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Defensive Operations in Desert Warfare

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Haines Research Topic: Desert Warfare

THESIS: The unique weather, terrain, and harshness associated with desert environments require extraordinary attention to military operations and strategies to ensure Brigade Combat Teams (BCTs) are successful in conducting desert warfare.

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Abstract

Defensive operations in the desert present unique challenges to commanders, Soldiers, and their equipment. The often rugged, barren terrain allows for multiple avenues of approach for advancing enemy forces. This wide-open terrain, while facilitating maneuver, requires a large number of forces and supplies to defend. Effective use of the available terrain and integration of the combined arms team is vital to the success of the Brigade Combat Team (BCT). The extreme temperatures and dusty conditions create a harsh environment for the Soldier on the ground and the equipment he operates. These desert conditions when contrasted against the more forgiving European terrain demonstrate some of the same challenges to the commander. The challenges in the desert, while being more extreme than in the European environment, still exist in both theaters of operation.

Defensive Operations in Desert Warfare

Historically, defensive warfare predates the Roman Empire and has continued to evolve into the modern combined arms warfare on today's battlefield. Nations have sometimes deployed their armies to areas of operation where they were unprepared for the terrain that confronted their forces on the ground. The unique weather, terrain, and harshness associated with desert environments require extraordinary attention to military operations and strategies to ensure Brigade Combat Teams (BCTs) are successful in conducting desert warfare. This paper will contrast the difficult challenges commanders face when conducting defensive operations in a desert environment compared to the terrain in the European theater of operations.

Fundamentals of the Defense

Defensive operations are combat operations designed to defeat an enemy attack, gain time, economize forces, or develop conditions to transition to offensive operations (FM 3-0). The combination of air assets and ground forces working together is the combined arms theory of modern warfare. The commander must use the appropriate weapons system and the appropriate troops at just the right time, and synchronize their employment in the destruction of the enemy (Dunnigan, J. F., & Bay, A., 1992, p 255).

Planning IV

✓ The generally open, flat terrain of the desert facilitates the use of intelligence, surveillance, and reconnaissance (ISR) and engineer assets to determine possible enemy objectives and avenues of approach. Satellite and unmanned aerial systems (UAS) provide for the accurate locations of enemy positions during the planning phase. The commander must determine the enemy's vulnerability to attacks and the effectiveness of obstacles to hinder maneuver, and take away the initiative of the attacking force.

The defending commander must decide how to array his forces against the attack. The objective is to defeat the attacking force with multiple unexpected blows before it attacks the defending force. The desert terrain allows for maximum use of observations and fields of fire. The extended distances permit weapons to use their maximum standoff range to destroy the enemy at the point of the commander's choosing.

The avenues of approach in the desert terrain allow maneuver from virtually any direction. The commander must shape the battlefield with obstacles to block, turn, and canalize enemy movement. These obstacles can be natural terrain that prevents freedom of maneuver to attacking elements integrated with man-made fortifications of wire and mines, and deep trenches or "tank ditches". The distances between terrain features require extensive amounts of barrier material when building obstacles to affect the enemy's maneuver. The sandy desert allows rapid seeding of minefields and although sand and wind can expose buried mines, or cover them and prevent proper functioning, they still may affect the enemy's maneuver. Allied forces in World War II made extensive use of minefields in the defense of El Alamein (Lucas, 1982). The commander may also deploy decoy minefields to disrupt the enemy's advance.

The hot dry desert weather takes its toll on Soldiers and equipment. Overheating and working in desert soils increases the wear on engines and hydraulic systems, often causing a 20-25 percent decrease in performance (Grau, 1995). The heat also decreases battery life in all types of equipment.

Preparation

The commander must ensure that his forces have the time available to prepare the defense and integrate all supporting efforts. Many elements of preparation happen during the planning stages following the priorities of work and basic troop leading procedures

AVOID
 It is also during this period that reconnaissance and construction of engagement areas occur. The ability to control the ground and designate exactly where the commander wants to destroy the enemy is invaluable to his supporting commanders. Rehearsals reinforce this advantage and integrate the combined arms team.

Execution

Commanders conduct security operations through active patrolling to gain and maintain contact with enemy forces. This contact prevents the enemy from ascertaining friendly locations of battle positions, obstacles, and friendly forces.

The execution of the defense confirms the success of the planning and preparation stages. The ability to mutually support adjacent positions while simultaneously integrating fires with maneuvering forces to destroy the enemy in the engagement area is evidence of success. When the enemy force is stopped, over extended, or transitions to the defense is the time that the defending forces transition into the counterattack and begin offensive maneuvers.

Cover and Concealment

Cover and concealment are not readily available in desert. The flat expanses of the desert provide minimal natural cover and concealment, especially from aerial reconnaissance. The construction of camouflage and deception measures take up to three times as much effort in the desert as in European terrain (Grau, 1995). Daytime movement produces dust trails that are observable for several kilometers. At night noise and light travels long distances

Defensive Operations in European Environments

Fundamentals of the Defense

Commanders conducting defensive operations in the temperate European region must use the same procedures for assessing the effects of the terrain on defensive operations. The

conditions in this theater, while not as harsh the desert, present a different set of challenges for ground forces.

Planning

The undulating terrain, forests, and urban areas on the European battlefield limit Observations and Fields of Fire. These limitations prevent the commander, in many situations, from maximizing the standoff range of direct-fire weapons. The varying levels of terrain provide several opportunities to occupy high ground over-looking the engagement area. The rolling terrain presents the challenge of identifying and covering dead space to deny freedom of maneuver to the enemy. This rolling terrain, forests, rivers, lakes, and urban areas limit the available avenues of approach and allow commanders to prepare more developed engagement areas. The use of terrain and abundance of improved roads facilitate maneuver and shorten the lines of communication for resupply.

The varying elevation provides opportunities to exploit the high ground to control or occupy Key terrain on the battlefield. The terrain may be choke points or high-speed avenues of approach that will allow the maneuver of large elements to support the commander's course of action (COA). These choke points and natural obstacles on the battlefield are normally present and compliment the man-made obstacles when the two are integrated. The terrain is generally difficult for seeding minefields, but the natural ground cover provides some camouflage when using surface laid mines.

Preparation

The terrain and number of available troops limit the time the defender has to prepare his defense. The benefits of more restrictive terrain and natural obstacles allow the defender to integrate his defense into the surrounding natural obstacles.

The available use of high ground allows the commander to employ his reconnaissance assets to observe enemy positions and movement. The restrictive terrain restricts movement and conceals the enemy's position from most ISR assets. This restrictive terrain allows for smaller engagement areas that facilitate the construction of obstacles and allow more time for digging in mechanized forces.

Execution

The execution of the defensive operation occurs once the enemy advances into the engagement area. This does not differ from the execution in any other environment.

Cover and Concealment

Cover and Concealment using natural vegetation and available terrain are more abundant. The use of terrain provides cover from direct fire weapons and concealment during maneuver. The terrain also facilitates the concealment of friendly reserve forces awaiting the counter attack.

Conclusion

After identifying the differences in desert and European conditions, leaders can draw certain conclusions. It is obvious that the desert environment takes a toll on military operations. Proactive measures by defending forces to ensure the best use of available time when preparing the defense can mitigate many of these conditions. Increased maintenance and survivability measures have to be aggressively pursued to maximize the effectiveness of weapons systems and Soldiers in the desert. Leaders that are aware of these differences can be just as successful in the harsh desert environment as the defender in Europe.

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