (Oxford: Oxford University Press 2013), 30-31.
- ⁸ CSA SSG, 5.
- ⁹ Ibid., 127-138.
- ¹⁰ Kilcullen, 123; citing interviews with Afghan respondents in Jalalabad, September 2009.
- ¹¹ Ibid., 123; citing interview with Afghans respondents from Kandahar, 2010.
- ¹² Ibid., 89-102.
- ¹³ Ibid., 30.
- ¹⁴ LTG P.K. Keen, "Foreign Disaster Response JTF-Haiti Observations," *Military Review* (Ft. Leavenworth: Combined Arms



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¹⁵ "ARCIC/Initiatives: Army Warfighting Challenges" ARCIC website, accessed May 2015,
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¹⁶ TRADOC Pamphlet 525-8-5, *US Army Functional Concept for Engagement* (Washington, DC: U.S. Government Printing Office [GPO], 24 February 2014): 22-25.

¹⁷ Dr. Charles Ehlschlaeger, "Understanding Megacities with the Reconnaissance, Surveillance, and Intelligence Paradigm" (*White Volume*, April 2014): ii-ix.

¹⁸ *Ibid.*, 48.

¹⁹ ARCIC Future Warfare Division, (Unified Quest 14 The Megacity, Operational Challenges for Force 2025 and Beyond): 2.

²⁰ Ehlschlaeger, "Understanding Megacities," 48.

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²² *Ibid.*, 1-4.

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<http://www.benning.army.mil/mcoe/maneuverconference/ReadAhead/MRD/MRDLRVinfopaper1Aug14.pdf>.

²⁴ *Ibid.*, 1-3.