

# Strategy Research Project

## Improving Assessments for Strategic Decision-Making in Counter Insurgency Operations

by

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United States Army War College  
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**IMPROVING ASSESSMENTS FOR STRATEGIC DECISION-MAKING IN COUNTER  
INSURGENCY OPERATIONS**

by

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## **ABSTRACT**

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## IMPROVING ASSESSMENTS FOR STRATEGIC DECISION-MAKING IN COUNTER INSURGENCY OPERATIONS

Assessment is a process that measures progress of the joint force toward mission accomplishment. The focus is on measuring progress toward the end state and delivering relevant reliable feedback into the planning process to adjust operations during execution.

—JP 5-0<sup>1</sup>

“How can we show irrefutable progress in Afghanistan?” This basic question posed by GEN Stanley McCrystal to his staff revealed limitations in the process used by his assessment teams to address strategic, operational, and tactical applications across the command. While Joint, North Atlantic Treaty Organization (NATO), and Service specific literature define how and why assessments are conducted, they generally fall short in addressing the data collection required for the complex counterinsurgency (COIN) environment. Analysis for COIN operations is very challenging, due in part to the need to understand perceptions and culture, the need to track hundreds or thousands of personalities, the local nature of insurgencies, and the tendency of insurgencies to change over time.<sup>2</sup> To measure progress at the strategic level, there must be data collected not just at the strategic level but, also at the local, tactical level where insurgents are most active. These measures help planners understand the operational environment to frame the problem and develop operational approaches.

This monograph specifically addresses a proposed methodology to collect relevant data that provides a more robust assessment of the operational environment. The paper is organized into six sections. Following this short introduction is a section on assessment doctrine. The third section examines two counterinsurgencies, namely Vietnam and Afghanistan, to determine where there are specific shortfalls. The fourth

section contains a proposed framework for data collection and data sharing pertinent to the strategic, operational, and tactical environments. Additional techniques specific to counterinsurgencies and transition are provided in the fifth section. The final section contains the conclusions of this research.

### Doctrine

Assessments occur from the highest levels of strategic planning in determining the Combatant Commander's mission areas to the evaluation of a tactical mission in a larger campaign. All assessments provide information to the command for input in the decision-making process and start during the planning process. Specifically, one of the purposes for developing an operational approach is to develop the assessments for the campaign. The measures developed aid in answering performance and effectiveness questions for the commander in reaching the desired endstate. During an operation or campaign, the assessment process is a continuous operation that coincides with the decision-making process. Generally, the process consists of three steps:

1. Monitoring the situation to collect relevant information.
2. Evaluating progress toward attaining end state conditions, achieving objectives, and performing tasks.
3. Recommending or directing action for improvement.<sup>3</sup>

Relevance of information will be dependent on the mission or campaign. It is not limited to the Commanders Critical Information Requirements (CCIR), but the types of information necessary to provide situational understanding or in comparison to the forecasted situation in the commander's intent. Counterinsurgencies are multi-dimensional, therefore relevant information should inform the Political, Military, Economic, Social, Information, and Infrastructure (PMESII) domains. Responsibility for

collecting the information is contained in the Reconnaissance and Surveillance plan. Given the complex nature of counterinsurgencies over time, there should be an expectation that the measures that are considered relevant may also change as the environment changes.

The second step of the process is evaluating progress and this is where the analyst plays a key role. The evaluation is critical in providing the commander an analysis of what is working, not working, and potential insights on how to better accomplish the mission. Measures of Effectiveness (MOEs) and Measures of Performance (MOPs) are generally used to determine and communicate progress toward achieving objectives and attaining end state conditions. Measures provide the criteria to judge progress and may be objective or subjective in nature. In general, MOPs help to answer the question “are we doing things right” versus MOEs that answer “are we doing the right things?”<sup>4</sup>

The third step is to recommend or direct action based on the assessments. This process requires the entire staff to evaluate the progress of the campaign, offer improvements, and make an estimate of the merit of their proposed changes. It is important that the staff recommendations are integrated by the chief of staff and synthesized to provide the commander a vetted recommendation from multiple sources.

The assessment process follows the same steps for a conventional or irregular warfare campaign plan, however the measures vary considerably. For a conventional campaign, measures may include friendly and enemy casualties, orders of battle, and terrain held. All are key measures for determining whether a conventional campaign is going well, and can be used to inform discussions of strategic adjustment.<sup>5</sup> Irregular

warfare campaigns, specifically counterinsurgencies are centered on the perception of the populace which is much more difficult to measure. The next section contains the analysis of two counterinsurgencies in Vietnam and Afghanistan.

### Case Studies

This section will examine two counterinsurgency campaigns in light of contemporary doctrine. The first campaign examined is the Vietnam campaign in 1966 and the second is the Afghanistan campaign in 2009-2010. These campaigns are categorized as insurgencies because of the inherent weakness of insurgent forces relative to the state or external forces. This relative weakness forces insurgents to avoid a direct confrontation and instead look for ways to attack asymmetrically. While combatants generally prefer a quick, cheap, overwhelming victory over a protracted struggle, insurgents often must prolong their effort to gain in relative strength and erode the will of opponents over time.<sup>6</sup>

The operational environment for Vietnam, similar to the contemporary environment of Afghanistan, can be best described as diverse and complicated. Several consecutive American administrations did not fully understand the multi-faceted operational environment and the nuances within the PMESII domains. From the political standpoint, the United States government committed early on to Ngo Dinh Diem as the premier. Diem's nationalism and administrative experience made him a logical choice for the premiership of an independent Vietnam, but he lacked many of the qualities required for the imposing challenges he faced.<sup>7</sup> The government he inherited did not have the capacity to meet the needs of the populace. The political agencies and services still in existence could not extend out to the rural areas that were often controlled by the insurgents who lived and hid amongst the populace.

The French departure from Vietnam left the Vietnamese military poorly equipped and trained to meet the country's needs. Initially, the United States advisers transformed the 250,000 man army into a 150,000 Soldier force in mobile divisions. During this process, the Vietnamese force became dependent on the American aid to keep the force viable. The transformation to the mobile divisions did not necessarily take into account the overall rugged terrain of Vietnam and poor interior road network. Overlooking the infrastructure capacity of the road networks across the three main sections of Vietnam led to a less than optimal force structure.

The Vietnamese economy subsisted predominantly on the export of rubber and tin to meet the demand for imports. The economic reform and nation-building through development projects had a positive effect on the cities of South Vietnam but did little to impact the majority of the population in the rural areas. This further exaggerated the social and political dilemmas for government.

From the social standpoint, the Vietnamese people comprised various religions, ethnicity, and occupations. The population's values, beliefs, and interests were further divided between the urban and rural population. Vietnam did not consist of a homogeneous population where one approach could be successful for the nation as Diem attempted. Diem was intolerant of the social demands of the various minorities, or sects, which hampered American nation building and allowed the seeds of insurgency to grow in the fertile environment of the rural populace. Diem was never able to build a strong, legitimate government as his premiership ended with his untimely death in the coup of 1963. "The population's religious, ethnic, and geographical diversity posed significant challenges for building a popular, self-sustaining government."<sup>8</sup>

Without a full understanding, or at least an appreciation, of the operational environment, the United States developed a campaign plan for the Vietnam War. The campaign plan consisted of four components:

1. Air Campaign against North Vietnam
2. Nation building within South Vietnam
3. Diplomacy
4. Ground battle in South Vietnam

Current doctrine defines these components as lines of effort, yet these lines of effort do not relate to the overall problem that should have been developed from an analysis of the operational environment. Each of these lines of effort require assessment to gauge the progress and if reframing is required as part of the recursive process.

Current doctrine describes assessments as a process that measures progress of the joint force toward mission accomplishment.<sup>9</sup> If the command was able to assess the progress along these lines of effort, they could have reframed the problem to match the situation on the ground. Instead, statistics and measurements instituted by Secretary of Defense McNamara took an unusually prominent role.

Secretary of Defense Robert McNamara was a key figure in the Vietnam War and the assessments process. His background in business and systems analysis led to his direct involvement in the measures and statistics collected. Unfortunately, while there was a great appetite for data from Vietnam, the data collected did not support the measurement of the strategic objectives. Military Assistance Command, Vietnam

(MACV) Directive 88 issued in 1963, consisted of 110 metrics which were not linked to any of the strategic objectives.<sup>10</sup>

By 1966, the strategy in Vietnam was modified to include assistance and governance projects in an effort to connect with the populace and win over their “hearts and minds.” In this case, there were problems with the objectives that made it impossible to measure progress. For example, one of the objectives was to increase the population that lived in secure areas by ten percent. There was not a clear definition of how this should be measured; and there was ambiguity in what the overall objective covered. Was the intent to secure more area or did it mean that we would be successful if we moved the populace from unsecure areas to secure areas? There were several other similar objectives that were so ill defined as to be useless in campaign assessments.

One of the objectives that was measurable entailed increasing the destruction of the enemy force by 235,000. The measure was nicknamed the body count metric because this was one metric that was actually measurable. However, many of the enemy “bodies” were never recovered that were reported as enemy casualties. An unintended second order effect of this measure included units that would artificially inflate their enemy body counts to show that they were successful.

As a means to measure the hearts and minds, a system was put in place that would survey the populace to gauge their perceptions on the war effort. This system was called the Hamlet Evaluation System (HES) and surveyed the rural population on items such as medical care, village infrastructure, and insurgent activity. RAND conducted a statistical analysis of the data in 1968 and found the data was statistically

stable and a good indicator of rural development programs.<sup>11</sup> The downside to the HES was the enormous amount of data it produced. There were roughly 12,000 villages in the program and approximately 2,000 villages were surveyed each month. A typical report, in total consisted of 90,000 pages of data.<sup>12</sup> While an analyst could manage a few villages, no human could possibly do a temporal analysis on the country wide set of data; there was simply too much data.

From the Vietnam case study there are three specific lessons that impact our doctrine concerning assessments. The first is the necessity to link the measures to the strategic objectives, which implies that the objectives are well defined and measurable. The second is that data collection without analysis is not useful. There was such a demand for the countless metrics in the Pentagon that it seemed more important to get the reports on time, vice the quality of what was in the reports. This leads to the third point, that too many statistics could not be integrated into an operational or strategic construct. It was not due to a lack of data, but the sheer magnitude of information such as from the HES reports that could not be combined for a useful assessment.

The second counterinsurgency case study examined was taken from Afghanistan in the 2009-2010 timeframe. At the end of 2009, the Headquarters (HQ), International Security Assistance Force (ISAF) created an operational command at the three star level called the ISAF Joint Command (IJC) to command and control the operational and tactical war. HQ, ISAF would remain the theater command under NATO and Central Command (CENTCOM) reporting chains with the responsibility for the strategic campaign plan.

The ISAF strategic campaign plan changed over time to reflect the environment both internal and external to Afghanistan. The plan consists of Lines of Effort (LOEs) focused on security, governance, development, and neutralization of malign networks. Each LOE has subordinate measures that consist of subjective and objective measures with indicators collected at the district level. The data is aggregated at the Regional Command (RC) level and forwarded to the IJC for the operational assessment on a six week recurring schedule. ISAF strategic assessments, informed by the IJC assessments, are reported monthly, quarterly, and annually.

Assessment on each of the LOEs consists of multiple data points via various reporting mechanisms. For example, the Security LOE assessment at the district level consists of the Significant Activities (SIGACT) reports, the IJC security rating for the district which includes the commander's subjective rating, and public perception data from polling. SIGACTs consist of mandatory reporting events such as enemy contact or improvised explosive device (IED) explosions that are input into the Combined Information Data Network Exchange (CIDNE) database. (CIDNE is the authoritative database for the Afghanistan theater and contains both subjective and objective data.) All these data points are considered in the overall subjective assessment which consists of a five color scale rating for the district.

The Security LOE has the most objective data particularly from the SIGACT reports, but there is a lack of objective data in the Governance and Development LOEs which feed into the political and economic domains of the PMESII analysis. The assessment for the LOEs predominantly consists of the subjective Provincial Reconstruction Team (PRT) narrative reports, IJC ratings, and polling results. Specific

to the governance and development sections are the narrative reports developed by the respective staff sections. These estimates are developed in concert with the United States Embassy and Afghanistan Ministries where appropriate. These reports along with hundreds of narrative reports are extremely difficult to objectively assess. Recent improvements in the CIDNE database provide for the inclusion of these narrative reports, but these reports are not necessarily quantifiable or repeatable. For example, a Human Terrain System (HTS) report on economic development in Marjeh district may be only one data point that is never repeated. The assessment teams have the difficult task of searching for the governance and development LOE narrative data to form to an overall subjective assessment on the five color scale rating for the district.

The Afghanistan assessment process is much closer to the contemporary Joint doctrine and follows the intent to link measures to the objectives. However, there are several lessons to learn from this case study. The first is to have a relevant data collection plan to provide discreet, verifiable data to drive the assessments. Next, if a system is to be used that combines qualitative and quantitative measures, then this system should be codified such that it is replicable and reliable over time. Finally, there is a tremendous amount of data available from the Afghanistan Ministries, Non-Governmental Organizations (NGOs), and international organizations that could provide additional insight to the assessment process. This virtually untapped resource could confirm or deny trends, and if found reliable could reduce the data collection burden for ISAF.

In comparing the Afghanistan case study to the Vietnam case study, there are similarities and clear distinctions. The case studies are similar in that they both have a

tremendous amount of subjective data collected. In the Vietnam case study, it is clear that these measures were not linked to the campaign objectives whereas in the Afghanistan study there are normally weak relationships using subjective data. While the tools to maintain the data have improved since Vietnam, analysts in Afghanistan still struggle with the amount of unstructured narrative data to assess the environment effectively.<sup>13</sup>

Understanding the operational environment is one of the key principles in the design process of campaign planning. In both scenarios, using polling data in Vietnam from the HES or using various national polls in Afghanistan fails to capture the relevant data to use the PMESII construct to inform the commander of progress. The misunderstanding of the operational environment can lead to an uninformed problem statement and the risk of defining an operational approach that does not lead to success. Defining a structured set of data focused on the operational environment will greatly enhance the commander's situational awareness and lead to more informed decisions.

#### Proposed Framework for Data Collection and Sharing

This section describes a proposed method to frame the data collection and sharing problem to not only provide the commander with enhanced situational awareness of the operational environment, but provide a means to show progress in campaign assessments with sufficient analytic rigor. The proposal begins with a review of the foundational data available in Afghanistan, categories of data, and the requirements to prepare a general data collection plan. Next is a description of the framework specifically applied to the Afghanistan theater. The section concludes with a discussion on the challenges and lessons learned from this approach.

*Foundational Data.* There is a tremendous amount of data available concerning Afghanistan and sources of data are as varied as the amount of information available. Identifying appropriate data sources to support assessments in Afghanistan is of critical importance to operational commanders and ISAF member nations. In general the data can be divided into two categories, namely structured and unstructured data. The preponderance of data in Afghanistan falls into the unstructured category. That is, the data is of a qualitative nature consisting of a textual narrative and perhaps a subjective rating.

Data is collected across theater for many purposes from the local tactical commander to the operational and strategic level. Examples include surveys done at the local and national level, host nation information requirement reporting, and significant activities reported in CIDNE. Given the nature of a counter insurgency environment, many of the tactical level data and measures have strategic implications. Unfortunately, outside of CIDNE there are very few means for sharing information in a structured database. Further, there are data repositories only known to the local unit (i.e. stored on unit hard drives) and therefore are not shared across theater. One shortfall to this data is that there is no mechanism in place to even identify these sources.

Data collection and data sharing plans must be synchronized to ensure that the proper data is collected at the right place, time, with the appropriate method, and then shared over acceptable media or network to organizations that can benefit from this information.

*Methodology.* Every assessment starts with a question or a set of questions to provide an indication or measure of progress. Data collection and sharing of this data are integral to the success of the process. The following figure is an example of how assessments (or similar analyses) are conducted. In each of the boxes, there is an internal process that develops the data for that particular section. Each of the processes, shown in Figure 1, are sequential with outputs from one process leading to inputs for the next process.

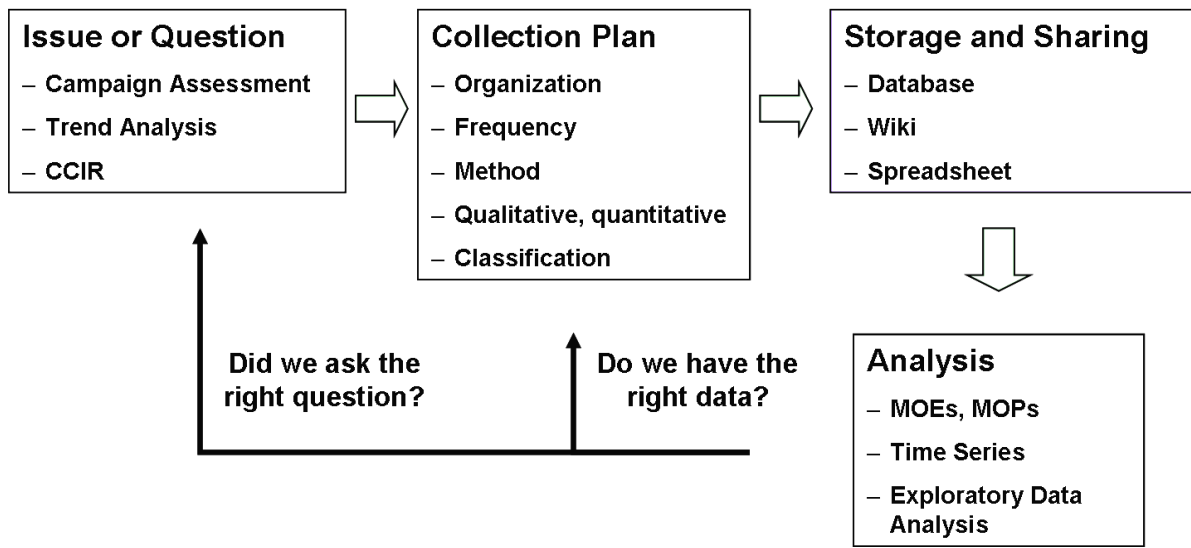


Figure 1: Data Collection and Data Sharing Process for Assessments<sup>14</sup>

The process starts with a question which could be in the form of a commander’s Information requirement or a specific measure related to Provincial transition. The type of question will determine the processes involved to collect the data necessary to provide the commander the necessary information to make the decision.

One of the first processes is the data collection plan. The result of the data collection plan is a listing of the measures and indicators required and the specifications

for the collection. Specific requirements should include how often the data needs to be collected, who is responsible for collecting the data, and what method of collection should be used. For example, survey methodologies are quite specific on how many surveys need to be completed at each level for the results to be valid for district, province, or national level. Other factors include the classification level of the data, as well as, determining if the data should be quantitative, qualitative, or both. Generally, analysts will want to conduct time series analysis or predictive analysis over a range of data points. To understand the trends, data will need to be collected in a methodological fashion at specific time frequencies such that the analysis is valid.

Once the data is collected it needs to be shared, or at the minimum, retrievable by the analyst team providing the assessment. Therefore, the means of providing the information via the network needs to be considered and included in the collection plan. Military forces have the capability to pass a great deal of classified information over their tactical networks. The same capability does not reside with government and non-government agencies trying to pass information over non-secure networks.

Similar to sharing the information via a network transport, storage of the data must also be considered. Depending on the complexity of the data and intended use, the solution for storage could range from a website, to a SharePoint, to an integrated relational database. Where the data is stored and who can retrieve the data for analysis needs is important to the overall quality and repeatability of the assessment.

The process does not end with the analysis cycle; it is an iterative process that continues to refine the questions and collection process. The goal is to provide the commander the information necessary to make informed decisions. There is as much

“art” as there is “science” in selecting the right measures and collecting data for them. Therefore, there is a need to incorporate flexibility into the data collection plan linking various sources of data if possible. The best analysis for the purpose of assessments is time-series, geospatially linked, quantitative data complemented by qualitative data that adds context.

One of the main considerations in the data collection process is the organization that is going to collect the data. While tactically it is quite simple to order a military unit to conduct reconnaissance and surveillance of an area, there are additional considerations and alternatives that deserve attention. For example, if valid and trustworthy information can be garnered from other sources then the command could use this source instead of tasking military units. This provides the commander additional flexibility in using his forces for security or other missions.

As discussed previously in this section, the issue being examined drives the process for collecting data. In the case of ISAF, there are specific data collection assets in place to collect information to inform assessments. This is particularly true in the key terrain and area of interest districts, where military units and PRTs actively collect information. In other areas, sometimes called “white space,” there are many disparate data collection efforts that include ISAF, Government of the Islamic Republic of Afghanistan (GIROA), as well as NGO and other organizations. MG Flynn in his white paper on “Fixing Intelligence” refers to these sources as rich unclassified data sources that provide context on the population. Understanding the human, sociological, cultural, and behavioral (HSCB) aspects of the population and the data collection efforts that support this evaluation are critical to the success of the operation.<sup>15</sup>

There are many data sources available to the ISAF for assessments from military sources, official Afghan government sources, intergovernmental organizations (IGO) and non-governmental organizations (NGO). The NATO authoritative source for ISAF operations is the CIDNE database, which resides on a classified network. In order to provide unclassified information to partner agencies, the International Distributed Uniform Reporting Environment (INDURE) provides similar types of information as CIDNE at the unclassified level. Many of the Afghanistan ministries collect data for their specific charter that are authoritative and applicable for use in assessments.

<b>Source</b>	<b>Description</b>	<b>Reports</b>	<b>PMESII Domains</b>
CIDNE	Classified authoritative database for ISAF operations.	SIGACTs, Intel, Targeting, Psychological Operations, HSCB	Primarily Military, but contains data on all domains.
INDURE	Password protected unclassified version of CIDNE providing a means for outside agencies to upload data.	SIGACTs and other declassified CIDNE reports, civil capacity, socio-cultural.	Information collected for all the domains.
Central Statistics Office	GiROA's only official statistical body and authoritative data source for country statistics.	Population, education, health development, agriculture development, inflation, exchange rate.	Information collected for all domains, but limited on Military.
Ministry of Rural Rehabilitation and Development	Unclassified repository of final reports and data on projects across Afghanistan.	Roads, education projects, civil projects.	Mainly Economic and Infrastructure.

Table 1: Small Sample of Military and Government Databases.

Two specific examples include the Central Statistics Office (CSO) and the Ministry for Rural Rehabilitation and Development (MRRD). A description of the government sponsored data sources are listed in Table 1. Additional sources concerning NGOs and other media are listed in Table 2.

<b>Source</b>	<b>Description</b>	<b>Reports</b>	<b>PMESII Domains</b>
Afghan-Info	Comprehensive listing of hundreds of websites on Afghanistan. <sup>16</sup>	Media, news, government, political, reconstruction, economy.	All domains.
World Bank	Provides statistics concerning international development measures. <sup>17</sup>	Education, poverty, medical, employment, etc...	All domains except for Military.
NGOs	Many organizations provide information on their activities in Afghanistan via the Internet or published reports.	Various depending on the location of the projects and type of work.	All domains except for Military.
Academia	Universities, institutes, and think tanks publish research relevant to understanding the operational environment.	Various depending on the research.	All domains.
Traditional Media	Regular reporting of events that can be searched or data-mined through a Nexus search.	Articles that report on events and public opinion.	All domains.
Non-Traditional Media	Sources consist of blogs, twitter feeds, and internet only journals that usually have less quality control than traditional media.	Various reports that target a specific audience.	All domains.

Table 2: Sample of Additional Data Sources.

With all the data sources that are available, the analyst team needs to determine the validity and accuracy of the data for its intended purpose in the assessment. Data sources could be scored to evaluate the differences between the sources. Suggested categories include, but are not limited to the following: collection method, credibility of the source, accessibility, relevance, sustainability, format, and confidence. Data sources that directly inform a specific measure should be the highest scoring but that does not mean that a low scoring data source should be discarded. The low scoring data sources may provide valuable contextual information or support a minority opinion on some assessments. One effort called Datacards, sponsored by the Office of the Secretary of Defense (OSD), attempts to catalog and score the accuracy of the sources. Datacards is a structured collection tool that indexes data sources that relate to irregular warfare, assessment, or can be used for socio-cultural modeling. These cards provide a summary description and evaluation of the content, quality, intended purposes, and potentially appropriate uses of each source.<sup>18</sup>

The data landscape in a conflict environment will always be challenging. Some of the main challenges include discipline in collection, over classification of data, lack of incentives, and validation. With respect to discipline in data collection, there is a need to continually evaluate data collected to ensure it is answering the question. Leadership needs to enforce the accurate collection and timely upload onto the appropriate network. There is a balance between overburdening the unit with too many requirements to collect data and collecting the most important data. When units are overburdened; data collection will lapse, errors will be more pronounced, and reports will be delayed or not reported at all. One method to alleviate some of the burden in

reporting is the use of standardized templates. Alternatively, the staff can find information that was collected for another purpose (proxy data) that can provide an acceptable answer.

There is a tendency to over classify data in a conflict environment. Counterinsurgency operations in particular will generate information related to the population that is generally unclassified. This information is sometimes referred as “white data” and can provide context to the current situation and provide useful proxy measures in security, governance, and development.<sup>19</sup> Collecting and sharing unclassified information provides a larger audience of analysts, particularly in academia, to work on current problems.

Data incentives are extremely important to the units that collect data. On both the military and civilian side of operations, the data should be useful to the organization collecting the data. For instance, units provide IED related data because they understand that the reports, trend analysis, and overall situational awareness will be improved if they do so. They see tangible products that affect their operations which is a huge incentive. Not all incentives will be this pronounced, but we cannot expect an NGO or other organizations to provide data to a system that doesn't provide them utility.

Finally, data validation will continue to be a challenge. Analysts will not always be able to use authoritative data sources. For example, surveys are one source of information used in measuring the perception of the populace. There are various methodologies and sampling techniques used in survey design and analysis which must be understood to begin the validation process. Analysts should also look for correlation between data sources as one of the measures in validation. These challenges are not

insurmountable and analysts at all levels have been providing incredibly detailed and accurate assessments to their commanders.

### Emerging Techniques

In an effort to better understand the operational environment in Afghanistan, several efforts have been suggested in varying degree to provide additional information to the commander. One such technique is through Host Nation Information Requirements (HNIR) and Specific Information Requirements (SIR). These measures were developed by members of the IJC's Information Dominance Center to capture the complex, nuanced, and dynamic environment of Afghanistan across multiple domains. These measures should provide a much clearer picture than polling data, anecdotal references and statistics insufficient for true understanding within the partnered commands.<sup>20</sup>

HNIRs essentially capture information on the population to build the critical operational environment necessary in operational design. The HNIRs can be collected, shared, analyzed, and disseminated similar to CCIRs using the data collection methods previously discussed. These potentially disparate bits of information need to be synthesized across domain experts to provide the context for the commander to better understand the whole environment and Host Nation capability from the lowest level possible. The quantitative data combined with qualitative expert opinion across the civilian and military communities provides a mosaic of information across all levels of command and leadership.<sup>21</sup>

SIRs are information requirements for an area of operations linked to an organization that can collect the information. The unique feature of SIRs is that the organization collecting the information could be tasked, but just as often would provide

the information in a cooperative arrangement without a tasking. For example, an HTS team could be asked to gather information on a bazaar in their area on a recurring basis. The HTS team falls under their Brigade Combat Team chain-of-command where it is assigned and is not under the direct tasking authority of the IJC. Another example includes asking an NGO or IGO team to report on a bazaar in a location where there is not an ISAF presence. In the latter case, the NGO or IGO team would need incentive to report the information which could be assuaged by providing them access to an unclassified data source that would be relevant to their needs.

The process to capture the information is similar to the process shown in Figure 1 with a notable exception. This particular process calls for a multi-disciplinary team to synthesize the information in a common analysis center, a shareable information system across the military/civilian/partner stakeholders, and the analysis disseminated to applicable staff sections for assessments. “It is about maneuvering information to the commander...achieving more effective partnership through shared unity of understanding.”<sup>22</sup>

Dr. David Kilcullen, a noted expert on counterinsurgency operations, also developed new techniques on capturing information relevant to the operational environment. He similarly states that the nature of the information in the population-centric domain does not readily fit into the stove pipe data collection process to answer questions on a specific LOE and argues for a cross-domain collection process. The majority of the data collected falls under the security LOE because of the life and death consequences that coalition forces face every day. However, governance and security LOE data remains just as important for the long term success of the campaign plan.

Security gains without similar improvements in governance can cause a rift in the expectations of the populace that the insurgents can exploit. He further states that there is a need for consistent measurements over time on a common set of metrics with observable indicators. Many of these measures can provide proxy data for several LOEs while providing quantitative data to show change in the operational environment.<sup>23</sup>

Kilcullen lists over 30 specific measures that are useful in this manner that are categorized into four areas: security, governance, host nation capabilities, and enemy. The measures generally are characterized by providing information on multiple domains, most often are quantitative in nature, and focus on the change between reporting periods. For example, one measure examines the price of agriculture products (not grown in the district) as a proxy measure of security and development. Development from the standpoint that there is commerce involved which includes the import or transportation of the products. Because transportation is involved, there is an inherent cost factored in for security. Kilcullen theorizes that if there is a large increase in the price of imported food then security and or corruption is probably poor in that district. Other measurement examples include the voluntary reporting of IEDs and the number of local officials that live in the district. In the case of persons turning in IEDs, this is already in place as a means to indicate security gains.<sup>24</sup> Each of these measures provides information indirectly of the security in the district, but more importantly on the overall confidence in the populace of the government and coalition effort.

Kilcullen's measures provide complementary data to the assessment process that are measurable and relevant across LOEs. The data collected from this process does not remove the qualitative expert judgment from lower level tactical commanders

but provides the quantitative evidence of change. Further, the measures can assist in correlating the data to why there are changes in the environment. Visualization of this data can lead to greater situational understanding by the commander and reframing of the operational approach as necessary.

Generally, military commanders are extremely comfortable with information provided on a map and can absorb the information more readily. Visualizing information on map is critical in providing the context of the information and shared understanding.<sup>25</sup> The Training and Doctrine Command Analysis Center at Monterey has recently completed a research project concerning exploratory data analysis (EDA) to visualize operational data for current operations in Afghanistan. Their research examined the factors and processes to implement a software solution to visualizing the data. They found that the two most important characteristics of the data are the temporal and geospatial components. In the most basic sense, time series or trend analyses relies on the temporal component of data collected over time. Typically, these measures are binned monthly but can be queried to fit the time interval required for the analysis. The geospatial component of the data is equally important in the overall analysis. The human brain can detect trends in data from visual displays much easier than from numeric tables. Providing data that is tagged with location information enables the analyst to provide much more information to the operational commander on a map background. Figure 2 depicts unclassified SIGACT reports over Regional Command South (RC-S) and Regional Command Southwest (RC-SW). This one chart depicts instantly where the insurgency has concentrated their activity and the relative frequency of attacks. This is the type of information that can readily inform the commander to

make decisions on where to adjust force strength, as well as government and development projects. Further, since this information is unclassified, it can be shared with NGO/IGO partners leading to their risk decisions on whether to conduct projects in specific districts.

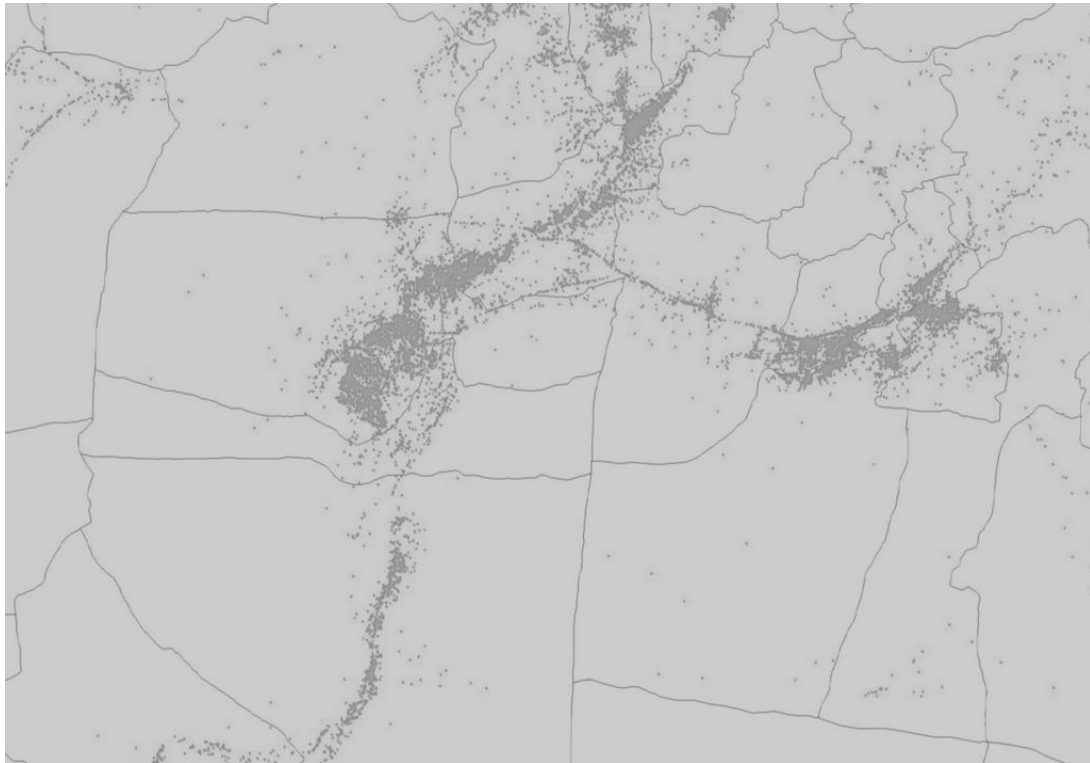


Figure 2: Exploratory data method to geographically show security incidents.<sup>26</sup>

## Conclusion

Counterinsurgency operations represent one of the most nuanced, complex, and dynamic types of warfare. Victory in these operations hinges on the perception of the populace and not on the destruction of the armed forces. In the Vietnam case study, the primary metric used to gauge success was the “body count” measure, which was prone to error and did not provide the insight necessary to gauge the populace’s

perception. In Afghanistan, it took until 2009 for the intelligence community to realize the shortfall of information and the lack of a collection process to garner information on the population. Both of the case studies lead to the undeniable conclusion that the commander needs to have a thorough understanding of the operational environment in order to design the operational approach for the campaign plan.

To measure progress in the campaign plan requires careful selection of the objectives and the process to measure the objectives. The measures collected or derived from reliable sources must be sensitive to changes in the PMESII domains to provide the commander insight into changes in the operational environment. Specific to the counterinsurgency environment in Afghanistan, there are numerous open source databases that provide useful information to assess the factors that impact the population's perspective. As assessments are important at all levels of command, a data sharing environment needs to exist with appropriate classification levels. Specifically, this network needs to have a robust unclassified portion to share information with civilian organizations and a means to get civilian organization's data into the database. The Datacards effort under the Office of the Secretary of Defense illuminates a portion of the databases that are available.

Finally, the data needs to be synthesized and communicated to the commander with clear and convincing evidence on the progress of the campaign plan. Using graphs that help the commander visualize the information on a map, such as exploratory data analysis techniques, aid in the rapid understanding of the environment. Commander's at the strategic level need accurate information on the environment to make the most informed decision. Without this analysis, commanders are forced to

make decisions based on instinct which carries a tremendous amount of risk in a volatile, uncertain, complex, and ambiguous environment.

## Endnotes

<sup>1</sup> U.S. Joint Chiefs of Staff, Joint Operations Planning, Joint Publication 5-0, (Washington, DC: U.S. Joint Chiefs of Staff, August 11, 2011), JP-5. Department of Defense JP 5-0. p. III-2.

<sup>2</sup> U.S. Joint Chiefs of Staff, Counterinsurgency Operations, Joint Publication 3-24, (Washington, DC: U.S. Joint Chiefs of Staff, October 5, 2009), JP 3-24. Department of Defense JP 3-24. p. xix.

<sup>3</sup> JP 5-0. p. D-2.

<sup>4</sup> JP-5. p. D-3-4.

<sup>5</sup> Scott S. Gartner, "Strategic Assessment in War" (Binghamton, NY: Vail-Ballou Press 1997), p. 163-77.

<sup>6</sup> JP 3-24. p. II-1.

<sup>7</sup> George C. Herring, "America's Longest War," (New York, McGraw Hill, 2002), p. 59.

<sup>8</sup> Gregory A. Daddis, "No Sure Victory: Measuring U.S. Army Effectiveness and Progress in the Vietnam War," (New York, Oxford University Press, 2011), p.41.

<sup>9</sup> JP-5, p. III-34.

<sup>10</sup> Gregory A. Daddis, "Measuring the Vietnam War," lecture, Temple University, Philadelphia, PA, November 2, 2011.

<sup>11</sup> Anders Sweetland, "Item Analysis of the Hamlet Evaluation System" (Santa Monica, CA, RAND, 1968), p.7.

<sup>12</sup> Gregory A. Daddis, "Measuring the Vietnam War," lecture, Temple University, Philadelphia, PA, November 2, 2011.

<sup>13</sup> MG Michael T. Flynn, USA, Captain Matt Pottinger, USMC, Paul D. Batchelor, DIA, "Fixing Intel: A Blueprint for Making Intelligence Relevant in Afghanistan." [http://www.cnas.org/files/documents/publications/AfghanIntel\\_Flynn\\_Jan2010\\_code507\\_voices.pdf](http://www.cnas.org/files/documents/publications/AfghanIntel_Flynn_Jan2010_code507_voices.pdf). (accessed January 10, 2012).

<sup>14</sup> LTC David Hudak, USA, Dr. Brian Effird, "Data Collection and Data Sources in Afghanistan," in *Pre-Release--NATO Operations Assessment: A Case Study Based on Planning for Transition in Afghanistan*, ed. James N. Bexfield, (RTO-TR-SAS-091, Oct 2011), 66.

<sup>15</sup> Flynn, p 8.

<sup>16</sup> Afghanistan Information Centre Home Page, <http://www.afg-info.com>, (accessed January 15, 2012).

<sup>17</sup> World Bank Afghanistan Home Page, <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/SOUTHASIAEXT/AFGHANISTANEXTN/menuPK:342167~pagePK:141159~piPK:141110~theSitePK:305985,00.html>, (accessed January 15, 2012).

<sup>18</sup> The Datacards Home Page, [http://www.datacards.org/mediawiki/index.php/Main\\_Page](http://www.datacards.org/mediawiki/index.php/Main_Page), (accessed February 14, 2012).

<sup>19</sup> David Kilcullen, "Measuring Progress in Afghanistan," [http://hts.army.mil/Documents/Measuring%20Progress%20Afghanistan%20\(2\).pdf](http://hts.army.mil/Documents/Measuring%20Progress%20Afghanistan%20(2).pdf) (accessed on January 10, 2012), p. 2.

<sup>20</sup> George Franz, David Pendall, and Jeffrey Steffen, "Host Nation Information Requirements: Achieving Unity of Understanding in Counterinsurgency," *Small Wars Journal*, January 15, 2010. p.1.

<sup>21</sup> *Ibid.* p. 7.

<sup>22</sup> *Ibid.* p. 5.

<sup>23</sup> Kilcullen, p. 6.

<sup>24</sup> David F. Eisler, "Counter-IED Strategy in Modern War," *Military Review*, January-February 2012, p. 12.

<sup>25</sup> Michael T. Flynn, Charles A. Flynn, "Integrating Intelligence and Information: Ten Points for the Commander," *Military Review*, January-February 2012, p. 6-7.

<sup>26</sup> James Henry, "Data Visualization Methods and Tools for Analysis of Current Operations," Army Operations Research Symposium, briefing slides, Fort Lee, VA, November 8, 2011.

