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MASTER OF MILITARY STUDIES

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**TITLE:**

Human Terrain Mapping and Its Application for Counterinsurgency Operations in Afghanistan

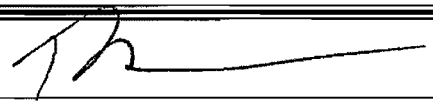
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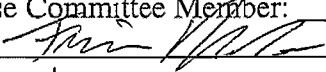
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## Executive Summary

**Title:** Human Terrain Mapping and Its Application for Counterinsurgency Operations in Afghanistan

**Author:** Major Sean M. Hankard, United States Marine Corps

**Thesis:** Effective counterinsurgency requires intelligence collection that enables the military's ability to develop a comprehensive understanding of the environment, not simply identify and locate targets for kinetic action. Human terrain mapping is an answer, but must be supported by organizational change at all echelons of command that reinforce intelligence priorities and dissemination methods most beneficial to counterinsurgency operations.

**Discussion:** General McChrystal, ISAF Commander, in his Commander's Initial Assessment stressed that the insurgency in Afghanistan has reached a critical stage. The Afghan government and ISAF forces have failed to address the population adequately and are losing control of the countryside to the insurgency. General McChrystal has directed that ISAF and U.S. forces improve their understanding of the complex environment and conduct a more effective population-centric counterinsurgency campaign.

On the ground, examples of successful battalions in Iraq and Afghanistan demonstrate clearly that units that effectively understand the population and work closely with them are most effective in COIN operations. While targeting the enemy still remains the primary focus of intelligence, the mapping of the human terrain and close, daily engagement with the population enables the U.S. forces to apply a balanced approach and better assess the effects of their actions.

The ISAF and U.S. intelligence communities have failed to provide their leaders with the comprehensive understanding of the environment to make sound operational and strategic decisions. Doctrine has been updated to emphasize the population in collection and analysis and discussion within ISAF has included the creation of specialized cells and methods to produce relevant information for counterinsurgency operations. The next step will be integrating these changes and proposals.

Existing force capabilities that engage the population on a routine basis, can provide a wealth of information about the population, but have not been harnessed effectively. Tasking existing sensors, developing a common environmental picture, and fusing information from various actors within the battlespace can produce a more complete understanding of the environment and support a population-centric counterinsurgency approach.

**Conclusion:** This research demonstrates that the means to understand better the human element of the environment exists through human terrain mapping. First, human terrain mapping supports units actively engaged with the population to decipher the human aspects of the environment to improve performance. Second, ISAF intelligence, by focusing on collection of population-centric intelligence, provides improved knowledge of the enemy and the environment to support decision making. Finally, human terrain mapping at the regional command and division level of command can synchronize the actions of Psychological Operations, Civil Affairs (CA), Provincial Reconstruction Teams (PRT), Human Terrain Teams (HTT), and maneuver units and improve the flow of population-centric data and analysis.

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Counterinsurgency operations in Iraq and Afghanistan have highlighted the need for a better understanding of the human terrain. In testifying before the House Armed Services in 2004, Major General Robert Scales stated, "The human element seems to underlie virtually all of the functional shortcomings chronicled in official reports and media stories: information operations, civil affairs, cultural awareness, soldier conduct...and most glaringly, intelligence, from national to tactical."<sup>1</sup> To address this deficiency, the U.S. military has placed greater emphasis on cultural training and education programs that utilize cultural expertise found in academia and explored changes to operational design. Yet, while U.S. and allied performance has improved in many ways since 2004, navigating the human terrain remains a shortcoming for U.S. and ISAF operations in Afghanistan in 2009.<sup>2</sup>

Faced with the need to combat insurgencies in two theaters, Afghanistan was initially relegated to an economy of force mission, while the operations in Iraq garnered the lion's share of resources, personnel, and attention. With the situation in Iraq stabilized and continuing to improve, the deteriorating situation in Afghanistan will be at the forefront of U.S. military operations. In the unclassified initial assessment from August 2009, General McChrystal states,

This is an important -- and likely decisive -- period of this war. Afghans are frustrated and weary after eight years without evidence of the progress they anticipated. Patience is understandably short, both in Afghanistan and in our own countries. Time matters; we must act now to reverse the negative trends and demonstrate progress.<sup>3</sup>

The Afghan population is the center of gravity in the conflict and must be secured if the Taliban are to be neutralized as a threat against the Afghan government.

In charting a course that will turn the tide of a growing insurgency, General McChrystal believes that improved understanding of the human terrain is necessary for ISAF to succeed. He has stated that, "ISAF leaders must redouble efforts to understand the social and political dynamics of all regions of the country and take actions that meet the needs of the people, and

insist the Government of the Islamic Republic of Afghanistan (GIROA) officials do the same.”<sup>4</sup> In a similar acknowledgement of current deficiencies, the Deputy Chief of Staff of Intelligence for ISAF has identified the need to improve the collection and dissemination of cultural intelligence. In regards to cultural intelligence he writes, “This vast and underappreciated body of information, almost all of which is unclassified, admittedly offers few clues where to find insurgents, but it does provide elements of greater strategic importance – a map for leveraging popular support and marginalizing the insurgency itself.”<sup>5</sup>

Neglected in doctrine and practice in the early years of the war, collecting information on the population and human aspects of the environment to support decision-making and execution has been given greater emphasis for counterinsurgency operations in Afghanistan. In doctrine, the U.S. Army and Marine Corps developed and released the *Counterinsurgency Field Manual* in 2006 and a revised *Intelligence Preparation of the Battlefield / Battlespace (IPB) Field Manual* in October 2009. The updated IPB manual addresses weaknesses from the previous version by emphasizing the collection of intelligence and analysis of the population for a more balanced understanding of the environment.<sup>6</sup> With doctrinal references established, the assessment of its impact in improving the understanding of the human terrain will become clearer as General McChrystal’s strategy is implemented. Success will require the U.S. to understand the population well enough to adopt what David Galula refers to as “indirect action,” where the counterinsurgent eliminates the conditions that produce support for the insurgency.<sup>7</sup>

General McChrystal makes it clear that the success of military operations in Afghanistan is dependent upon understanding the population. Correcting the problem requires a systematic analysis of the population, dedicated personnel and time to study it, and the means to capture this information in a way that can produce meaningful action. Effective counterinsurgency requires



intelligence collection that enables the military's ability to develop a comprehensive understanding of the environment, not simply identify and locate targets for kinetic action. Human terrain mapping is an answer, but must be supported by organizational change at all echelons of command that reinforce intelligence priorities and dissemination methods most beneficial to counterinsurgency operations.

In examining human terrain mapping, this paper will look at what human terrain mapping is, why it is important to COIN operations and how it can support all echelons of command. First, human terrain mapping supports units actively engaged with the population to decipher the human aspects of the environment to improve performance. Second, ISAF intelligence, by focusing on collection of population-centric intelligence, provides improved knowledge of the enemy and the environment to support decision making. Finally, human terrain mapping at the regional command and division level of command can synchronize the actions of Psychological Operations (PSYOPS), Civil Affairs (CA), Provincial Reconstruction Teams (PRT), Human Terrain Teams (HTT), and maneuver units and improve the flow of population-centric data and analysis.

## WHAT IS HUMAN TERRAIN MAPPING

The *Counterinsurgency Field Manual* states that “truly grasping the operational environment requires commanders and staffs to devote at least as much effort to understanding the people they support as they do understanding the enemy.”<sup>8</sup> The term human terrain mapping first appeared in an article from Lieutenant Colonel Jack Marr, Battalion Commander of the 1-15 Infantry, and his staff in 2008. In this article, he highlighted how they analyzed the cultural,

political, and economic aspects of their area of operation to conduct counterinsurgency (COIN) operations more effectively.<sup>9</sup>

At its most basic level, human terrain mapping is a means to understand the cultural and social elements of the environment through both product and process. LTC Marr writes, "...before the counterinsurgent can win over the people, he must take the necessary steps to really understand and know them."<sup>10</sup> While the traditional view of mapping brings to mind a two-dimensional, color-coded overlay, in reality mapping human terrain is both a graphical depiction and a dynamic and interactive process that seeks to improve understanding of the population, the influence of the government, and the enemy through graphic portrayal and continuous research. The picture that is built through the collection effort and its continuous updating enables the counterinsurgent to understand the human terrain and manipulate his actions to support the mission more effectively.

LTC Marr identified the methodology of collecting information, building databases, and depicting the information in a way that enhanced engagement with the population and helped to eliminate popular support for the insurgency in his battalion's area of operation (see Appendix A, TF Dragon Tactical Human Terrain Mapping). In much the same way that the U.S. military employs the common operational picture to produce shared understanding of the enemy and friendly forces, human terrain mapping seeks to expand situational awareness through a human-terrain picture. Through a number of published information requirements, every patrol that entered the population was assigned three major tasks, to provide security, gather Information Requirements (IRs), and develop relations with the people they encountered. The IRs answered would helped to develop a picture of the human terrain, while personal engagement, Civil

Affairs, Human Intelligence Collection Teams (HCT), and Psychological Operations sought to shape it.<sup>11</sup>

The Human Terrain Handbook developed by the U.S. Army program, Human Terrain System (HTS), utilizes the Cultural Preparation of the Environment (CPE) to help understand the environment, which mirrors the four steps of Intelligence Preparation of the Battlespace (IPB). The four steps of CPE are Identify Physical and Human Terrain, Describe Civil Considerations, Identify Social and Political Patterns, and Identify Key Friction Points or Misconceptions. In the second step, the area, structure, capabilities, organizations, people, and events (ASCOPE) of the battlespace are examined and serve as the most important step in establishing a baseline for future collection.<sup>12</sup> (see Appendix B, ASCOPE) As a method, this detailed assessment of the human terrain represents an evolution from the IRs first developed by Task Force Dragon during their deployment in 2007 and expands the understanding of the human terrain.

## WHY HUMAN TERRAIN MAPPING IS RELEVANT FOR COIN

Mao Tse-Tung described the population in a guerilla war as the medium in which the insurgent operates.<sup>13</sup> In order to influence the population and turn it against the government, the insurgent must interact with and influence the people. Success for ISAF and other counterinsurgency missions will be heavily dependent upon developing an intimate understanding of the population and using this knowledge to deny the insurgents access to the people. Additionally, a thorough understanding of the environment and successful engagement with the populace can provide the counterinsurgent with the ability to separate the enemy from the people through non-kinetic means and an opportunity to reconcile elements of the insurgency with the government.

Employing the framework of human terrain mapping enables conventional forces to ensure collection efforts against the enemy is balanced with the population. The default for conventional military forces and intelligence is to dedicate most assets on target acquisition of the enemy, with the population becoming an after-thought. General McChrystal states “ISAF must change the operational culture...to focus on protecting the Afghan people, understanding their environment, and building relationships with them.”<sup>14</sup> By leveraging human terrain mapping, the U.S. military can improve its understanding of the complex environment in Afghanistan, develop plans and strategy that defeats the insurgency, identify and leverage potential allies, and improve its support among the Afghan population.

Not everyone within the U.S. military is convinced that change is necessary. While General McChrystal and others advocate the benefits of adapting methods and organization to focus on the population, critics are concerned that excessive change may hinder the military’s ability to defeat conventional adversaries in the future.<sup>15</sup> However, critics fail to recognize that a full-spectrum military needs to be able to do both and changes made to improve the conduct of counterinsurgency may benefit the planning and conduct of conventional operations. Making a distinction between the types of warfare the U.S. military will conduct and limiting how well it should understand the environment is counterproductive to effective operational design and problem framing.

While destroying the enemy is important, the overemphasis on the insurgent has hampered the ability of the intelligence community to understand the broader picture. MGen Flynn assesses that the current focus on insurgent attacks, “baits intelligence shops into reacting to enemy tactics at the expense of finding ways to strike at the very heart of the insurgency.”<sup>16</sup> Furthermore, the cultural aspects present in many of the tribes found in the most heavily

contested areas of Afghanistan, makes the death of insurgents a source of additional fighters who are required by code to take revenge against the coalition. Although the killing of insurgents is often necessary, understanding the potential for fueling the insurgency through a purely kinetic, enemy-focused approach is required.

The utilization of human terrain mapping enables military forces to identify the multiple cultural layers in a society and seek to understand them. In Afghanistan, there are seven major ethnic groups, countless numbers of tribes, and an exponentially-higher number of clans. In addition to the traditional social divisions based on family, there are religious divisions, warlords, criminal organizations, and three separate insurgent organizations that need to be understood. Through a systematic analysis of the local environment, conventional forces will be able to identify the multiple ethnicities, understand the unique culture of each, and engage each more intelligently for mission success.

#### UTILIZING CULTURAL KNOWLEDGE THROUGH HUMAN TERRAIN MAPPING

The *Counterinsurgency Field Manual* states that one of the historical principles derived from past insurgencies is, “Successful conduct of COIN operations depends on thoroughly understanding the society and culture within which they are to be conducted.”<sup>17</sup> While all personnel assigned to support COIN operations in Afghanistan receive cultural awareness training, have access to survival language resources, and know where in Afghanistan they will be deployed, deep understanding must be gained through immersion and experience with the environment. Those units and personnel who make the effort to understand the population tend to be the most successful in conducting COIN operations.<sup>18</sup> Human terrain mapping can prepare

conventional units for unconventional warfare, create order out of a complex environment, inform planning and operations, and secure the objective that is the population.

Afghanistan represents one of the most complex environments in which the U.S. military has ever had to operate. Understanding all of the cultural inputs in a given area of operation will require concentrating at the local level to collect information and intelligence and interpret the intentions, historical narrative, and allegiances. In many areas in Afghanistan, units are expanding the influence of ISAF into portions of the country where coalition forces have yet to venture: TF Dragon, led by LTC Marr, faced a similar situation when he assumed responsibility for his area of operation and did not receive cultural or population data from the outgoing unit. By developing a framework to begin collecting data on the population, he was able to rapidly build situational awareness through active collection and engagement that paid significant dividends during the deployment.<sup>19</sup>

Counterinsurgency operations by definition are complex, but the counterinsurgent can produce meaning and shared understanding through human terrain mapping. Identifying tribal boundaries, key leaders, ethnic groups, grievances, economic activities, and infrastructure can begin to arrange the area of operation and focus the activities of the counterinsurgent. By developing products that depict this information and disseminating it throughout the unit, human terrain mapping builds situational awareness and provides a common frame of reference. Through experience and collation of information, the counterinsurgent can begin to recognize patterns and irregularities that can be exploited to deny the insurgent access to the population.

Without adequately understanding the human terrain, the likelihood of unintended, negative consequences increases. The need to win over the population requires that planning and operations be conducted with an understanding of how they will be perceived and how they will

influence support for the government. Focusing solely on the enemy is a path to failure as the Soviets learned, “when despite killing hundreds of thousands of Afghans, they faced a larger insurgency near the end of the war than they did in the beginning.”<sup>20</sup> Understanding the environment, the population’s tolerance for certain actions, and perceptions ensures tactical success and avoids errors with strategic-level consequences.

Major Jim Gant, who served as a Team Leader of a Tribal Engagement Team (TET) in Afghanistan, has contributed to the understanding of Afghan tribes and their value in defeating the insurgency with his article “One Tribe at a Time.”<sup>21</sup> His understanding of the tribes was developed through living with a tribe and being immersed in their culture. As a result of his understanding of this element of the human terrain, his unique experience enabled him to identify an important potential ally in the fight against the Taliban.<sup>22</sup> While it is not possible or desirable in some cases to immerse large conventional units into tribes, the benefit of immersing units through analysis of the culture in areas of operation can lead to critical discoveries that support COIN.

While TF Dragon has already been mentioned as using understanding of the human terrain to successfully conduct effective COIN operations, there are a numerous examples emerging to reinforce this point. Major General Flynn, ISAF CJ2, referenced three infantry battalions who have used understanding of the population effectively to achieve significant successes. In the case of 1st Battalion, 5th Marines, their collection effort and engagement with the population is an excellent example of what ISAF can accomplish.<sup>23</sup> After clearing an area in southern Afghanistan that had been held by insurgents, 1/5 reduced IED attacks by 90%, returned Afghans who had fled their homes because of the Taliban, and weakened the insurgency. Similar results have also been achieved by 1st Squadron, 91st Cavalry and 3rd.

Squadron, 71st Cavalry, not by focusing on the enemy, but by applying resources and personnel to engage the population.<sup>24</sup> Also, the HTT attached to 4<sup>th</sup> Brigade, 82d Airborne has been credited with reducing kinetic activity against insurgents by 60% and increasing district support of the government from 34 to 53 of 83 districts.<sup>25</sup>

Through understanding and engaging the population, battalions and companies have demonstrated that focusing on the culture can produce tangible results. Engagement and systematic analysis are critical elements for the successful application of COIN operations. Human terrain mapping can assist conventional forces with understanding the human aspect of the environment and providing a greater appreciation of their impact on the society they are trying to protect. For higher headquarters, the challenge of understanding the population in an expansive area of operation has been identified as an area for improvement.

## FIXING INTELLIGENCE

General McCrystal stated in his initial assessment on Afghanistan, “Central to my analysis is a belief that we must respect the complexities of the operational environment and design our strategic approach accordingly.”<sup>26</sup> However, the failure to understand the complex environment is one of the main reasons he and others believe ISAF is currently losing ground in defeating the insurgency. The ISAF Assistant Chief of Staff for Intelligence, Major General Flynn, elaborated further by stating, “Eight years into the war in Afghanistan, the U.S. intelligence community is only marginally relevant to the overall strategy.”<sup>27</sup> With its focus on the enemy, at the expense of the population, the intelligence community has been unable to provide the comprehensive understanding required for the U.S. and ISAF leadership to make well-informed decisions.



There are a number of short and long-term solutions for fixing the intelligence community and making it more effective at collecting and analyzing the human terrain. In the short term, communicating information related to the population must improve to ensure that data and analysis collected at the local level is efficiently conveyed to the operational and strategic levels. Intelligence must push assets and resources to lower levels to ensure they have every available means to support collecting this information. In both cases, intelligence assets must attach greater importance to the populations itself. In the long-run, the intelligence community must adjust its doctrine and training to include greater emphasis on culture and the population during planning and execution. As Major General Flynn stated, “lethal targeting alone will not help U.S. and allied forces win in Afghanistan.”<sup>28</sup>

The current transmission of population-centric intelligence between ISAF headquarters and the units on the ground is broken. MGen Flynn identified the culture of the intelligence community as mostly to blame, stating,

the intelligence community’s mode of operation is surprisingly passive about aggregating information that is not enemy-related and relaying it to decision-makers or fellow analysts up the chain of command; it...is strangely oblivious of how little its analytic products, as they now exist, actually influence commanders; [and] it is also a culture that is emphatic about secrecy but regrettably less concerned about mission effectiveness.<sup>29</sup>

Furthermore, he identifies that the information exists in many cases at the lower levels and the technological means to convey this information is not the problem.<sup>30</sup> It is the lack of emphasis placed on the human terrain that explains why information on the population is largely absent at higher echelons of command.

Intelligence must push assets and resources to the lower levels, where the bulk of the data that supports the effectiveness of COIN operations can be found. MGen Flynn assesses accurately that tactical level information in Afghanistan needs to be assessed and understood at.

the operational and strategic level; however, the battalions and companies that have the greatest access to this information have the fewest resources and analysts to manage it.<sup>31</sup> His recommendations are to push additional analysts to lower echelons and encourage analysts to travel throughout the battlespace to gain first-hand knowledge. Similar to HTTs, analysts charged with collecting and analyzing information on the population would focus on this aspect of the environment, work closely with subordinate unit intelligence sections, and tap into a variety of intelligence and staff elements that focus on the human terrain.

Until recently, joint doctrine lacked the detail and emphasis required to support decision-making effectively in a counterinsurgency. LCDR Coles, in examining the previous Joint Intelligence doctrine, finds that culture and focus on the population is not emphasized. He writes that, "Examination in more detail of what intelligence is in joint doctrine shows that it centers on combat adversaries and the physical environment."<sup>32</sup> In those rare instances where the environment was discussed, it tended to focus on the physical terrain or the enemy, with little detail provided on what intelligence is to collect and analyze about the population. This doctrinal blind spot, resolved in part with the release of the updated IPB Field Manual in fall of 2009, helps to explain why the intelligence community had been less effective in developing information on the population.<sup>33</sup>

Major General Flynn proposes what he terms a Stability Operations Information Centers (SOIC), which would focus on the population, travel into the field, serve as a clearing house for population-centric information, and provide information and intelligence to commanders that will help them understand the entire environment.<sup>34</sup> Composed of military and civilian intelligence analysts, the SOIC would remain separate from the Fusion Centers, which primarily deal with targeting the enemy, in order to remain accessible to a greater number of customers

and avoid issues with security clearance. Similar to the HTTs found at subordinate headquarters, they would be able to provide unclassified and open-source information to support civil affairs, non-governmental organizations, and host-nation personnel. Where fusion centers and traditional intelligence activities focus on the enemy, the SOIC would almost exclusively focus on the population.<sup>35</sup>

### SYNCHRONIZING EFFORT THROUGH HUMAN TERRAIN MAPPING

Major General Flynn identified that the disconnect between units engaged directly with the population and ISAF headquarters is at the Regional Command and Division level; this has interfered with the transmission of intelligence and information required to assess the environment.<sup>36</sup> The disconnect has hampered a thorough understanding of the population and inhibited the ability of key leaders to make well-informed decisions. A wide array of capabilities and elements within the military command structure engage the population and the human element of the terrain, but there is a need to tie them together to map the human terrain effectively and inform military action and political decisions.

Civil Affairs, PSYOPS, PRTs, HTTs, and standard infantry patrols all collect information on and interact with the population. While they have different capabilities, means, and focus, their integration can play a significant supporting role in the effort to conduct population-centric COIN. When integrated with the SOIC, this concept takes advantage of the unique capabilities that currently exist in the force and combines their efforts in a way that provides the information required to effectively analyze the population in order to build support for the GIRoA and counter the influence of the insurgents.<sup>37</sup>

The mission for Civil Affairs is to “systematically identify critical requirements needed by local citizens in war or disaster situations...[and] help minimize civilian interferences with operations, support national assistance activities, plan and execute non-combatant evacuation, support counter-drug operations, and establish and maintain liaison or dialogue with civilian personnel agencies and civilian commercial and private organizations.”<sup>38</sup> While a significant portion of the civil affairs effort has gone to Provincial Reconstruction Teams, these units exist at the headquarters of battalions and higher and can provide critical information on the population. As a conduit for civil projects and local governments, they are able to collect detailed information on the needs of the population and can assist in gauging levels of support for the government. This contribution to the assessment and understanding of the population provides identification of critical infrastructure, economic information, and needs for social services.

The mission of Psychological Operations units is to “influence the behavior of foreign target audiences (TAs) to support U.S. national objectives...by conveying selected information and/or advising on actions that influence the emotions, motives, objective reasoning, and ultimately the behavior of foreign audiences.”<sup>39</sup> While psychological operations are considered an element of non-lethal fires, key to influencing the behavior of a population is assessing attitudes and perceptions. The employment of Tactical PSYOP Teams (TPT) throughout the battlespace provides an opportunity to engage villages and towns to identify grievances and determine which messages resonate with a specific demographic. By incorporating assessments from PSYOPS, location of tribes and ethnic groups can be identified and government support can be determined.

The Provincial Reconstruction Teams serve as an interagency team that combines members of the military and government agencies.<sup>40</sup> “Their mission is to (1) assist the Islamic Republic of Afghanistan extend its authority, (2) enable security sector reform efforts, and (3) enable reconstruction and development efforts.”<sup>41</sup> Working primarily in reconstruction, their objective is to support the GIRoA’s influence through the provinces. Including elements of civil affairs, they also possess capabilities and access to the surrounding population that can provide improved understanding of the environment. Their assessment of villages and cities within assigned areas of responsibility and close relationship with representatives of the Afghan government provides significant interaction that can benefit mapping the human terrain.

The Human Terrain System (HTS) pairs anthropologists and other social scientists with active and retired members of the military in Human Terrain Teams (HTT) to support the staffs at regiment, brigade, and division headquarters, by providing research reach-back capability, cultural expertise, extended presence in an area of operation, and software to help map the human terrain. In concert with the intelligence section, the HTT evaluates the environment and seeks to provide data on the human terrain to support the Intelligence Preparation of the Battlefield through Cultural Preparation of the Environment (Table 1 - IPB / CPE Comparison).<sup>42</sup> The Cultural Preparation of the Environment (CPE) is completed in conjunction with the intelligence section’s IPB and elements concerning the human terrain can also be displayed to ensure both the physical and human terrain are represented.<sup>43</sup> Assigned the primary responsibility to develop a comprehensive assessment of the population, the HTTs serve as a valuable means to inform staffs through research and coordination with subordinate units with the battlespace.

IPB Step	Cultural Information Focus
1. Define the Operational Environment	Identify Physical and Human Terrain
2. Describe the Environmental Effects	Describe Civil Considerations (ASCOPE)
3. Evaluate the Threat	Identify Social and Political Patterns
4. Determine Threat COA	Identify Key Friction Points or Misconceptions

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Table 1 – IPB / CPE Comparison

Engagement with the population by maneuver units during patrols and operations also provides data necessary for understanding the population. Through the process of securing the population, reporting and observations feed the intelligence cycle, which generates assessments and analysis. Increasingly, intelligence functions that typically occurred at battalions or above are being performed at companies and even platoons. The ability to conduct a census and collect biometric data enables these units to develop an extremely detailed understanding of the population, but engenders significant difficulty in disseminating information up the chain of command. The combination of engagement by patrols at the local level by and expertise found in CA, PSYOPS, PRTs, and HTTs, demonstrates that there are multiple sources for information, but what is lacking is the ability to combine this information in a manner to support intermediate headquarters between the battalions and ISAF headquarters.

If there are adequate assets and expertise capable of conducting human terrain mapping, what are possible solutions to resolve the breakdown between the maneuver elements working amongst the population and the ISAF headquarters and political leadership? General Flynn's article points to the need to push analysts down to the lowest echelons, create intelligence cells focused on the environment, standardize terrain mapping programs, and improve the flow of

information from local units to the senior commands.<sup>45</sup> Extending this concept to regiment and brigade through regional headquarters could help alleviate the disconnect and enable units to more effectively understand the population.<sup>46</sup>

To support a common operational picture of the human terrain and dissemination of population-centric information, the utilization of human terrain mapping programs and detailed, written assessments<sup>47</sup> would provide for a systematic and uniform common point of reference while also providing more in-depth assessment. There are a number of human terrain software programs in use and under development that would enable a standardized means of disseminating data.<sup>48</sup> Current databases on Afghanistan will need to be updated or created and issues with vetting information will need to be resolved, but identifying one joint-force program that allows information to be accessed by a wide array of users will be an important step forward. MGen Flynn's initiative to produce detailed, written assessments would also provide greater analysis and improved understanding of the population as opposed to the standard power point products and reports utilized.<sup>49</sup>

Standardizing reports that specifically address the population will also assist in the development of improved understanding of the overall environment. With COIN operations being conducted in Afghanistan, in often austere and remote locations, the need to convey information through limited communication architecture requires the development of reports that support human terrain mapping. Solutions to date have included site visits conducted by HTT and civil affairs and non-traditional reporting, but force protection, travel restrictions, and desire to avoid lengthy transmissions pose a problem. Specific reports, that enable the relay of atmospherics and information related to the population,<sup>50</sup> would serve as a more effective means

to transmit rudimentary information in support of human terrain mapping by units operating in remote locations.

Linking the wide array of supporting units and capabilities that currently exist in the force can be accomplished through standardization and improving linkage between echelons of command. Human terrain mapping can provide the ability to inform military and government organizations about the population, but it can also assist in synchronizing efforts and developing a common environmental picture. The capabilities exist, but it will require a means to pull them together to become more effective. Improved capability of maneuver units to assess and engage the population and improvements to the intelligence community can be supported through a more efficient utilization of the sensors already engaged throughout the battlespace.

## SUMMARY AND RECOMMENDED RESEARCH

General McChrystal stated that a renewed emphasis is required to turn the tide of a growing insurgency; "ISAF will...pursue a counterinsurgency approach that puts the Afghan people first."<sup>51</sup> This research demonstrates that the means to better understand the human element of the environment exists through human terrain mapping, which will improve the ability of maneuver units to operate in a complex environment, improve the capabilities of the intelligence community in providing a more comprehensive view of the human aspect of the environment and provide the linkage between ISAF headquarters and forces on the ground. The experience of commanders who have successfully employed human terrain mapping and the results achieved demonstrate its potential.

Examples of successful battalions in Iraq and Afghanistan demonstrate clearly that units that effectively understand the population and work closely with them are most effective in



COIN operations. While targeting the enemy still remains the primary focus of intelligence, the mapping of the human terrain and close, daily engagement with the population enables U.S. forces to apply a balanced approach and better assess the effects of their actions. While there are commanders who possess an intuitive grasp of counterinsurgency operations, utilizing a systematic approach to mapping the human terrain improves the common understanding of units and assists conventional forces in securing and supporting the population.

The effort to fix intelligence efforts in Afghanistan is clearly aimed at improving ISAF's understanding of the human terrain. While ISAF intelligence views the HTT efforts as one of many sources that provide understanding of the population, its proposal to stand-up the SOIC closely resembles the intent behind the creation of HTS and HTTs. With some cultural issues within the intelligence community being identified as a significant explanation for the enemy-centric intelligence effort, the creation of a population-centric component of intelligence is an attempt to better map the human element of the environment for operational and strategic decision-making. Until doctrine and training can refocus the entire intelligence community on the overall environment, this may prove to be the most effective solution to a time-sensitive requirement.

Correcting the disconnect between ISAF headquarters and units on the ground will require integrating the assessment of the population from PSYOPS, PRTs, HTTs, Civil Affairs, and patrols utilizing modified reporting, human terrain computer programs, and incorporating the concept of the Stability Operations Information Cell. This will provide a common operational picture of the environment and improve the effectiveness of military operations amongst the population. More importantly it will facilitate the dissemination of information throughout the chain of command to inform planning, operations, and decisions.

In talking about strategic communication, Admiral Stavridis paraphrased a quote attributed to Admiral Earnest King in World War II, "I don't know what the hell this [strategic communication] is that Marshall keeps talking about, but I want some of it."<sup>52</sup> This quote could be equally applicable to our efforts to understand the human terrain in Afghanistan. The argument over whether this effort should be retained strictly in the realm of the intelligence community or is better addressed by another staff section like Civil Affairs, leads one to conclude that currently neither approach alone has been sufficiently effective. Pulling together information collected from all elements that engage the population is the best answer, with intelligence being involved in the process for analysis and integration.

Since terminology has been inconsistently utilized, the ability to clearly delineate human terrain mapping from a host of other concepts has made the study of human terrain mapping problematic. Further, the after action reports and articles available on the COIN fight in Iraq and specifically Afghanistan lack the historical perspective and rigorous examination necessary to pinpoint areas where effective human terrain mapping has been decisive and what methods were utilized to develop understanding of the operating environment.<sup>53</sup> As a result, much of the research has been anecdotal and lacks the detail to strongly prove the case.

The one area that is not in dispute is the fact that understanding the operating environment must include the population and that cultural competency has been a significant determining factor for successful conventional units. Understanding the generic culture of a nation state and cultural awareness is insufficient to defeat an insurgency. This examination of human terrain mapping is an attempt to understand why cultural understanding is important and how it can be applied to COIN operations.

The research conducted for this paper would suggest that establishing a standardized and systematic format for studying the operational environment would benefit human terrain mapping and COIN operations. The Human Terrain Handbook's Cultural Preparation of the Environment (CPE), which mirrors the four steps of IPB, would appear to mesh well with current doctrinal intelligence processes. The acronym ASCOPE, identified in step 2, would support the establishment of a baseline to support the collection effort of all subordinate units. While each unit will likely build or alter the standardized reports, dependent on the unique characteristics of the battlespace, a common frame of reference as a starting point will enable a coherent human terrain mapping effort.<sup>54</sup>

The effort to match human terrain mapping requirements with capabilities appears to be heading in the right direction. At the company and battalion level, intelligence sections are being augmented with personnel from RCTs and BCTs and have the benefit of interacting with the population on a routine basis. The RCTs and BCTs have been fielded HTTs and can utilize the Human Terrain System to stay apprised of the human terrain throughout multiple subordinate AOs and benefit from the continuity and expertise that it provides. Changes directed by the Assistant Chief of Staff of Intelligence for ISAF, looks to refocus intelligence and collection efforts on the population, task analysts to specifically evaluate the human terrain, and the standing up of the SOICs at the Regional Command Level and ISAF headquarters appears to be a step in the right direction. There already exists numerous units within the battlespace that engage and work with the population and integrating their efforts to map the human terrain can help inform intermediate headquarters and establish linkage from ground units to ISAF headquarters.

Similar to conventional combat arms units, the default for the intelligence community is to focus on the enemy. While identifying and evaluating the enemy is an important function of intelligence, the collection and analysis effort cannot afford to ignore the population. Intelligence drives operations and operations drive intelligence. In COIN operations, the focus on the enemy at the expense of the population can be self-defeating once support for the government has been lost. The process of human terrain mapping engages the population and the process of developing databases and graphic depictions supports analysis and an improved understanding of the environment.

<sup>1</sup> MajGen Robert Scales, *Army Transformation: Implications for the Future*. Testifying before the House Armed Services Committee on 15 July 2004, 2, <http://www.au.af.mil/au/awc/awcgate/congress/04-07-15scales.pdf> (accessed January 18, 2010).

<sup>2</sup> Gen Stanley McChrystal, *Commander's Initial Assessment* (Unclassified Version). International Security Assistance Force, Afghanistan, August 30, 2009, 1-4.

<sup>3</sup> McChrystal, 1-4.

<sup>4</sup> McChrystal, 2-4 – 2-5.

<sup>5</sup> Major General Michael T. Flynn, Matt Pottinger, and Paul D. Batchelor. "Fixing Intel: A Blueprint for Making Intelligence Relevant in Afghanistan." *Center for a New American Security* (Jan 2010), 7, <http://www.cnas.org/node/3927> (accessed January 8, 2009).

<sup>6</sup> U.S. Department of the Army and Headquarters Marine Corps. *Intelligence Preparation of the Battlefield/Battlespace*. FM 2-01.3 or MCRP 2-3A. Washington DC: Department of the Army, October 2009, v.

<sup>7</sup> David Galula. *Counterinsurgency Warfare: Theory and Practice*. Westport, CT: Greenwood Press 1964. Reprinted. St. Petersburg, FL: Hailer Publishing, 1964, 66-67.

<sup>8</sup> U.S. Department of the Army, and Headquarters Marine Corps. *Counterinsurgency*. FM 3-24 or MCWP 3-33.5. Washington, DC: U.S. Department of the Army, December 2006, 3-35

<sup>9</sup> Jack Marr, John Cushing, Brad Garner, and Richard Thompson. "HUMAN TERRAIN MAPPING: A Critical First Step to Winning the COIN Fight." *Military Review* 88, (2) (Mar/Apr 2008): 18, <http://proquest.umi.com/>. (accessed August 21, 2009).

<sup>10</sup> Marr, 18.

<sup>11</sup> Marr, 19.

<sup>12</sup> Nathan Finney. *Human Terrain Team Handbook*. Fort Leavenworth, KS: Human Terrain System, Sep 2008, 50-55.

<sup>13</sup> Headquarters U.S. Marine Corps, *Mao Tse-tung on Guerilla Warfare*. FMFRP 12-18. Washington, DC: Headquarters U.S. Marine Corps, April 5, 1989, 92-93.

<sup>14</sup> McChrystal, 2-1.

<sup>15</sup> Gian P. Gentile. "A Strategy of Tactics: Population-centric COIN and the Army." *Parameters* XXXIX, no. 3 (Autumn 2009): 5-17.

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<sup>16</sup> Flynn, 8.

<sup>17</sup> U.S. Department of the Army, and Headquarters Marine Corps. *Counterinsurgency*. FM 3-24 or MCWP 3-33.5. Washington, DC: U.S. Department of the Army, December 2006, 1-22.

<sup>18</sup> Flynn, 13-15.

<sup>19</sup> Marr, 19.

<sup>20</sup> Flynn, 8.

<sup>21</sup> Jim Gant. *One Tribe at a Time: A Strategy for Success in Afghanistan*. Los Angeles: Nine Sisters Imports, 2009, 5-52, <http://blog.stevenpressfield.com>. (accessed January 17, 2010).

<sup>22</sup> Gant.

<sup>23</sup> Flynn, 13.

<sup>24</sup> Flynn, 22.

<sup>25</sup> Noah Shachtman. "Army Social Scientists Calm Afghanistan, Make Enemies at Home." *Wired News* (November 29, 2007): 2,3. [http://www.wired.com/politics/security/news/2007/11/human\\_terrain?currentPage=all](http://www.wired.com/politics/security/news/2007/11/human_terrain?currentPage=all) (accessed February 19, 2010).

<sup>26</sup> McChrystal, 1-3.

<sup>27</sup> Flynn, 7.

<sup>28</sup> Flynn, 8.

<sup>29</sup> Flynn, 9.

<sup>30</sup> Flynn, 9.

<sup>31</sup> Flynn, 9.

<sup>32</sup> John P. Coles "Cultural Intelligence and Joint Intelligence Doctrine." *IO Sphere* (Spring 06), 2, [http://www.au.af.mil/info-ops/iosphere/iosphere\\_spring06\\_coles.pdf](http://www.au.af.mil/info-ops/iosphere/iosphere_spring06_coles.pdf) (accessed January 16, 2010).

<sup>33</sup> Coles, 2-4.

<sup>34</sup> Flynn, 19-21.

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- <sup>35</sup> Flynn, 21.
- <sup>36</sup> Flynn, 9.
- <sup>37</sup> Flynn, 19-21.
- <sup>38</sup> SpecialOperations.Com. [http://www.specialoperations.com/Army/Civil\\_Affairs/default.html](http://www.specialoperations.com/Army/Civil_Affairs/default.html), (accessed 14 March 2010).
- <sup>39</sup> U.S. Department of the Army and Headquarters Marine Corps. *Psychological Operations*. FM 3-05.30 or MCRP 3-40.6. Washington, D.C.: U.S. Department of the Army, April 2005, 1-2.
- <sup>40</sup> Michelle Parker. "The Role of the Department of Defense in Provincial Reconstruction." *Statement of Michelle Parker Before the Committee on Armed Services Subcommittee on Oversight and Investigations United States House of Representatives*. (September 5, 2007): 2 [http://armedservices.house.gov/pdfs/OI090507/Parker\\_Testimony090507.pdf](http://armedservices.house.gov/pdfs/OI090507/Parker_Testimony090507.pdf) (accessed March 14, 2010).
- <sup>41</sup> Parker, 2.
- <sup>42</sup> Finney, 49-50.
- <sup>43</sup> Finney, 35.
- <sup>44</sup> Finney, 50.
- <sup>45</sup> Flynn, 7-22.
- <sup>46</sup> Flynn, 21-22.
- <sup>47</sup> Flynn, 12.
- <sup>48</sup> MAP-HT Tool Kit, HTS Program <http://www.acq.osd.mil/asc/success/Sept2008/MAP%20HT%20JCTD%20Sept%202008.pdf> (accessed February 20, 2010); Tactical Ground Reporting System (TIGR), HTS Program, [http://tactical.overwatch.com/pdfs/news/2009/0905\\_c4isr\\_journal-mapht\\_article.pdf](http://tactical.overwatch.com/pdfs/news/2009/0905_c4isr_journal-mapht_article.pdf); (accessed March 28, 2010) and ESRI has project under development for military application, but is not currently listed (<http://www.esri.com>).
- <sup>49</sup> Flynn, 7.
- <sup>50</sup> Lieutenant Colonel McCullough brief on operations in Afghanistan in March 2010 at USMC Command and Staff College.
- <sup>51</sup> McChrystal, 2-11.

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<sup>52</sup> James G. Stavridis. "Strategic Communication and National Security." *Joint Forces Quarterly* (Issue 46, 3d Quarter 2007): 4,  
<http://www.carlisle.army.mil/DIME/documents/Stavridis%20Strategic%20Communication%20and%20National%20Security.pdf>. (accessed November 1, 2009).

<sup>53</sup> USMC and limited USA After Action Reports for Afghanistan can be found at the Marine Corps Center for Lessons Learned at <https://www.mccll.usmc.mil/> via the Afghanistan Information Center link (CAC required for access).

<sup>54</sup> Finney, 50-55.

<sup>55</sup> Marr, 20.

<sup>56</sup> Finney, 50-55.



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## Appendix A<sup>55</sup>

### **Tactical Human Terrain Mapping (TF Dragon, 1-15 Infantry, 3d Heavy Bde, 3d I.D.):**

- The boundaries of each tribal area (with specific attention to where they adjoined over overlapped).
- Location and contact information for each sheik or village mukhtar and any other important people (government officials, Iraqi Security Forces, etc.).
- Location of mosques, schools, and markets.
- Identification of the population's daily habits (when they woke up, slept, shopped, etc.).
- Nearest locations and checkpoints of Iraqi Security Forces.
- Economic driving force (i.e. occupation and livelihood).
- Employment and unemployment levels.
- Population flow (i.e. people moving in and out of AO).
- Anti-coalition presence and activities.
- Access to essential services (fuel, water, emergency care, fire response, etc.).
- Particular local population concerns and issues.

## Appendix B<sup>56</sup>

### ASCOPE (Derived from FM 3-24)

AREA (Key Civilian Areas are localities or aspects of the terrain within an AO that have significance to the local populace; represented by maps with subsequent assessments of how each affects the population and is part of a socially integrated society):

1. Areas defined by political boundaries such as Districts, Municipalities, Provinces
  - a. Acquire maps from Map Terrain Team with a .pdf file for each layer
  - b. District Boundaries
  - c. Muhallah boundaries per District
  - d. Muhallah per Hayy
  - e. Acquire high resolution image of each Muhallah from TIGR
2. Areas of high economic value
  - a. Market/shopping complexes
  - b. High property value residential zones
  - c. Industrial and technical parks
  - d. Natural resource zones (water, mineral, forest, oases, riverside corridors)
  - e. Trees, parks, open spaces
  - f. Cropland, fisheries
3. Centers of government and politics
  - a. District Council Hall
  - b. Neighborhood Council Hall
  - c. Government Ministry Offices
4. Culturally important areas
  - a. Archeological and Historical resources
  - b. Sacred sites and landscapes
5. Social, ethnic, tribal, political, religious, criminal, or other important enclaves/neighborhoods
6. Trade routes and smuggling routes
7. Possible sites for temporary settlement of dislocated civilians or other civil functions

### STRUCTURE:

1. Headquarters for Security Forces
2. Law Enforcement
  - a. Police Stations
  - b. Courthouses
  - c. Jails
  - d. Checkpoints
3. Communication/Media Infrastructure
  - a. Radio towers
  - b. T.V. Stations
  - c. Cell Towers
  - d. Newspaper Offices
  - e. Printing Presses
4. Roads & Bridges

- a. Bridges
- b. Roads
- 5. Ports of entry
- 6. Dams
- 7. Electrical Power stations and Sub Stations
- 8. Refineries/Other fuel sources
- 9. Potable Water
- 10. Sewage System
- 11. Clinics & Hospitals
- 12. Schools/Universities
- 13. Religious Places of Worship
- 14. Banks/Financial Institutions
- 15. Markets

CAPABILITIES (save, sustain, and enhance life):

- 1. Public Administration
  - a. Bureaucracy
  - b. Courts
  - c. Other parts of Government
- 2. Public Safety
  - a. Military
  - b. Border
  - c. Police
  - d. Intelligence Orgs
- 3. Emergency Services:
  - a. Fire Department
  - b. Ambulance Services
- 4. Public Health
  - a. Clinics
  - b. Hospitals
  - c. Veterinary
- 5. Food
- 6. Water
- 7. Sanitation
  - a. Sewage
  - b. Trash

ORGANIZATIONS (Influence on population):

- 1. Religious
- 2. Political Parties
- 3. Patriotic/Service Organizations
- 4. Labor Unions
- 5. Criminal
- 6. Community Organizations
- 7. Multinational Corporations
- 8. International Government Organizations

## 9. Non-Governmental Organizations

PEOPLE (non-Military, Local National, in/out of OE effecting Operations):

### 1. Society

### 2. Social Structures

a. Groups

b. Networks

c. Institutions

d. Organizations

e. Roles/Status

f. Social Norms

g. Culture

h. Identity

i. Cultural Forms

1) Narrative

2) Symbols

3) Rituals

j. Beliefs and Belief Systems

1) Core beliefs

2) Intermediate beliefs

3) Peripheral beliefs

k. Values

l. Attitudes

1) Social groups

2) Ideologies

3) Government

4) U.S. Forces

m. Perceptions

1) Power

1. What type of power does the group have?

2. What do they use their power for?

3. How is their power acquired and maintained?

4. Which leaders have power within particular groups?

5. What type of power do they have?

6. How is their power acquired and maintained?

n. Interests

### 3. Physical security

a. Is the civilian population safe from harm?

b. Is there a functioning police and judiciary system?

c. Are the police fair and non-discriminatory?

d. If the police are not providing civilians with physical security, who is?

### 4. Economic resources

### 5. Political participation

a. Do all members of the civilian population have a guarantee of political participation?

b. Is there ethnic, religious, or other discrimination?

c. Is the government violating human rights?

- d. Is there an occupying force in the country?
- e. Do all civilians have access to basic government services, such as health care, sewage, water, electricity, and so forth?
- f. Are there legal, social, or other policies that contribute to the insurgency?

#### 6. Grievances

- a. What are the insurgents' grievances?
- b. What are the grievances of the population?
- c. Would a reasonable person consider them to be valid? Validity of grievance is not effectively assessed by objective condition.
- d. Are the articulated grievances of the population and those of the insurgency the same?
- e. What does the government believe to be the grievances of the population? Does it consider those grievances to be valid?
- f. Are the articulated grievances of the population the same as those perceived by the government?
- g. Has the government made genuine efforts to address these grievances?
- h. Are these grievances practically addressable or are they beyond the immediate capacity of the government (for example, major social and economic dislocations caused by globalization)?
- i. Can U.S. forces address these interests or grievances to elicit support from the civilian population?

#### 7. Additional Civil Considerations

- a. Languages and dialects spoken by the populace.
- b. Nonverbal communication, like hand signals and gestures.
- c. Education levels, including literacy rates, and availability of education.
- d. Means of communication and its importance to the populace.
- e. Interpersonal via face-to-face conversation, e-mail, or telephone.
- f. Mass media, such as print publications, radio, television, or the Internet.
- g. National history and political history.
- h. Events leading to the insurgency.
- i. Events contributing to the development of the insurgency.
- j. The availability of weapons to the general population.

#### EVENTS:

- 1. National and religious holidays
- 2. Agricultural crop/livestock and market cycles
- 3. Elections
- 4. Civil disturbances
- 5. Celebrations