

Multi-Layered Assessment: Lessons from Measuring Progress in Afghanistan

In: Proceedings from the 27th International Symposium on Military Operational Research
31 Aug – 3 Sep 2010, New Place, near Bishop Waltham, Hampshire, UK.

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Abstract

An assessment is a key component of the mission planning and implementation process, and at the same time it is a very difficult and challenging endeavour. This is especially true for counterinsurgency operations, such as the NATO mission in Afghanistan. This paper addresses three distinct aspects of the Afghanistan mission assessment process based on the authors' cumulative experiences with the mission assessment in the whole-of-government environment, gained while supporting the assessment process of the Canadian Expeditionary Forces Command in 2007, Task Force Kandahar in 2009, and the US Central Command in 2010. Rather than attempt to provide an exhaustive treatise of all possible assessment procedures, instructive examples of what worked and what did not work are presented, as well as suggestions for building a comprehensive approach to the assessment process. Three main lines of investigation are pursued. First, the topology of the involved organizational and security structures is examined and implications for the assessment frameworks are commented on. Second, the selection of measures for the assessment and the possibility of information overload are discussed, while at the same time the problem of inadequate situational awareness is examined. Third, the issue of qualitative versus quantitative assessment is considered, as is the nature of assessment at a community or village level where there is typically a lack of quantitative data, but the qualitative data may still be gathered.

Introduction

In 1998 the Canadian Forces adopted an effects-based approach to operations (EBAO) as an integral part of their doctrine [1]. However, the construct was not fully implemented in the doctrinal writings at a level relevant for day-to-day planning and assessment endeavours [2] and in 2008 it was all but abandoned. At the same time US JFCOM rejected somewhat related concept of Effects Based Operations (EBO) due to its frequent misapplication and misuse of concepts [3]. Unlike EBO, the EBAO construct, when used at the appropriate (that is operational) level, can provide a useful connection between strategic objectives and tactical tasks in a complex environment. However, when used indiscriminately, the concept of effects can become a burden rather than assistance to military commanders. Combining the personal experience of several personnel of the planning team with the North Atlantic Treaty Organization (NATO) pre-

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doctrinal hand book [4], the Task Force Kandahar (TFK) headquarters (HQ) tried to integrate the EBAO construct into its planning process at the operational level [2].

The assessment process, in particular, proved to be a significant challenge. Aside from the complication of having multiple stakeholders within TFK, there were also reporting and assessment requirements from higher HQ in Canada, as well as from the International Security Assistance Force (ISAF). Attempting to satisfy some of these requirements brought to light several weaknesses in the assessment process. Paramount among those was the fact that in many cases the inherent complexity of the environment that was to be assessed was ignored, as was the unique character of the organizational and geographical structures involved. This translated to an incomplete and/or misleading picture of the assessed quantities. Most of these weaknesses are not limited to the Canadian process alone, nor to Afghan mission alone, rather they have been observed across other conflicts by other nations as well [5 and references therein⁴].

One particular concern deserves to be mentioned. One of the indications of the complexity of the conflict in Afghanistan is that many aspects (such as casualty and incident numbers) behave in a way consistent with the dynamics of critical systems [6]. This in turn means that the causality in the system is not well defined because there is a non-linear response to changes that spans multiple temporal, spatial, organizational and geo-political scales. The implication for assessment is that it may be in principle impossible to state that A caused B. In most cases the most conclusive statement would be that A was correlated with B, or A was influenced by B (but in turn B could be influenced by A via some other mechanism). A simple example can be envisioned as follows. In general, an increase in security may enable more effective governance and development activities. On the other hand, improving governance and addressing grievances is likely to increase support for the government, thus decreasing the insurgent freedom of action. So if it is observed that the grievances were addressed, the popular support of government increased, and at the same time there is an increase in security – what is the cause and what is the consequence? This lack of clear causal links needs to be considered in the assessment process.

This paper addresses three distinct aspects of the Afghanistan mission assessment. First, it examines the topology of the organizational and security structures involved and implications for the assessment frameworks. Second, it discusses the selection of measures for the assessment and the possibility of information overload while lacking reliable situational awareness. Third, the paper considers the issue of qualitative versus quantitative assessment, in particular the assessment at a community or village level where there is typically a sparseness of quantitative data. This paper is not intended to be an exhaustive treatise on the assessment process; rather, it presents instructive examples of what worked and what did not work, and adds suggestions to aid in the creation of a more comprehensive and encompassing approach to the assessment process. While it is based primarily on the experience in Afghanistan, most of the findings can be extrapolated to any similar, counterinsurgency or armed state-building, environment.

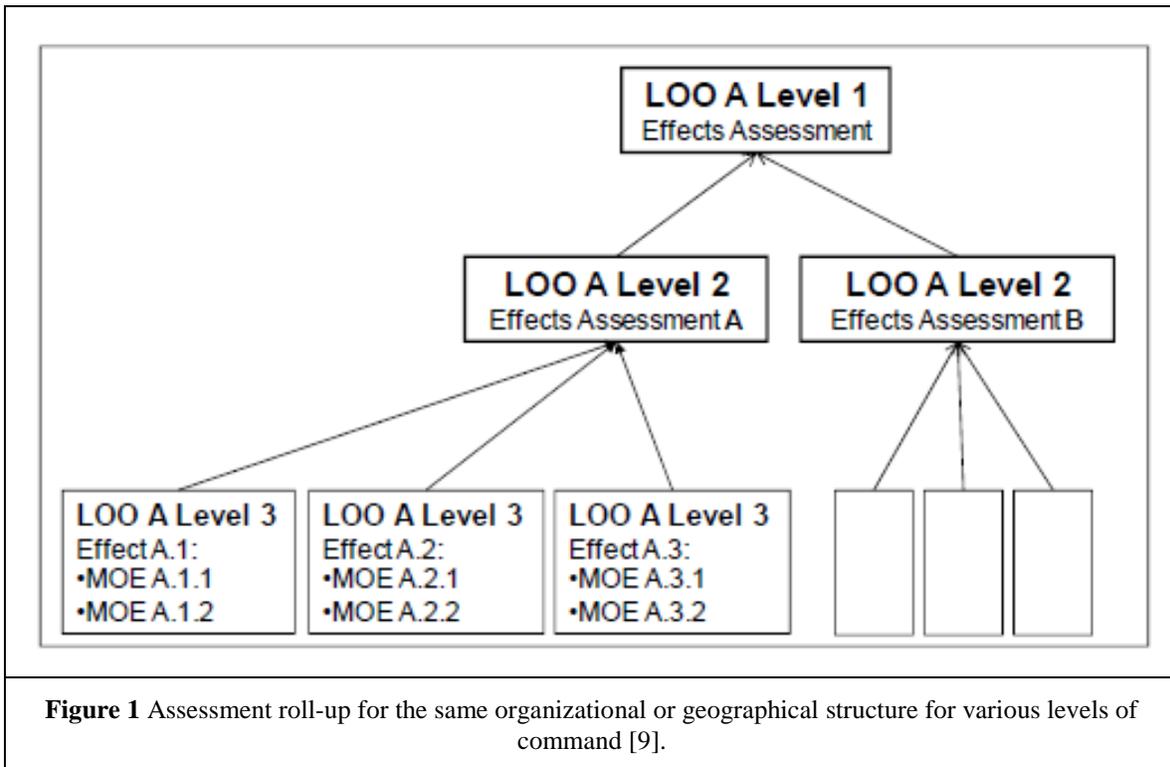
Topology of Assessment: From Villages to the Nation

One of the greatest challenges of the assessment process is the fact that different levels of stakeholders have different requirements on the level and distribution of the assessment. For

⁴ While this paper focuses on the Canadian experience with the mission assessment, reference 5 (and partially reference 7) includes a detailed discussion of limitations common across variety of assessment methodologies from other nations, and it also includes an extensive bibliography of the studies dealing with this topic.

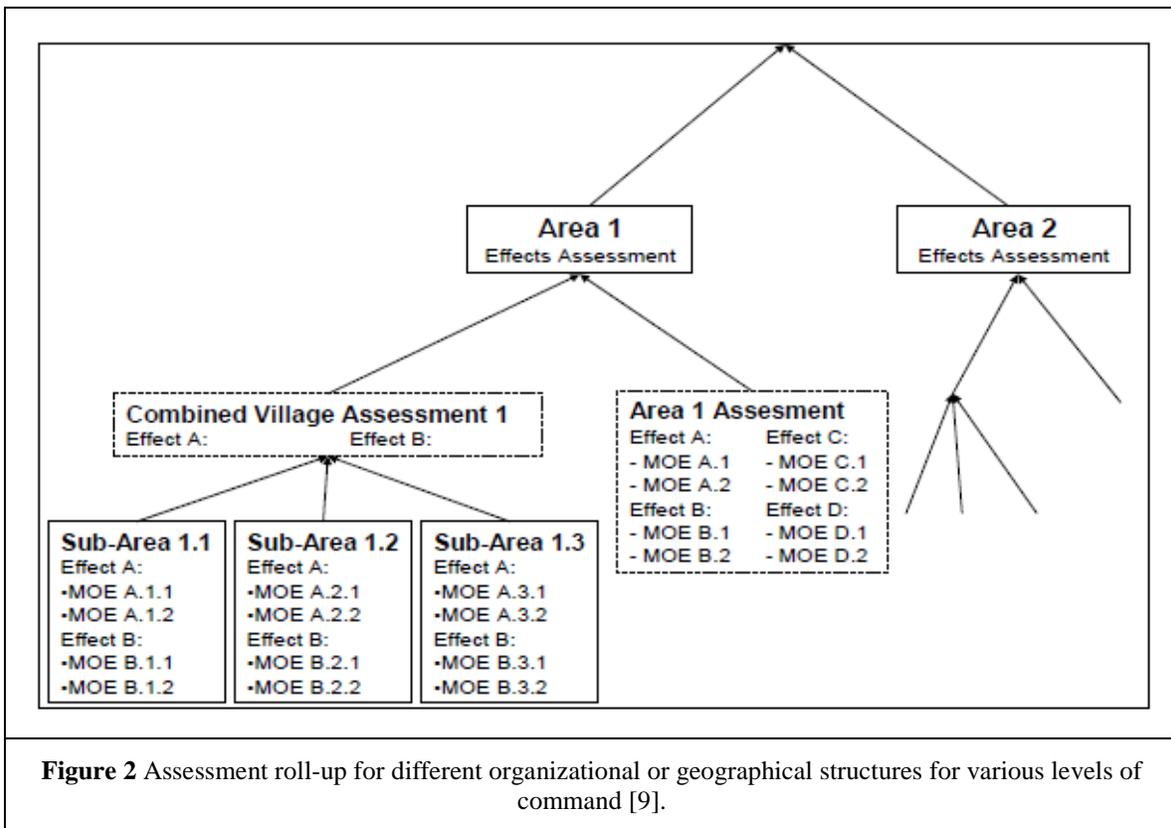
example, battalion or brigade commanders might be interested in the progress in villages and perhaps districts in their area of responsibility (AOR). In some cases they might be interested in the provincial assessment, for instance, if their AOR coincides with the entire province or a key part of it. On the other hand, division HQ have a greater interest in the regional or provincial assessment (their entire AOR), perhaps down to district level. And so on. The challenge is compounded by the fact that distinct geographical/organizational structures often have different governance, security and development layouts which must be reflected in the definition of measures as well as in the definition of the assessment process. There are two possible perspectives of the assessment structure.

In one, all of the different levels of command assess the same organizational or geographic structure (e.g. province or district) at their respective decision-making level. For example strategic HQ would be interested in a high-level, “30,000 ft”, picture, while tactical commanders would be interested in the performance of the assigned tasks (Figure 1). The tactical commander’s measures might provide one of the inputs for the operational-level assessment, assuming his tasks are well connected with the operational-level effects [2]. Likewise, the operational-level commander can roll-up his assessment to provide an input for the higher level picture, since the assessment is tied to particular structures. An approach like the one described was used, for example, in the design of the Canadian Effects Dashboard [5,7]. A word of caution needs to be included here. No matter how well measures of progress are defined, they only provide a part of the overall picture. They need to be supplemented by a narrative that puts the measures into appropriate context [8]. Any assessment tool is exactly that – a tool that facilitates better assessment. It should not be confused with the assessment itself.



The second perspective, a more complicated one, arises in cases when the assessment deals with different organizational structures for one or multiple levels of command. For example, the assessment can span the entities from the village or community level through district and provincial, all the way up to the national level. Figure 2 shows an example of a roll-up for distinct structures. In the case of the assessment of distinct structural levels, additional information must be considered at each level of the assessment. For example, the assessment of the provincial government is not done for each village separately since the same information would need to be repeated for every village (the provincial government remains the same).⁵ Consequently, the village-level information would be aggregated as the assessment was rolled up to the provincial level. In addition, since the narrative describing the MOEs is such an important part of the assessment, it should be added to the assessment at every stage of the roll-up.

There is an important implication of these observations: Since more information needs to be added at additional levels, it is vital to keep the number of measures low from the beginning; otherwise, there is a risk that a huge and unwieldy structure will result, possibly becoming more of a hindrance than a help. Thus the trade-offs between simplicity, efficiency and resolution must be considered carefully when selecting the measures. The following sections address the assessment process at different organizational levels and possible connections among them. Past experiences are examined and leveraged to provide possibilities for the way forward. Most of the proposed structures are provided at a conceptual level so as to enable extrapolation to missions other than Afghanistan, and to avoid classification concerns.



⁵ The assessment of the governor should not be confused with the assessment of the popular support of the government, the latter of which is valid village or district level information.

Measures of Effectiveness and Measures of Performance

A critical piece of the assessment process is the selection of appropriate measures. In general, the assessment process needs to answer one or both of the two questions: “Are we doing things right?” and “Are we doing the right things?” The first question can be extremely important to tactical-level commanders in order to be able to assess the performance of their troops, and the second question is important for the operational and strategic-level commanders because it provides potentially valuable information for directing courses of action to achieve the strategic objectives of a mission.

There is a relationship between the two questions or, at least, there should be, if the tasks performed by the tactical units are to lead to the achievement of the strategic objectives. This relationship should be identified at the mission analysis stage in as much relevant detail as is possible. Accordingly, tasks assigned to tactical-level commanders should be driven by the desired measures of effectiveness (MOE) [2]. Now if the relationship between the tasks and objectives is defined correctly, the measures of performance (MOP) assessing the quality of performance of the desired tasks will be able to inform the measures of effectiveness, which, to reiterate, measure the effects of the completed tasks relative to the strategic objectives.

At the same time, when structuring the assessment framework, indicators of progress need to be adopted that will enable a re-evaluation of the assumptions and a re-orientation of the tasks if the assumptions are found to be deficient in some way. Thus, the MOEs can be informed via two streams, one of them taking account of how well the tasks intended to lead to the desired effects were executed, and the other measuring the outcomes relative to the strategic objectives, independent of the conducted tasks. The advantage of this approach is that it enables a re-evaluation of the relationship between tasks and the objectives, i.e., whether there is evidence to support the notion that a task contributed to outcomes defined in the mission analysis. However, having that said, fully quantifying this relationship requires additional knowledge of the mechanisms through which the outcomes were influenced by the tasks, and this may not be easy to do.

One of the greatest pitfalls of assessment is the tendency to select too many measures. Although it is, in general, better to have more information available than less, the effort that goes into devising, evaluating, processing and weighing measures oftentimes is not worth the gain in awareness achievable with a few simple, well-chosen measures. The fact that particular details or statistics are being tracked does not imply that they must be included as measures in the assessment. In addition, overlap in the dependency structure of measures can make it difficult to ascertain how much weight is effectively being given to each fundamental aspect of the object under evaluation. In addition, measures come with their associated errors; they are imperfect variables intended to quantify some underlying phenomenon. While one can hope that the errors are small or negligible, it is still necessary to be realistic and acknowledge that each new measure contributes its error. Since the individual errors add up, adding more and more measures will increase the cumulative error to a point when adding new measures becomes detrimental to the assessment process.

The measures need to capture enough of the multi-dimensionality of a mission to provide an overall picture, but there is no requirement to capture all the aspects of the mission. There is no hard rule as to how many measures there should be, but less can be sometimes more. So, a rule of thumb could be: Collect as many measures as are needed, but no more than assess the space of mission objectives as independently and objectively as possible. If there are too many measures

and the assessment process becomes too tedious, the assessors are inclined to confound the issues rather than provide a meaningful assessment.

Furthermore, quantitative or semi-quantitative measures (e.g. grading using indicators [5,9]) on their own provide only a part of the picture. When supplemented by a narrative supplied by subject-matter experts, however, which sets up the context and provides considerations for some of the aspects not captured by the measures⁶, the interpretive potential of the raw data is enhanced. For example, the Canadian assessment of progress in Afghanistan used measures with a five-point scale that was defined using a set of four to six indicators for each measure. This grading scale was complemented by comments included with each measure. However, there was no separate assessment in the form of narrative; the comments were strictly related to the measures, and they were not graded separately.

Another factor to consider is the level or scale at which a measure is to be evaluated. Measures and indicators used in the assessment process need to be tied to a particular position in the assessment hierarchy. Otherwise the assessment becomes too convoluted and irrelevant to be useful at any one level. For example, international recognition should not be assessed at the village level (whether foreign governments accept existence of a particular village is usually unimportant).

The information relevant for the higher levels thus needs to be added during the roll-up process, and the irrelevant information needs to be removed. Inappropriate convolution of the measures and indicators across various levels of governance will lead to one of two situations:

- 1) The lower-level assessment is simply rolled up to the higher level without considering any additional information, leading to incomplete situational picture and consequently to an erroneous assessment; or
- 2) The high-level measures are assessed at lower levels, convoluting the assessment, making it too lengthy and providing potentially misleading situational picture, thus leading to an erroneous assessment.

In any case, the result is that the assessment is likely to be misleading. Therefore, it is crucial that appropriate measures are defined, and that the assessment process allows for the consideration of additional inputs specific to the organizational level at which the assessment happens.

In addition, to enable proper assessment, it must be determined what granularity of information is to be captured. For example, different requirements arise if the assessment is going to be operational versus when it is strategic. The level of assessment will drive considerations like the level of detail, classification considerations, and the presentation of results. For the operational-level assessment, the level of detail must be sufficient to inform planning processes and to enable selection of proper courses of action. On the other hand, strategic assessment should be broad enough to satisfy the information requirements of the policy makers and the domestic and host nation population, and it should be tied to the strategic objectives of the mission in the greater strategic context.

⁶ For example, a decline in violence (a positive factor) may not be a reflection of improved security. It may simply mean that the security deteriorated to a point when no one dares to walk into the streets. Therefore the context is vital for proper assessment of the security situation.

Village Assessment

Though tools such as surveys and trend analysis were useful at the macro-level of analysis, there was little evidence of these approaches being reliable or valid at the community level. The main limitation of a trend analysis was an extreme scarcity of the events – often as few as one event over several months. Large scale polling was usually unable to provide a representative sample that accounted for the range of community experiences on local issues. Nor were general questions used in measures such as the Kandahar Opinion Poll sufficient in providing a deeper understanding of local grievances, politics, or socio-economic factors. While the fidelity of polling and surveys could be increased by increasing sample sizes for particular villages, there might be external factors such as cost or security that would render it a non-viable option.

To enable assessment at the community level, a behaviour-centered approach using a combination of direct observations, semi-structured interviews, and focus groups was selected as the most effective and accessible means of assessment (Figure 3 shows two pictures of small group assessments). Focussing on actual behaviours provided the basics needed to understand and impact community concerns. For example, a person may say “I feel secure” in a poll, but stay at home most of the time, raising concerns that perhaps that individual does not feel safe outside of the home. Or conversely they may identify ‘water security’ as the major issue, while the core grievance is rather control of existing water supplies. In both cases the context is vital and cannot be assessed at the community level through macro-level assessment methodologies.

The greatest metrics challenge was to connect this behaviour-based assessment with the effects framework developed at the provincial level. In the end the measures that enabled translation from the operational effect were identified and used to provide the connectivity. A more detailed description of the behavioural assessment within TFK follows.



Figure 3 Conducting village assessment in Kandahar Province, Afghanistan.

Behavioural Effects

As mentioned above, within TFK the human element of assessment focused on the populations’ attitudes, beliefs and most importantly their behaviour. A strong emphasis on the human dimensions reflected counter-insurgency literature (e.g. ref [10]) and Canadian doctrine

describing the need to prioritize the population's perceptions, attitudes, and ultimately their behaviour as the "strategic centre of gravity" [1]. The latter document defines the measures of effectiveness for human factors as follows:

"With influence activities and effects on the psychological plane, MOE are applied to activities and the resulting changes in understanding, perception and the will of the target audience...The results of these influence activities require as defined a set of indicators as possible in order to detect changes in perceptions, understanding, attitudes and behaviours." (p. 6-27)

Based on the above definition, a series of MOEs assessing different aspects of the community's behaviour, attitudes, and perceptions were developed.

In developing these measures each relevant effect defined in the Canadian Operational Plan was treated as a psychological construct, i.e., a hypothetical concept which can be observed only from the individual's behaviour. Considering effects as constructs is logical given their similarity; effects tended to involve such broad concepts as the community freedom of movement or the relevance of the insurgency to daily quality of life, which are difficult to assess in a comprehensive fashion at a village level without resorting to behaviour as a criterion. Some examples of the MOEs and corresponding behaviours are in Table 1.

By the end of the operational planning process (April-May 2009) the assessment framework contained a list of MOEs that were behaviourally focused and linked conceptually to the operational level effects. These MOEs were assessed using focus groups, behavioural observation, and semi-structured interviews, all conducted by one of the authors (JL).

Table 1 Some Examples of MOEs & linked measurement methods

Desired Effect	Measure of Effectiveness	Data Sources
Freedom of movement is achieved	<ul style="list-style-type: none"> • Ability to attend work and school • Ability to transport goods • Ability to visit family • Perception of how safe travel is 	<ul style="list-style-type: none"> • Focus groups • Target surveys • GIROA and NGO data
Insurgency is separated (morally) from population	<ul style="list-style-type: none"> • School attendance • Level of support for local reconstruction and development • Voting behaviour • Engagement with government institutions 	<ul style="list-style-type: none"> • Direct observation • Observation and PRT data • Focus groups • NGO data • Semi-structured interviews

Focus groups ranged in size between six to twelve members, with each group consisting of village elders, landowners, or day labourers. Communities did not allow women to be included and participants were not randomly selected but provided by the village leaders. Questions used in focus groups centred on local behaviours when possible and avoided explicit mention of the insurgency and government to avoid receiving "desired" responses. For example to determine

people's fear of insurgent retaliation for dealing with International Security Assistance Force (ISAF), participants were asked:

"I will be coming through your community in a couple of days, would you be comfortable if I came by your home and in front of the community greeted you as a friend?"

Responses to this question provided insight into the level of comfort with ISAF in different communities while follow-on probes about why participants felt comfortable or not revealed much about levels of fear and mistrust in the community.

Passive behavioural observation occurred during patrols, meetings, and at work sites. While observation contributed only limited quantitative data, usually though counting of easily observed behaviours such as the quality of interactions with ISAF patrols, the method was invaluable in providing tactical level feedback.

Semi-structured interviews were used to gather in-depth information about specific topics. For example, interviews with key leaders were used to assess those leaders' perceptions of issues such as community governance, or the relationship between different tribal groups in a community. Semi-structured interviews were not generally included in community assessments, but rather to gather the necessary background information about community dynamics.

The methods used at the village level provided unique insights into the lives and realities of the Afghan people. The community level work augmented and enriched other data-collection programs. Tactical leaders were able to use the data to identify immediate problems and grievances while operational level planners were able to incorporate community reactions into the design of upcoming operations. Yet despite filling a valuable niche in the overall collection plan, community based work in Afghanistan is fraught with difficulty. Variance in community demographics and social structures, the inability to communicate with women, and the cultural lack of trust in a country at war for several generations makes data collection and the drawing of inferences challenging, especially for foreign uniformed soldiers.

District Assessment

ISAF, particularly Regional Command (South), assessment became focused on district level assessment around 2008. However, the assessment tool used in the south was labour intensive (as described below), required very intense involvement of a variety of interest groups and suffered from a lack of interest and/or buy-in from subordinate taskforces.

The assessment process was revisited in 2009 with more involvement from the taskforces, and currently, at the time of writing, a major district assessment process for key districts is being led by the ISAF Joint Command (IJC). This district assessment provides a valuable overview of the changes across Afghanistan and is being used as an integral part of the Commander ISAF quarterly report. It is organized along the three lines of operations (governance, development, and security) and includes also a separate overall assessment. The summary district assessment is conducted every six weeks and enables tracking trends for the key districts. The indicators and measures are relevant at the appropriate level and consequently the district assessment has the potential to provide a useful operational picture. The IJC district assessment process is supplemented by an assessment of the districts with limited or no ISAF presence conducted by the US Central Command (CENTCOM). The two assessment processes are compatible, and they allow for building a country-wide assessment picture.

On the other hand, the district assessment does not provide the much-needed strategic, nation-wide picture, and consequently there is a growing desire to conduct higher-level assessments in

tandem. The ISAF interest is focused on provinces, while there is a parallel requirement for strategic assessment in ISAF contributing countries.

Provincial and National Assessment – Roll-Up from the Districts

During the initial stages of the conflict in Afghanistan, Canadian Forces were stationed in Kabul and the assessment focused on the national picture of progress in Afghanistan. With this in view, the operational analysis team supporting the Canadian Expeditionary Forces Command (CEFCOM) was tasked to develop an assessment matrix for all of Afghanistan. This tool was to be consistent with the existing dashboard developed within the CEFCOM J5 Division [5,7]. At the same time it built on the extensive body of literature related to assessment processes [xx and references there in].

However, before the matrix was completed, the task was re-scoped to consider Kandahar Province alone. This requirement was driven by the fact that the Canadian AOR became Kandahar, and that Canada had only limited visibility on progress in other parts of the country. Even within Kandahar Province the assessment focused heavily on the so-called “ink spot”—the area of the province including Kandahar City and parts of Zhari and Panjwayi districts where most of the TFK was located and had relatively good visibility.

This re-scoping was rather challenging, since the structure of the proposed ‘Effects Dashboard’, as the matrix was referred to, was meant for a high-level, nation-wide assessment, and some of the measures were not entirely relevant even at the provincial level and consequently needed to be redefined. The Effects Dashboard relied on a semi-quantitative assessment scale that used the presence of specific indicators for each desired and monitored effect. This assessment was supplemented by a narrative in the form of comments that could be added to each of the effects [5]. The Effects Dashboard became an integral part of the Commander CEFCOM Quarterly Campaign Assessment Report (QCAR). Its comments formed a significant part of the text, and the rolled-up assessment was used to provide a summary picture. The QCAR in turn informed the assessment conducted by the Canadian Strategic Joint Staff, and provided updates to other government departments.

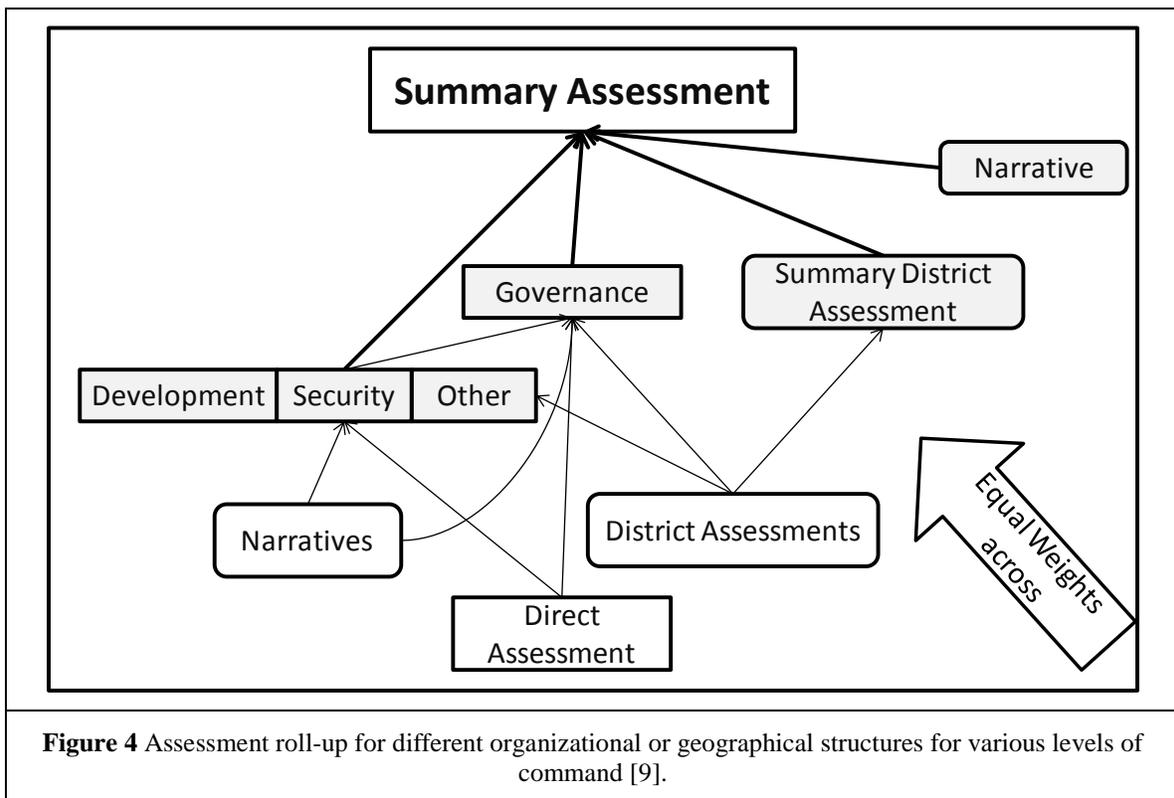
Later, it was decided that the Effects Dashboard would be used to assess each district separately and that the district-level results would be rolled together to obtain a provincial assessment. This meant that measures having significant limitations in relevance even at the provincial level would be now used to assess an even lower level, and then simply averaged to obtain the provincial assessment without consideration for any discontinuities or incompatibilities in the two structures.

In addition, while assessment at the provincial level involved 132 measures [5], which was quite manageable, applying the same framework at the district level meant assessing seventeen times this number, suddenly bringing the number to over 2200. This made the assessment process a very labour-intensive exercise. In addition, most of the population lives in less than half of the districts and the Canadian Forces had little or no presence in the majority of the assessed districts. It suffices to say that the resulting assessment was of limited utility.

While the original Effects Dashboard was intended as an assessment support tool capturing both semi-quantitative measures and an open-ended narrative in the form of comments, the transition to district assessment meant that the comments became token or were non-existent (except perhaps “nothing to report”). In 2009 it was decided to abandon the Effects Dashboard and switch to a purely narrative assessment supplemented with some quantitative data in annexes (often focused on the incident and casualty numbers). The change meant from that point forward the

assessment became predominantly subjective, based solely on the opinion of the assessors and some anecdotal evidence.

Thus the Effects Dashboard became emblematic of a typical assessment tool. At first it was developed and used by the same people, so there was a clear connection between the intent, design, and usage. With the force rotation, different people began using it in different ways than initially intended. This led to the impression that it adds no value, especially considering the amount of work required, and it was eventually abandoned. However, what may have been lost was that the process demonstrated that it was possible to develop an efficient roll-up across different levels of command, at least for the same organizational structure. The question remains, however, as to how to structure a national-level assessment based on a roll-up of the districts.



Some preliminary work has been done in this area, but there is no generally accepted approach yet. One option is depicted in Figure 2. The roll-up from the districts would use the ISAF district assessment⁷ as one of the inputs, but it would include a number of other considerations including a meaningfully scored narrative (Figure 4).

In addition, the experience with the Effects Dashboard demonstrated the importance of including users and stakeholders in the process [5,7] and also the importance of maintaining a strong connection between the design and intended usage of the Effects Dashboard.

⁷ Currently ISAF uses well defined district assessment process to measure progress across Afghanistan (previous section).

Conclusions

Overall, it can be concluded that mission assessment in a complex environment such as Afghanistan has been a convoluted and difficult endeavour. These difficulties are driven at least in part by the internal complexity of the environment. Multiple stakeholders with often conflicting interests, pressures from higher headquarters and policymakers, lack of reliable data, multiple reporting channels and a limited understanding of the complexities all contribute to the magnitude of the problem.

Assessments typically span several organizational and geographical layers. The information requirements are different at different levels, and the availability and quality of the information varies as well. This complex structure of the assessed environment requires a comparable complexity embedded within the assessment procedure⁸. The authors' experience suggests that a multilayered approach using different data sources at different levels, and then combining lower-level assessments at higher levels while adding layer-specific information and considerations should be able to address the problem. An example of such a process is the strategic assessment roll-up currently being developed for the Afghan theatre.

In closing, it was also found that involvement of the relevant stakeholders is critical for ensuring buy-in and usefulness of the assessment framework across user domains. In addition, it would be useful if the analysts involved in the development of assessment tools were involved in the implementation of the tools, since they understand the intent of the particular tool. Since this might be difficult to achieve due to a relatively quick turnover of personnel, in particular in the deployed environment, it is vital that the intended use of a tool be properly documented in order to ensure continuity across different rotations. Otherwise there is a serious risk of misapplication of the framework leading to it becoming obsolete and abandoned, and consequently one more discontinuity in the assessment process.

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⁸ Increase complexity does not mean increased level of detail. It means that the internal structure of the assessed environment must be reflected in the internal structure of the assessment.

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