NORTH ATLANTIC TREATY ORGANISATION

RESEARCH AND TECHNOLOGY ORGANISATION

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RTO TECHNICAL REPORT **TR-HFM-160**

How to Improve your Aim: Measuring the Effectiveness of Activities that Influence Attitudes and Behaviors

(Comment améliorer votre objectif : En mesurant l'efficacité des activités qui influencent les attitudes et les comportements)

Final Report of Task Groups HFM-160 and HFM-183.

Published August 2011

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The Research and Technology Organisation (RTO) of NATO

RTO is the single focus in NATO for Defence Research and Technology activities. Its mission is to conduct and promote co-operative research and information exchange. The objective is to support the development and effective use of national defence research and technology and to meet the military needs of the Alliance, to maintain a technological lead, and to provide advice to NATO and national decision makers. The RTO performs its mission with the support of an extensive network of national experts. It also ensures effective co-ordination with other NATO bodies involved in R&T activities.

RTO reports both to the Military Committee of NATO and to the Conference of National Armament Directors. It comprises a Research and Technology Board (RTB) as the highest level of national representation and the Research and Technology Agency (RTA), a dedicated staff with its headquarters in Neuilly, near Paris, France. In order to facilitate contacts with the military users and other NATO activities, a small part of the RTA staff is located in NATO Headquarters in Brussels. The Brussels staff also co-ordinates RTO's co-operation with nations in Middle and Eastern Europe, to which RTO attaches particular importance especially as working together in the field of research is one of the more promising areas of co-operation.

The total spectrum of R&T activities is covered by the following 7 bodies:

- AVT Applied Vehicle Technology Panel
- HFM Human Factors and Medicine Panel
- IST Information Systems Technology Panel
- NMSG NATO Modelling and Simulation Group
- SAS System Analysis and Studies Panel
- SCI Systems Concepts and Integration Panel
- SET Sensors and Electronics Technology Panel

These bodies are made up of national representatives as well as generally recognised 'world class' scientists. They also provide a communication link to military users and other NATO bodies. RTO's scientific and technological work is carried out by Technical Teams, created for specific activities and with a specific duration. Such Technical Teams can organise workshops, symposia, field trials, lecture series and training courses. An important function of these Technical Teams is to ensure the continuity of the expert networks.

RTO builds upon earlier co-operation in defence research and technology as set-up under the Advisory Group for Aerospace Research and Development (AGARD) and the Defence Research Group (DRG). AGARD and the DRG share common roots in that they were both established at the initiative of Dr Theodore von Kármán, a leading aerospace scientist, who early on recognised the importance of scientific support for the Allied Armed Forces. RTO is capitalising on these common roots in order to provide the Alliance and the NATO nations with a strong scientific and technological basis that will guarantee a solid base for the future.

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List of Abbreviations

ARW	Advanced Research Workshop
CEA	Campaign Effectiveness Assessment
CI	Commander's Intent
CIMIC	Civil and Military Cooperation
CO	Commanding Officer
COA	Course Of Action
CONOPS	Concept Operations
EBAO	Effects-Based Approach to Operations
ET	Exploratory Team
HQ	Headquarters
HUMINT	Human Intelligence
IED	Improvised Explosive Device
INTEL	Intelligence
IO	Information Operations
JFC	Joint Force Commander
KLE	Key Leader Engagement
LN	Local National
LOO	Lines Of Operation
MOE	Measure Of Effectivness
MOP	Measure Of Performance
OA	Operational Analysis
OPPLAN	Operational Plan
OPTEMPO	Operational Tempo
PfP	Partner for Peace
PSYOPS	Psychological Operations
RAG	Red-Amber-Green
RFI	Request For Information
RTA	Research and Technology Agency
RTG	Research Task Group
RTO	Research and Technology Organisation
SME	Subject Matter Expert
SWOT	Strengths, Weaknesses, Opportunities, Threats
TA	Target Audience
TAA	Target Audience Analysis
TC	Technical Course
TG	Task Group

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How to Improve your Aim: Measuring the Effectiveness of Activities that Influence Attitudes and Behaviors

(RTO-TR-HFM-160)

Executive Summary

The emphasis of military operations is shifting more and more towards non-kinetic activities, such as Psychological Operations and Information Operations, which are geared towards influencing attitudes and behaviors of specific target audiences. Though many such activities are undertaken, there is little systematic evaluation of the effects they bring about and their effectiveness. As a result, it is not well known what these operations contribute to the overall operation and to what degree they are achieving their goals. The purpose of the Task Group HFM-160 was to develop a systematic approach to the Measurement Of Effectiveness (MOE) of influence operations.

In our approach, we consider MOE to be a process rather than a "thing"; there is no definitive list of MOE or even an overview of best practices. All MOE are custom made for a specific situation. Our approach is a way of thinking about how to assess the effects of what you have done and how effective you have been. MOE is most intuitively suited to influence operations, such as PSYOPS. However, any operation will affect attitudes and behaviors – especially kinetic operations. For this reason, our approach generalizes across the whole operations spectrum: from PSYOPS and CIMIC to the most assertive kinetic activity. Our work takes NATO PSYOPS doctrine (AJP 3.10.1) as a starting point and augments it specifically for MOE. There where we feel existing definitions and procedures are insufficient, we take the liberty to develop our own.

Our approach should be seen as a starting point. It is not possible to become an MOE expert in a couple of days after reading about our approach. Furthermore, some activities in the approach, such as statistical analysis, should be supported by knowledgeable individuals; just knowing that something should be done is not the same as being able to do it. The approach was designed for operational and tactical levels working with, commissioning, developing or interpreting MOE for any type of influence activity. They should gain an understanding of the complexity of attitudinal and behavioral MOE, the basics of how to embed MOE in operations and the basics of how to develop MOE such that it yields the desired – or at least useful – information.

The most important key concepts in the HFM-160 approach to MOE are: *effects and effectiveness*. Effects refer to changes in the environment, *potentially brought about by your actions*, though other forces may lead to the observed effects. Effectiveness refers to the degree to which *your actions are responsible* for bringing about the desired effects. Effects can be seen as a goal in and of themselves; what causes the effects is relatively unimportant as long as the effects are manifested. In terms of effectiveness, *how* the change comes about is key. It is not enough that change has occurred; you must gain insight into the cause of this change: either your actions or something else.

Our approach contains seven steps:

1) Define the effects you want to achieve;
2) Define impact indicators for each effect, which are measurable concepts that indicate attitudinal and behavioral change;

3) Define thresholds, which identify the level of change necessary to conclude that you have been successful;
4) Specify data collection methods;
5) Specify data analysis techniques;
6) Specify activities to undertake in order to achieve the desired effects (interventions); and
7) Define separately indicators of effectiveness, to help determine the degree to which *your actions* led to changes in the impact indicators.

Our approach is described in detail in the final report of the Task Group. Furthermore, in order to help end-users understand the basics of this technique, we have developed a Technical Course, which addresses and instructs trainees on the main points of the approach.

Comment améliorer votre objectif : En mesurant l'efficacité des activités qui influencent les attitudes et les comportements

(RTO-TR-HFM-160)

Synthèse

Les opérations militaires dérivent de plus en plus vers des activités non cinétiques, comme les opérations psychologiques et les opérations d'information, qui sont conçues pour influencer les attitudes et les comportements de publics ciblés. Bien que de nombreuses activités de ce type soient entreprises, il existe peu d'évaluations systématiques de leur efficacité et des effets qu'elles provoquent. En conséquence, on ne sait pas trop en quoi ces activités contribuent aux opérations globales ni à quel point elles atteignent leurs objectifs. L'objet du groupe de travail HFM-160 a été de développer une approche systématique de la Mesure de l'Efficacité (MOE) des opérations d'influence.

Dans notre approche, nous considérons la MOE comme un processus plutôt que comme une « chose »; il n'existe pas de liste exhaustive des MOE ni même une vue d'ensemble des bonnes pratiques. Toutes les MOE sont adaptées à une situation spécifique. Notre approche est un avis sur la manière d'évaluer votre efficacité et les effets de votre action. La MOE convient très intuitivement aux opérations d'influence, comme l'action psychologique (PSYOPS). Cependant, toute opération affecte les attitudes et les comportements – en particulier les opérations cinétiques. Pour cette raison, notre approche est élargie à l'ensemble du spectre des opérations : de l'action psychologique (PSYOPS) et de la coopération civilo-militaire (CIMIC) à l'activité cinétique la plus déclarée. Notre travail prend la doctrine PSYOPS de l'OTAN (NATO PSYOPS AJP 3.10.1) comme point de départ et l'élargit spécifiquement aux MOE. Là où les procédures et des définitions existantes nous semblaient insuffisantes, nous avons pris la liberté de développer les nôtres.

Notre approche doit être considérée comme un point de départ. Il n'est pas possible de devenir un expert MOE en quelques jours après en avoir pris connaissance. En outre, certaines activités liées à cette démarche, comme l'analyse statistique, doivent être soutenues par des connaissances individuelles ; juste savoir que quelque chose doit être fait ne signifie pas être capable de le faire. L'approche a été conçue pour des niveaux opérationnels et tactiques travaillant avec, missionnant, développant ou interprétant des MOE pour tout type d'activités d'influence. Ils doivent acquérir une compréhension de la complexité des MOE d'attitude et de comportement, des bases sur la façon d'intégrer les MOE dans les opérations et des bases sur la façon de développer les MOE de telle manière qu'elles privilégient l'information désirée ou tout au moins l'information utile.

Les concepts clés les plus importants dans l'approche HFM-160 de la MOE sont : *les effets et l'efficacité.* Les effets se réfèrent aux changements dans l'environnement, *potentiellement provoqués par vos actions*, quoique d'autres forces puissent conduire aux effets observés. L'efficacité se réfère au niveau auquel *vos actions sont responsables* de l'obtention des effets désirés. Les effets peuvent être considérés eux-mêmes comme un objectif et un objectif en eux-mêmes ; ce qui provoque les effets est relativement peu important tant que les effets se manifestent. En termes d'efficacité, *la clé* est la façon dont se produit le changement. Il ne suffit pas que le changement ait eu lieu ; vous devez avoir une vision de la raison de ce changement : que ce soit votre action ou autre chose.

Notre approche comporte sept étapes :

1) Définir les effets que vous voulez obtenir ;
2) Définir les indicateurs d'impact pour chaque effet, qui sont des concepts mesurables indiquant le changement d'attitude et de comportement ;
3) Définir des seuils, qui identifient le niveau de changement nécessaire pour conclure à votre réussite ;
4) Spécifier les méthodes de collecte des données ;
5) Spécifier les techniques d'analyse des données ;
6) Spécifier les activités à entreprendre afin d'atteindre les effets désirés (intervention) ; et
7) Définir séparément les indicateurs d'efficacité, pour aider à déterminer dans quelle mesure *vos actions* conduisent aux changements dans les indicateurs d'impact.

Notre approche est décrite en détail dans le compte-rendu final du groupe de travail. En outre, afin d'aider les utilisateurs à comprendre les bases de cette technique, nous avons développé un cours technique dédié à l'instruction des stagiaires sur les points principaux de la démarche.

Chapter 1 – INTRODUCTION

1.1 RESEARCH TASK GROUP STRUCTURE AND COMPOSITION

Influence Operations are gaining more and more attention. Military missions are not purely kinetic. Rather, commanders have a wide array of interventions they can use in order to support their mission. If they want a mission to succeed, they should be aware of the various resources that are available and of the benefits of these resources. Examples of influence resources available to a commander are the use of Information Operations (IO) and of Psychological Operations (PSYOPS), which NATO defines as "planned psychological activities using methods of communications and other means directed to approved audiences in order to influence perceptions, attitudes and behavior, affecting the achievement of political and military objectives" (NATO MC402/1, 2003). However, although commanders are aware of the existence (and hopefully, the importance) of influence methods such as IO and PSYOPS, it is difficult to demonstrate the effects of these kinds of operations. This is unfortunate, as determining their effects would be immensely valuable to increasing and improving the use of Influence Operations.

Given the complexity of the assessment of the effects of Influence Operations, the HFM Exploratory Team (ET-065) was formed to investigate if this topic would be appropriate for a task group. The ET met twice in the period 2006 and 2007 in Soesterberg (Netherlands). As a result of this ET, the NATO HFM Research Task Group (RTG) on *Measurement of Effectiveness of Psychological Operations as part of Information Operations* (HFM-160) was formed. HFM-160 consists of representatives from a variety of countries including the United Kingdom, Canada, the United States, Netherlands, Germany, Belgium and Sweden.

Over the course of its three-year mandate, the HFM-160 held meetings at a variety of locations: Paris (France), San Diego (USA), Brussels (Belgium), Farnborough (UK), and Toronto (Canada). In total, there were 18 days of meeting. The group consisted of experts in the field of military operations involving PSYOPS, IO and MOE[1]; operational effects analysts; and social psychologists. Among the affiliations of the group members are DSTL in the UK, the Air Force Research Laboratory (AFRL) in the USA, the Swedish National Defence College, TNO Defence, Security and Safety in the Netherlands, and Defence Research and Development Canada (DRDC). Some of the group members (had) served military functions in the (British, German, Swedish, or US) armed forces. In varying constellations, HFM-160 benefitted from the knowledge and experience of a total of 14 members during its lifetime.

1.2 BACKGROUND

Operations are no longer purely kinetic, but are also about influence and information. Informing the local population of the aims when a village is entered, encouraging local nationals to hand in their weapons or to provide information on the location of IEDs (Improvised Explosive Devices) are all examples of aspects of current missions in which behavioral and attitudinal influence are essential. One of the most important reasons for increasing the role of influence and information in theaters is that it is a non-provocative, proportional tool, which can be used when conventional weapons are unsuitable. Together with different military interventions, these effects-based operations are extremely helpful in supporting a mission.

With a growing interest in Influence Operations, the Measurement Of Effectiveness (MOE) is also becoming more and more important. After all, when missions also involve non-kinetic operations such as PSYOPS or IO to exert influence, it is important that the effects of these operations can be determined.

[1] Throughout this report, the abbreviation MOE always refers to 'Measurement of Effectiveness,' as opposed to 'Measures of Effect' or any other alternative. Effectiveness is always addressed in terms of its 'measurement.' For effects and performance, 'measurement' and 'measures' are used interchangeably.

This provides insight into which operations achieve their goals and which are not, forming the basis for improving the quality of operations and the allocation of resources.

Measuring the effectiveness of military interventions (or indeed any form of effects-based intervention) represents a critical capability and a key challenge. In the case of IO, with its "soft" targets such as perceptions, attitudes, thoughts, feelings and behavior, this requires significant development and/or adaptation of methodologies and expertise.

The work in HFM-160 has led to the conclusion that the two main challenges for MOE for influence activities are not primarily *content*-related but rather *context*-related:

1) In many defence forces in general and within the NATO-framework in particular there is currently a confounding of terms and definitions of what constitutes MOE and related data and methods. This issue is not alleviated by the fact that many Nations have their own narrow and often conflicting definitions and operating procedures for conducting and reporting MOE of PSYOPS and other influence activities. This may lead to resource-consuming discussions and misunderstandings of what MOE is and how to conduct it.
2) Additionally, numerous analyses and after-action reports point to the fact that even in cases where operators, analysts, and commanding officers have the proper education, experience and/or understanding of what constitutes MOE, MOE are often not commissioned or conducted correctly due to restrictions in time or resources, or simply due to incentive structures and political issues: nobody wants to bring bad news, which might hurt career prospects.

The first challenge may be addressed through a structured approach detailing the different components of conducting MOE for influence activities and defining their interrelationships. The aim is to aid operators and analysts to develop MOE in a way that is reasonable given the operational restrictions in time and resources that any operation will face. This knowledge gap on conducting MOE also became apparent in a TNO study on PSYOPS among five different NATO countries: Poland, Germany, Belgium, Spain and the United Kingdom (Wetzer, Griffioen-Young & Schwerzel, 2007). The goal of this study was to combine the knowledge and lessons learned in order to gain a better insight into various aspects of PSYOPS. Notably, all countries visited reported that Measurement Of Effectiveness (MOE) is one of the most difficult aspects of PSYOPS. Whereas some countries simply do not try to measure the effectiveness of their PSYOPS campaigns and products, others try to do it as well as possible. All countries visited reported the need, however, to gain more knowledge on this important topic.

In addition, previous results of PSYOPS research (e.g. Janssen, Toevank, Smeenk & Voskuilen, 2004), show that one of the most difficult issues with MOE is simply the determination of which measure can be used to report anything at all on the effectiveness of a PSYOPS product or campaign. ***After all, asking whether a specific poster was seen by locals or whether they think the poster looked nice does not say anything about its impact.*** Moreover, even if the target audience seems to be influenced by the PSYOPS, it is very hard to determine whether the resulting behavior is an effect of the PSYOPS or of something else. After all, various processes may be at work in an area of operation, such as CIMIC, (counter-)propaganda by a hostile army or organization, MediaOps, or IO, which all can influence the target audience.

Though maybe even more important, the second challenge identified above is a pervasive and structural issue relating to most international operations. As it falls outside the scope of HFM-160, however, it will not be addressed in detail in this publication.

1.3 NATO AND MOE

The MOE planning process described in this report is intended to complement the PSYOPS planning process in AJP 3.10.1 Psychological Operations. MOE clearly is a critical part of the PSYOPS OPLAN

and is to be included in the operational process, but no guidance is given as to how to define exactly what MOE is (apart from impact indicators) and virtually no guidance is given with respect as how to (a) develop, (b) measure and (c) analyze MOEs. This document provides process and guidance on how to develop and measure MOE for PSYOPS.

NATO doctrine AJP 3.10.1 recognizes the importance of measuring effectiveness, as it becomes clear in various sections. See for example 0118: Monitoring and Assessment: "The successful prosecution of IO relies on continuous monitoring and assessment of the short and long-term effects of interrelated activities, directed towards objectives. This is achieved by collection of all-source INTEL and other feedback on military information activities. Measurement Of Effectiveness (MOE) must be integrated in the INTEL collection activities led by J2. Particular attention should be paid to changes in the adversary's behavior and such other items as changes in the attitude of the civilian population, political activity, and expressions of unrest. Also, changes in an adversary's capability may be used as a MOE, for example reduced efficiency, disorganization and slower reactions to events and specific actions in response to deception."

In addition, further in AJP 3.10.1, paragraph 0402 states: "IO staff activities include evaluation and interpretation of analysis results, advice to planning and execution, contribution to planning and assessment, and the coordination of contributions by military capabilities. In particular:

1) Evaluation and interpretation of results from Systems Analysis concerning the information environment.
2) Establishment, development and utilization of information relationships (subject-matter expert network).
3) Assessment of the situation:
    a) Description of the operational environment related to information and information systems (considering global/strategic aspects).
    b) Mission analysis/analysis of (strategic) guidance for creating effects in the information environment.
    c) Analysis of limitations (assumptions, constraints and restraints) for information activities.
    d) Identification of own capabilities for creating effects in the information environment.
    e) Identification of others' capabilities for creating effects in the information environment, considering allied, friendly, neutral and (potentially) adversary actors.
4) Estimate of the situation:
    a) Comparison of the actual and aspired situation in the information environment (variance analysis related to the situation and mission).
    b) Identification and evaluation of possible trends (developments, evolutions) in the information environment.
    c) Identification and evaluation of possible and desired effects in the information environment that can be created by military means."

Clearly, the importance of conducting MOE is recognized by NATO. However, the doctrine does not elaborate on *how* this should be done. It only expresses the importance of determining the effects of activities, but it does not guide soldiers in doing so. For example, it states that the actual and desired situations should be compared. The first question that arises here is what exactly to measure when the aim is "to measure the situation". If it is clear which specific aspect of the situation should be measured, the next issue immediately arises: how to measure this aspect? Thus, although NATO doctrine makes explicit the importance of conducting MOE, it does not provide guidelines to do so. In our philosophy, MOE should follow a planning process similar to that of Psychological Operations covered by AJP 3.10.1., according to which PSYOPS is intended to interact with the operational planning process in five phases. These are set out in Table 1-1 below.

Table 1-1: iSYOPS Operational Planning Process.

Stage	Process	Outputs	Purpose
1	**Initiation**	• Updated PSYOPS studies • Submit Requests For Information (RFIs)	• AOO assessment to do the groundwork for mission analysis. • Fill information shortfalls.
2	**Orientation**	• Initiate the PSYOPS estimate	• Mission analysis, to focus own and subordinate HQ planning.
3	**Concept Development**	• Continue to refine PSYOPS estimate • PSYOPS input into main CONOPS	• Staff analysis, to ensure the PSYOPS factors of each course of action are understood by the commander. • Outlines the significance and priority of PSYOPS activities.
4	**Plan Development**	• PSYOPS Annex L • PSYOPS input into main body of OPLAN • PSYOPS OPLAN	• Highlights PSYOPS activities to a broader readership. • To outline a coordinated PSYOPS plan that supports the commander's objectives.
5	**Plan Review**	• Updated Annex L/OPLAN	• To adjust the plan as a result of monitoring MOE.

1.3.1 Operational Planning Process Stage 1: Initiation

PSYOPS have no direct input into the Initiation Stage, but the groundwork for mission analysis is to be done as early as possible to direct the staff's attention towards psychological considerations that may be important for further planning and force generation. A key issue is the development of detailed Requests For Information (RFI) to support further PSYOPS analysis.

1.3.2 Operational Planning Process Stage 2: Orientation

In the Orientation Stage PSYOPS will contribute to mission analysis and produce an initial PSYOPS Estimate. ***The initial estimate should concentrate on identifying limitations for PSYOPS (with regards to MOE),*** potential target audiences, exploitable psychological weaknesses, and adversary psychological capabilities. It summarizes the considerations and contributions of the PSYOPS Staff to mission analysis and supports more detailed PSYOPS planning on force level.

1.3.3 Operational Planning Process Stage 3: Concept Development

In the Concept Development Stage PSYOPS provide staff analysis for incorporation into the COAs. The process used here is to refine the initial estimate into a full PSYOPS estimate, which includes the comparison of different COAs from the psychological perspective and the identification of the operational COA that PSYOPS can best support.

1.3.4 Operational Planning Process Stage 4: Plan Development

In the Plan Development Stage the PSYOPS Annex to the plan is produced by the HQ PSYOPS Staff. ***A key item is to seek approval for PSYOPS objectives (and MOE) from the NAC.*** The annex provides the basics necessary for the development of the PSYOPS Supporting Plan. It must include at least PSYOPS themes and objectives, allocate PSYOPS tasks on the operational and tactical levels, establish PSYOPS force requirements and nominate the responsible approval authorities.

1.3.5 Operational Planning Process Stage 5: Plan Review

During the whole operation, PSYOPS continues to conduct theater assessment, including Target Audience Analysis (TAA) and impact analysis (MOE).

1.4 HFM-160

The main goal of HFM-160 was to develop knowledge on MOE and to extend current insights. Very early in the life of the Task Group, we came to a number of conclusions regarding MOE. First, we originally focused on developing a multi-national perspective on Measurement Of Effectiveness (MOE) for *PSYOPS specifically*. However, the discussions soon revealed that the topic of conducting good MOE is not PSYOPS-specific but rather much broader. Thus our focus changed accordingly: to measure the effects of (influence) operations on attitudes and behavior in general. In other words, the key issue of the Task Group became how to measure and evaluate changes in attitudes and behavior in an operational environment.

Second, based on a survey of MOE in each of the countries represented in the Task Group, we concluded there was a lack of best practice, and, as explained before, of uniform doctrine. As a result, we were more or less breaking new ground.

Finally, we quickly reached the conclusion that there was little uniformity in the definitions of key concepts related to MOE and that in some cases the definitions of the concepts were not consistent with the way we felt the concepts should be defined. Consequently, HFM-160 focused strongly on key concept definitions, in addition to the steps needed to measure effectiveness, and data collection methods and techniques. Besides these primary foci, the panel also addressed data analysis and communication and presentation of the results of MOE.

1.5 DELIVERABLES OF HFM-160

In this section, we provide a brief overview of the most important deliverables developed by the HFM-160 team. Each deliverable will be described in more detail later in this report.

The first product of the HFM Task Group was a general ***framework***: an approach including guidelines for how to conduct MOE, which are discussed in Chapter 2. The purpose of the guidelines is to help the military environment:

- Structure thinking about how to measure attitudes and behavior;
- Design and implement MOE;
- Support the application of methods and techniques; and
- Facilitate shared practice between NATO partners.

After having reviewed the best practices and lessons learned, and having defined the key concepts, we addressed the question of how to acquire the data necessary to make statements about effects and effectiveness of an operation. To do this we inventoried different methods appropriate for data collection for MOE. This yielded a list of data collection methods on which a SWOT-analysis was conducted in which for each of the data collection methods, the strengths, weaknesses, opportunities and threats were analyzed. The Task Group also identified a range of situational variables, against which the data collection methods were evaluated in the SWOT analysis. Examples of the situational variables are the availability of information or the level of resources. The resulting ***Data Collection Methods Matrix***, which forms the second product, provides an overview of the identified data collection methods and the accompanying SWOT-analysis for each of these methods (see Chapter 3).

The third product of the HFM-160 Task Group was an ***Effects Specifications Table***. This table provides a guide for people who want to conduct MOE using a top-down approach. This table helps the user to carefully consider the different steps he[2] needs to go through to assess or evaluate changes in attitudes and behavior. The table helps break down which activity would be most suited to achieving a desired effect. This breakdown is strongly focused on problem definition, in which the user considers and defines various concepts (such as impact indicators, thresholds and data collection methods) before deciding what is going to be measured and how. The table can be found in Chapter 6.

In addition to the products mentioned above, during its mandate, the HFM-160 Task Group also conducted ***Advanced Research Workshops (ARWs)***. These took place twice: once in Farnborough, UK, and once in Toronto, Canada. In these workshops, we presented the materials the Task Group had produced so far to participants from the military and civilian environments. The participants were asked to use these materials in several exercises, and to comment on these materials in plenary discussions. These discussions were a basis for further improvement of the work in progress. The two ARWs are discussed in detail in Chapter 9.

At the end of the three years, the HFM-160 Task Group held a series of three ***Technical Courses (TCs; HFM-183)***. The TCs were held in Brussels (Belgium) in February 2010, Dayton (Ohio, USA) and Izmir (Turkey), both in March 2010. Each of the TCs lasted two days. There was no focus on specific levels, since the materials we developed are intended to be useful on multiple levels. There was also no focus on current operations. The TCs had a broad audience. Participants were, among others, operational practitioners (planners), operational analysts, and researchers who support operations. Participants further ranged from civilians to military ranking from Captain to Lieutenant Colonel. The aim of the TCs was to teach to relevant practitioners the Task Group's approach to MOE and how to use the materials we have developed. Though it would be impossible for TC participants to learn how to flawlessly develop and implement MOE in two days, we designed the TC to give participants a better understanding of three things: first, the complexity of attitudinal and behavioral MOE, second how to embed them in operations, and third the basics of how to develop MOE such that it yields the desired – or at least useful – information. The procedure and materials for the TC are laid out in Chapters 6, 7 and 8. A report of the TCs we gave in 2010 is given in Chapter 10.

The last deliverable of the HFM-160 Task Group is the ***final report***.

1.6 INTENDED USE AND AUDIENCE

The primary users we envisaged for this work are operational and tactical levels working with, commissioning, developing or interpreting MOE for PSYOPS, IO, or other influence activities, for example:

- Planners and analysts; PSYOPS/J2/J3/J5;
- Commanding Officers (CO);
- Reachback / Human Factors Analysts;
- Target Audience Analysis (TAA) personnel; and
- CIMIC personnel.

This overview aims to provide an operator, analyst, or officer with little previous experience in PSYOPS/ IO, with an overview of the MOE process and components, as well as to give an introduction to different data collection methods available and their respective strengths and weaknesses. An important note here is that collecting and interpreting quantitative and qualitative data on humans, especially when related to attitudes and behaviors, is a craft where training, talent and experience are as crucial as for medical professionals. Just being familiar with the definitions and methods in this overview does not make the

[2] For clarity and simplicity in this report the masculine forms of 'he' and 'his' are used, but we recognize that many individuals active in the field of Influence Operations and PSYOPS are females.

person a subject-matter expert. However, providing a common ground with regards to methods and definitions is certain to greatly improve communication and planning.

1.7 THE ORGANIZATION OF THIS REPORT

The remainder of this report is in effect divided into two sections. Section 1, Chapters 2 – 8, describes the HFM-160 approach to MOE: the guidelines, the data collection matrix, data analysis, communication and briefing of results, and the Technical Course. Section 2, Chapters 9 – 12, describes the activities undertaken in the life of HFM-160: the Advanced Research Workshops, the report of the Technical Course given in 2010 and a summary of our most important accomplishments and contributions to developing and executing MOE.

Even though we, as a Task Group, broadened from focusing solely on PSYOPS to a wider study of MOEs for Influence Ops, we refer to it numerous times throughout this report. For example, the participants of the ARWs were primarily individuals with experience in PSYOPS and related areas. Also, we use numerous examples from PSYOPS missions throughout this report, specifically in Chapter 5 on communicating and presenting results. The reason for this is that PSYOPS is by far the area with the most expertise from the field when it comes to developing and executing attitudinal and behavioral MOE, and as a result, provides a suitable context in which to think about and present this work. The reader is asked to keep in mind, however, that measuring attitudinal and behavioral change is by no means limited to PSYOPS.

SECTION 1:

THE HFM-160 APPROACH

Chapter 2 – THE HFM-160 APPROACH

2.1 INTRODUCTION

This chapter is intended to serve as an overview and reference to the approach to MOE developed by HFM-160. It should not be read as a complete tutorial for all methods and techniques presented. Main takeaways for the reader will be an understanding of the key issues and confounded terms that are a challenge to developing and measuring effectiveness of Influence Operations.

A fundamental principle in effects measurement is that the MOE must be defined at the same time as intended outcomes or objectives. This might seem trivial or self-evident, but as numerous studies have found, and our work has confirmed, in most cases this does not happen.

2.2 CONCEPTS AND DEFINITIONS

Before describing the guidelines, it is important to clearly define several concepts, which in the past have proved to be particularly ambiguous. For example, the difference between 'effect' and 'effectiveness' tends to be particularly difficult to get straight. Here, we discuss some of the main concepts and their definitions.

2.2.1 Effects

Every operation conducted is geared towards realizing a particular ***effect***. In terms of kinetic activities, this may be to diminish the adversary's fire power or limit their mobility. In operations geared towards attitudinal and behavioral change, it may be to create support within the local population or something more tangible such as collecting firearms in civilians' possession. In all cases, the goal is to change something through ***your actions***. Any change resulting from any operation may be identified as an effect. Though hopefully the effect you want is what changes, an effect may also be unwanted or unintended. Effects may be positive or negative. They may also be material, attitudinal or behavioral.

2.2.2 Effectiveness

Effects are one thing; however, ***effectiveness*** is something else. Effectiveness refers to the degree to which *your actions* have brought about realizing the effects you desire, while taking into account other effects that have also been brought about. Change or effects by themselves do not say anything about how effective an operation has been. To do this, you have to understand how much of the change can be attributed to your actions rather than to something else.

2.2.3 Measurement of Effectiveness

So, what then is '***measurement*** of effectiveness'? In existing research on MOE, you can find varying operationalizations of MOE:

- A specific effect being sought (e.g. a changed attitude).
- A specific data collection method (e.g. focus groups).
- A specific analysis method (e.g. correlational analysis).

The HFM approach uses the following definition: '***Measurement of effectiveness is measuring the extent to which your desired effect has been achieved as a result of your actions***.' As with effects in

general, in order to measure effectiveness, you should define very clearly the desired effect (what do you need to see changed in order to conclude that your actions led to the desired effect and thus, the relevant impact indicators and thresholds), how will this be measured (what kind of data will you need and how are these to be collected), and how will these data be analyzed. In sum, MOE is more a process than a distinct 'thing'.

This definition of MOE also helps make evident that there is no list of objective solutions or MOE techniques. Rather, MOE is a process that is always situation-specific. For a successful application of MOE, people in the military environment have to be able to define and conduct the relevant MOE in a given situation by following the complete process. To support this, we have developed an approach that helps to make this process more explicit and to support the people engaged in it.

Within NATO, sometimes Measure of Effect is used to describe the level of an effect, but unlike Measurement Of Effectiveness (MOE), this does not include causality and restrictions. For instance, Measure of Effect can be used to track developments that are not connected to one's own operations, such as the level of criminal activity within a wider area of operations. Keeping Measures of Effect and MOE separate is not unproblematic but it is important. A fundamental difference is that Measures of Effect provides a picture of the general trend whereas MOE is about assessing the effectiveness of your own operations and actions in relation to the desired effect.

Finally, and this cannot be repeated enough: ***the MOE must be measured more than once for any operation or influence activity – either in terms of time or locations – as this is the only way to measure changes and trends***.

2.2.4 Impact Indicators

In order to measure the occurrence of any type of effects, it is necessary to identify ***impact indicators***. These refer to something that can be assessed or measured to provide a snapshot of the extent to which change occurs. In short, this is the variable you want to see changed. In kinetic actions, a bridge may be destroyed in order to limit an adversary's movements. The effect you want is not a blown-up bridge as such, but rather that the adversary's movements are interrupted. This could be measured by the number of enemy transports detected elsewhere in the region: if there are fewer transports elsewhere, this could be attributed to mobility problems where the bridge used to be. An effect should ideally be broken down into multiple measurable impact indicators, which may be either attitudes or behaviors. These concepts are described later in this section.

2.2.5 Thresholds

But how much change is enough? When can you judge your actions successful? To do this, you must define ***thresholds***. When the change in an impact indicator reaches a certain level, you may conclude that you have reached your goal. Thresholds may be either relative (20 percent fewer attacks) or may have specific levels (no more than two attacks per week). Regardless of the form, understanding the change you bring about is only useful if you have pre-defined how much change you want, and if you know what the level is before you introduce your intervention. Thresholds should be defined for the indicators of effects and the indicators of effectiveness.

2.2.6 Performance

Performance and the measurement thereof (***Measures Of Performance***, MOPs) are about accounting for the process and execution of an operation or activity; this could be for example the number of Key Leader

Engagements (KLE), number of leaflets distributed, number of Shuras attended. Although MOPs do provide important data, it is important not to confuse this data with MOE.

MOPs are presented here for the sake of completeness, however, they are not central to the rest of the HFM-160 approach, and as such will not be discussed in detail in the rest of this report.

2.2.7 Attitudes and Behaviors

Influence activities such as Psychological Operations, Information Operations, and kinetic operations where the kinetic effect is merely a tool to reach a psychological objective all aim to affect attitudes and behaviors of a target population in a desired way.

Attitudes and behaviors are key concepts in the planning and evaluation of influence activities. *Attitudes* are the perceptions and feelings of a target audience (for example the local population) towards a defined object (for example NATO troops or an adversary). *Behaviors* are the (potentially) observable patterns of actions among the target audience. Academic research has found that attitudes are only a weak predictor for behaviors, meaning that, even if a target audience has a positive attitude towards NATO troops, it does not mean that we can predict that target audience's behavior. There is a connection between attitudes and behavior, but it is complex, and simple linear causality cannot be assumed (Ajzen & Fishbein, 1980). At the same time, the connection between attitudes and certain types of behaviors (e.g. participation, voting in elections) means that attitudes are a key concept in Influence Operations. Also, knowing how to influence attitudes in a target audience increases the likelihood of being able to induce desired behaviors in that target audience.

The difference between attitudes and behaviors is also distinct when it comes to measurement. ***Behaviors*** have the advantage of being:

- Relatively easy to observe and measure.
- Often have a close connection to the desired effect; for example identified psychological objectives are often related to the behavior of the target audience.

Another important characteristic of behaviors is that they are observable in real time or near time, making it possible to measure effectiveness of influence activities with a short time lag and provide fast feedback.

By comparison, ***attitudes*** are harder to measure but equally important. Measurable indicators of attitudes in a target audience may be used to:

- Identify potential opportunities and threats in communicating with a target audience.
- Estimate certain future behaviors.

Some desired states in international operations are connected to attitudes, for example local population perception of NATO presence, perception of security, etc.

As opposed to behaviors, attitudes are harder to observe and analyze, especially with a restricted timeframe. Normally it takes longer to achieve changes in attitudes relative to changes in behavior. Moreover, even in cases where the change in attitude is expected in the near future, the measurement of this will be time consuming as it is more complex and demanding with regards to data collection and analytical skills.

When developing impact indicators for measuring effects, these can thus consist of both attitudes and behaviors. However, behaviors might also be used as proxies for attitudes. If an influence activity aims to improve the target audience's perception towards NATO troops, the ideal MOE would be to measure the attitudes of the target audience directly. Due to operational, resource, and security reasons, however,

this might not be possible. An alternative is then to measure multiple observable behaviors and use the aggregated result over time as an approximation of attitudes, for example the number of positive interactions during patrols is an observable behavior that could be reasonably assumed to be indicative of a positive attitude towards NATO troops.

2.2.8 Intervention

With the term 'intervention' we refer to the activity undertaken with the goal of achieving the desired effect. An intervention is a broad concept. It can be kinetic or non-kinetic, long-term or short-term, continuous or a one-time event, et cetera. In short, the intervention is what you do to change something in the environment. When we talk about effects and effectiveness, it is always in relation to the intervention: What was the effect of the intervention? Was the intervention effective?

2.2.9 In Summary

A simple summary of the above: Measurement of Effect answers the question '***What changes are we bringing about?***' Measurement of Effectiveness answers the question '***How well are our actions contributing to achieving our goal?***' Measurement of Performance answers the question '***How much are we doing?***' The importance of MOE thus follows: we may be enacting change (Measurement of Effect), but does it have any connection to how we define, plan and implement our goals, actions and resources? Additionally, we could be working very hard (Measurement of Performance), but is it actually helping us to achieve our desired end-state? Only by measuring MOE can we gain an understanding of what operations and resources most effectively contribute (or perhaps work against) achieving our goal.

To bring this all together in an example, consider a PSYOPS initiative in which the desired effect is to keep civilians away from a field laid with landmines. To realize this goal, pamphlets are distributed instructing the reader to not go near the field. If no civilians are observed in this field, where previously there were daily accidents, you might conclude your pamphlet was successful. There may be other explanations, though, such as the local village head gives orders that same week to stay away from the field, or other processes may be at work that are not under your control. These would have to be sorted out in order to conclude that it was your pamphlet, which brought about the effect, rather than something else; that is, that you were effective.

Now let's say your operation was not successful. You distributed many pamphlets, which people actually read, and they successfully encouraged people to stay away from a field – unfortunately, it was the wrong field. Here, your pamphlet had good performance and a large effect…just not the desired effect. Hence, it was not *effective*. Maybe the pamphlet did not work because it was dropped in the lake rather than in the village. Here: no pamphlet, hence bad performance, no effect and no effectiveness. Maybe people who saw it thought they were meant to go to the field instead of stay away from it. Again: good performance, big effect, no effectiveness.

Finally, let's assume that the target audience stayed away from the field in question; however, they all went to another field which was teeming with poisonous snakes. Many people were bitten and some died. Here: performance was good, effect was large. What about effectiveness?

Table 2-1 sums up the most important definitions (see also Table 6-1).

Table 2-1: Key Concept Definitions.

Concept	Definition Used in HFM-160/HFM-183
Effect	A change that has occurred. This can be attitudinal, behavioral, material… An effect may be intended or unintended, expected or unexpected, related to your goal or unrelated. To identify an effect, ask yourself: What happened after my activities (e.g. people handed in firearms after I distributed my flyers)?
Effectiveness	Refers specifically to your actions and the degree to which your actions have led to achieving the desired effect. To identify a measure of effectiveness, ask yourself: How can I measure or assess if *my activities* (e.g. flyers) were responsible for the desired effect (e.g. collected firearms)?
Impact Indicator	Something that can be assessed to provide insight into the effect. This is the variable you want to see changed. Ask: What will the world look like when I have achieved my goal? What can I measure or assess to find out if I have achieved my goal / if the world has changed the way I expect? (For example, the goal is increased support for ISAF. If this occurs there should be fewer IED attacks. The impact indicator is thus the number of IED attacks.)
Threshold	The expression of the desired effect that describes a satisfactory outcome. Usually a desired level or change in an impact indicator. Ask: How much change do I want to see in order to conclude that my activities have been successful? Think about change in terms of percentages (from 20% to 50% of people who feel safe on the streets) or absolute change (from 100 to 150 children per day in school). Ideally you should also specify conditions relevant to the desired change, such as a time span (e.g. by the end of the month), a location (e.g. in the vicinity of Miresk) or population (e.g. JeS rebels).

2.3 PROCESS MODEL AND EFFECTS MATRIX

One of the main conclusions of this project is that there is no off-the-shelf influence MOE; ways to measure effectiveness need to be developed for each operation individually and continuously assessed and improved. Here we provide a simple process model to develop and conduct MOE for Influence Operations. A caveat is that even though a model and data collection methods are provided and explained, just working through the checklist does not necessarily answer the question of whether an influence activity was successful or not.

The stepwise model introduced here is a means, in which the product is an effect matrix identifying different possible MOE strategies and custodians within the organization. It should be remembered that more ways to do MOE can be developed than will actually be applied at any given time in the field. The matrix can then be used both in planning as well as in analysis and evaluation; it is both a planning and a management tool.

2.3.1 Process Model

As previously mentioned, the main problem with MOE for Influence Operations is the confusing of concepts and definitions. Here we provide a working process model for influence MOE where the following concepts are included:

1) Effects.
2) Impact indicators of the desired effects, which may be defined as:
   a) Attitudes; and

b) Behaviors.

3) Thresholds.

4) Data collection methods (e.g. interviews, requests for information, focus groups).

5) Analysis methods:
   a) Quantitative methods; and
   b) Qualitative methods.

6) Interventions.

7) Impact indicators of effectiveness.

Working through this process and breaking down each concept into the definitions below is a generic process model for developing and assessing influence MOE. The data collection and analysis methods are described in other chapters in this report and are not explained in detail here.

2.3.2 Overview of MOE Development Process

The MOE development process is essentially about translating strategic and operational campaign goals into more detailed and workable indicators and metrics for the given situation.

2.3.3 Input

Strategic and operational effects will normally be given in the form of strategic and operational campaign metrics/MOE. These are either accessible in a joint-effects matrix or in an Annex L to the strategic or operational plan. In some inputs, effects are already classified as attitudinal and behavioral. In the event of PSYOPS, for example, which is primarily a supporting activity; any effects should be in accordance with long- or short-term campaign goals and be developed in collaboration with planning staff (J3 or equivalent).

2.3.4 MOE Development Steps

The development of MOE for Influence Operations can be achieved by working through the following steps:

1) *Define the desired effects* – Based on the NATO Planning Process, the strategic goals and effects are given in the Operational Plan (OPPLAN) and commander's intent. Each strategic goal/effect is broken down into a number of desired effects on tactical and operational levels. In PSYOPS this is done by the PSYOPS planner. ***Here, you can ask yourself what the world would look like if you achieved your goal; what would be different compared to the present situation?*** Example: the strategic goal is to increase support for the NATO mission. More concrete tactical effects define what this would look like: e.g. fewer attacks on NATO personnel, fewer slanderous radio broadcasts, more often being spontaneously approached by people in public places, or people are not scared to walk around with goodies with the NATO logo. Ideally, these effects should be defined in detail:
   a) What: fewer attacks on NATO personnel.
   b) Where: in public spaces in a particular city.
   c) When: over the next three months.

   When formulating the desired effects, it can be helpful to think in terms of three levels of 'Why?' when explaining desired effects and causality ('Our desired effect is to increase support for NATO. Why? Because increased support leads to fewer attacks. Why is that important? Because

if we don't have to fight the local civilians, then we can better get on with the business of finding the real insurgents.').

2) *Determine relevant contextual variables in the operating environment* – Once desired effects have been identified, significant external events that may impact on the achievement of the effect need to be mapped and discussed. These could be macro factors (e.g. regional stability, economic activity), events (e.g. elections) or third party activities (e.g. adversary propaganda). It is not always possible to control the impact of these variables, but they may help determine which impact indicators and interventions would be most effective by decidedly excluding certain options. For example, if much of the local population is illiterate, then distributing pamphlets with text will not be particularly useful.

3) *Determine and develop indicators of the desired effects and thresholds* – After having defined and delimited our desired effects, we can develop indicators. For each desired effect, we can have a number of attitudinal and behavioral indicators that separately or aggregately can be used to measure our intended effect. We can further classify our indicators as primary or secondary indicators of effects. It is important in indicator development to identify success thresholds and potential time constraints. For instance, an indicator may only be a measure of effectiveness if it is observed before a pre-determined point in time.

4) *Identify potential custodians and data sources* – After having developed a list of potential indicators, we need to identify the potential custodians and data sources within the organization. It is important to keep in mind that even if specific MOE are developed, e.g. for PSYOPS functions, these data do not necessarily have to be collected by PSYOPS assets. There are a number of different potential custodians and data sources which can monitor their respective metrics and deliver data to the staff responsible for MOE and analysis.

5) *Identify suitable data collection methods (take into account existing data)* – For each indicator, suitable data collection methods should be noted. Ideally a number of data collection methods should be selected based on their suitability for the information sought; in the execution stage planners will have to select methods based on available resources, current operating environment and context.

6) *Identify analysis methods* – A number of analysis method could also be indicated, however these are often directly linked to the choice of data collection method and are not always a requirement at the planning stage.

7) *Determine and develop interventions* – Given the desired effect, it is now time to choose an intervention suited to achieving that effect. Note that it is not the other way around: you do not define a desired effect based on an intervention you have already chosen. The choice of intervention is constrained by many factors, for example, the availability of resources, timeframe, or contextual and cultural variables.

8) *Determine and develop indicators of effectiveness* – Thinking about indicators of effectiveness is a bit different from thinking about indicators of effects, and is perhaps the hardest part of this process. In achieving an *effect*, it is not always important what the driver of change is. As long as the goal was achieved, how that change was enacted may be of secondary concern. With *effectiveness*, however, *how* the change came about is central; it is not enough to simply note that change has occurred. This means taking into account other events which may have had a similar impact to our interventions: Did something else happen which may account for the change we observe? It also means thinking about possibilities for comparisons even more so than with indicators of effect: Is there a comparable village that did not receive the pamphlets? What has changed since before we increased our patrolling frequency?

9) *Data collection* – Ideally data should be collected as early as possible for each MOE to establish baselines. In order to establish baselines, data must be collected *before* implementation of the

interventions. Data should be collected for the identified indicators and if possible for extraneous environmental factors.

2.3.5 Effects Matrix

The outcome of working through this process will be an effects matrix such as shown below in Table 2-2; essentially a worksheet document containing the outcomes of the process. The effects matrix should be developed in conjunction with planning, operations, and assessment staff where applicable. An intuitive set-up is to work though this table from top to bottom. As a rule of thumb, every desired effect provided should ideally have at least three (3) potential indicators. It is then the aggregated measurement and trend of these indicators that provides the answer as to whether an effect has been brought about or not. We provide an example of an effects matrix below for a fictitious operation where the mission is to reduce the dependence of the local economy on narcotics in support of general reconstruction efforts.

Table 2-2: Example of Completed Effects Table with Breakdown of Goal into Effects, Effectiveness and Indicators.

	Overall Goal: Reconstruction and Development
	Effect (which is defined by the J3 plans cell): Reduced Dependence of Local Economy on Narcotics
Impact Indicator	Number of local narcotics farmers who have ceased narcotics cultivation.
Threshold	50% reduction in number of narcotics farmers by the end of next year.
Data Collection Method	NGO data, UN data, Survey, HUMINT.
When	Collect data at 2 month intervals until the end of next year.
Sample	All farmers in Province X (both narcotics and non-narcotics farmers).
Advantages of the Chosen Data Collection Method in this Specific Situation	Because data comes from external sources, the impact on financial resources is low.
Disadvantages of the Chosen Data Collection Method in this Specific Situation	There is little control over the quality and reliability of the data (though this is partially overcome through the use of multiple data sources).
Analysis Method(s)	Descriptive statistics, cross tables (Chi-square), t-tests if, e.g. there are other provinces where the intervention was different or absent.
Tactical Activity (intervention)	Supply local farmers with seeds for a different crop and offer support in making the switch (e.g. training on how to cultivate the different crop).
Indicator of Effectiveness	• Comparison of number of previous narcotics farmers who are now growing the new intervention-crop to farmers who are no longer growing narcotics, but who have switched to something other than the intervention-crop. • Comparison of number of intervention-crop farmers who received seeds directly from NATO, to intervention-crop farmers who received seeds from another source.
Unintended Effects of the PSYOPS Activity (either desirable or undesirable)	Farmers may accept the seeds only to sell them on the black market, while continuing to cultivate narcotics.

Chapter 3 – DATA COLLECTION METHODS MATRIX AND SWOT ANALYSIS

This chapter provides a matrix of data collection methods, and can be used to choose the most suitable way to collect data on attitudes and behaviors in military operations. The matrix includes an analysis of the strengths, weaknesses, opportunities and threats of each data collection method against a range of situational variables.

3.1 AIM

This matrix is intended to support PSYOPS Officers and deployed Operational Analysts with the planning and design of data collection activities to enable measuring the effects and effectiveness of influence activities. It is an integral part of the HFM-160 MOE guidelines.

3.2 DATA COLLECTION METHODS

This matrix includes a number of key methods for collecting data to assess effects and effectiveness, based on principles of social science research, and with a particular focus on the military operational environment. There are more data collection methods than are listed here; in this list we identify those methods we deem most relevant and applicable to data collection in the operational field. The collection methods and their definitions are given below:

1) *Face-to-Face Encounter* – A planned or impromptu, recurring or infrequent interpersonal encounter with the subject(s) of interest.

2) *Interview (Individual)* – Interviews involve subjective or objective questions (either with or without pre-determined answer options), the aim of which is to gain insight into specific opinions, behaviors and perspectives. Interviews are typically held in the form of a formal face-to-face or telephone conversation between interviewer and interviewee. The formality of interviews is what distinguishes them from face-to-face encounters, which have a more informal and spontaneous character.
   a) *Structured/Directive Interview* – A fixed format interview in which all questions are prepared in advance and are presented in the same order to each interviewee. Although this style lacks the free flow of a friendly conversation (as in an unstructured interview) it provides the precision and reliability required in certain situations.
   b) *Unstructured/Non-Directive Interview* – An interview without any set format but in which the interviewer may have some key questions formulated in advance. That the interview is unstructured does not imply that it is without a pre-determined goal; there is usually a specific topic to be addressed or in which insight is desired. Unstructured interviews allow questions based on the interviewees' responses and proceed like a friendly, non-threatening conversation. However, because each interviewee is asked a different series of questions, this style lacks the reliability and precision of a structured interview. In a military context, unstructured interviews may include debriefings with prisoners of war.

3) *Focus Group* – A sample group, representative of the population of interest (target audience), gathered together for the purpose of obtaining perceptions and/or opinions, suggesting ideas, or recommending courses of actions. The responses and discussions are studied to determine the opinions, behaviors or perceptions that can be expected from a larger population. While research indicates that 8 – 10 people is an ideal number for a productive focus group, the size of the group will have to be determined based on factors of the specific situation.

4) *Questionnaire* – This includes questionnaires, surveys or polls. They can be distributed (e.g. handed out, air-dropped, posted) or made freely available (e.g. posted on the internet) for completion by the subject population.

5) *Tally* – Record keeping or counting of events, things, or people indicative of a direct or indirect effect. Certain indicators could be counted using electronic collection methods, such as through SIGINT (e.g. monitoring telephone call volumes).

6) *Participant Observation* – A qualitative research technique in which the investigator actively participates in or is immersed in the environment of interest. Sometimes the researcher may be identifiable as such, though sometimes the researcher may try to "blend in" so that his presence does not influence the behavior of the subjects of observation.

7) *Request For Information (RFI)* – A research and information gathering tool and process aimed at collecting the most current intelligence from multiple open/closed sources in a timely manner.

8) *Media Monitoring* – The organized collection, collation, filtering and analysis of material in the media, for example, TV, press, internet, radio, video/DVD.

9) *Literature Review* – An extensive search of the credible, relevant, published information relating to a specific topic of study from both open and closed sources.

10) *Subject-Matter Expert Consultation* – A Subject-Matter Expert (SME) is a person whose professional opinion is considered authoritative in a particular subject area. Their recent experience and knowledge designates him as a technical expert. Consultation with SMEs can be structured (e.g. tools, techniques, and setting) or in the form of unstructured communication (e.g. face-to-face, e-mail, telephone).

3.3 SITUATIONAL VARIABLES

We identify a range of situational variables, against which the data collection methods are evaluated. These are:

1) *The availability of information* – This includes the permissiveness of the environment (e.g. benign or hostile) and whether access to the target audience(s) is direct or remote.

2) *The nature of the target audience(s)* – This includes characteristics such as religion, culture, language, gender roles, and literacy. It also includes whether they are hostile, supportive, or uncommitted towards friendly forces.

3) *The level of resources* – This includes, but is not limited to, the number and skills of friendly forces and, for example, the level of funding.

4) *The nature of the desired effect* – This includes whether the effect is a change in attitudes or behaviors, whether it is observable or unobservable, whether it would be conscious or unconscious, and whether it is a change by a group or an individual.

5) *The information requirements* – This includes the level of granularity required in the data; the level of certainty whether an effect has been achieved; the reliability of the measure for the decision-maker; the timeliness and dynamism of data collection; and whether the information is required to support quantitative or qualitative analysis.

6) *The data collector variables.* –This includes whether the collector is military or civilian, whether they are friendly forces or members of the indigenous population, and characteristics such as their gender, race and religion.

3.4 SWOT ANALYSIS

Each data collection method is assessed using a SWOT analysis to evaluate its utility and applicability in relation to each of the situational variables. In this particular exercise, the SWOT analysis is defined in the following way:

1) *SWOT Analysis* – A strategy development tool typically used to identify and assess an organization's inherent (internal) strengths and weaknesses, as well as external (possible) opportunities and threats. In this study the SWOT analysis is used to evaluate the positive and negative aspects of specific data collection methods suitable for assessing behavioral and attitudinal change.
2) *Strengths* – Inherent attributes of the data collection method which are positive (e.g. useful) in relation to the situational variables.
3) *Weaknesses* – Inherent attributes of the data collection method which are negative (e.g. inappropriate) in relation to the situational variables.
4) *Opportunities* – Additional benefits of using the method external to the actual collection of the data itself.
5) *Threats* – Potential negative outcomes of using the method, external to the actual collection of the data itself.

DATA COLLECTION METHODS MATRIX AND SWOT ANALYSIS

METHOD	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS	MILITARY OPERATIONAL ISSUES
Face-to-Face Encounter	• Encounters can be impromptu or planned. • Can be accomplished by anyone (not just PSYOPS team) at anytime. • Much of information can be gathered in a timely manner. • Collector is often familiar with neighborhood and locals. • Collectors gather very recent data. • Good for both non-verbal/ verbal information.	• Collector bias. • Limited sample size. • Unstructured data. • No opportunity to cross-check data; trend analysis is difficult. • Personality dependent. • Responses are event-driven and dependent on current environmental context. • Difficult in non-permissive environments.	• Develop a social network of locals. • Timeliness. • Good information for future missions. • Information collected can be used to assess the current opinion of population. • Task force members can hear unofficial "grapevine" information relevant to the mood of the Target Audience.	• Response may be dependent on appearance. • If there is a bond with locals, possible for interviewer to develop too much empathy. • Locals can be untruthful or maliciously and intentionally withhold "grapevine" information. • Possibly gaining a narrow view or opinion of the local population (depending on who is willing to interact with the task force and who is not).	• The characteristics of interpreters can be very important in getting subjects to cooperate: e.g. gender, ethnicity, tribal group. • There is a difference between interpreters and translators – may need one of each to provide different things. • It may be difficult to recruit professional interpreters and translators in operational circumstances. • Electronic devices could be used to conduct basic translations.
Structured Interview (Focused or Directive)	• Depth of information/ resolution. • Control over the information you're getting. • Can support quantitative analysis. • Good for both verbal and non-verbal information. • Has more scientific rigor than unstructured (due to repetitiveness). • Good to test both collective and individual effects.	• Difficult in non-permissive environments. • Timeliness. • Can be biased by both the interviewer and interviewee. • Costly in terms of financial and personnel resources. • Does not allow large samples.	• Can be contracted out (which has the potential to mitigate interviewee bias). • Can support trend analysis (can determine causality beyond correlation). • Choice of collectors. • Potential influence opportunities. • Possibility to preserve detailed records for future use.	• Resource limitations. • Loss of flexibility. • Freedom of expression (interviewer/interviewee). • Freedom of movement (interviewer/interviewee). • People may not want to participate because they are not allowed to have contact with task force.	• Security situation is a big driver: access for civilian interviewers can be very difficult. • Need to understand the value of "group dynamics" before choosing between an individual or group collection forum. • Interviews can be used as a precursor or catalyst to get individuals to agree to participate in a focus group.

DATA COLLECTION METHODS MATRIX AND SWOT ANALYSIS

METHOD	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS	MILITARY OPERATIONAL ISSUES
Structured Interview (Focused or Directive) (cont'd)	• Access to sub-conscious effects (e.g. non-verbal behavior). • Access to both behavioral and attitudinal effects.				• The characteristics of interpreters can be very important in getting subjects to cooperate: e.g. gender, ethnicity, tribal group. • There is a difference between interpreters and translators – may need one of each to provide different things. • It may be difficult to recruit professional interpreters and translators in operational circumstances Electronic devices could be used to conduct basic translations.
Unstructured Interview (Non-Directive)	• Depth of information/ resolution (even more than structured interviews). • Control over the information you're getting. • Can support qualitative analysis. • Good for both verbal and non-verbal information. • Good to test both collective and individual effects.	• Difficult in non-permissive environments. • Timeliness. • Can be biased by both the interviewer and interviewee (more than structured due to the level of flexibility). • Costly in terms of money. • Does not allow big sample. • Lack of scientific rigor, and consequently the process is not repeatable, thus making quantitative analysis difficult.	• Consulting SME provides a better possibility of understanding your data. • Choice of collectors. • Intentional influence opportunities. • Ability to record and analyze carefully.	• Resource limitations. • Difficult to hire an outside source to give an unstructured interview because he may not gather all necessary data. • Audience issues (linked to bias). • Freedom of expression and freedom of movement (interviewee).	• Locally employed civilians may not be as skilled – in these circumstances collection may need to default to structured interviews instead. • The characteristics of interpreters can be very important in getting subjects to cooperate: e.g. gender, ethnicity, tribal group.

DATA COLLECTION METHODS MATRIX AND SWOT ANALYSIS

METHOD	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS	MILITARY OPERATIONAL ISSUES
Unstructured Interview (Non-Directive) (cont'd)	• Access to sub-conscious effects (e.g. non-verbal behavior). • Access to both behavioral and attitudinal effects (even more than structured). • Flexibility – allows interviewer to engage in conversation outside of the scripted interview (e.g. follow-up questions, refute rebuttal statements, and pursue their intuition). • Freedom of expression and freedom of movement (interviewer).	• May be difficult to analyze. • Possibly need SME for analysis.	•	•	• There is a difference between interpreters and translators – may need one of each to provide different things. • It may be difficult to recruit professional interpreters and translators in operational circumstances. • Electronic devices could be used to conduct basic translations. • PoW debriefing requires specifically trained staff (e.g. handlers). There is no formal access for PSYOPS staff, though they can undertake the relevant required training.
Focus Group	• Depth of information. • Allows focus on a specific group. • Timeliness, a lot of information quickly. • Observation of and insight into group dynamics. • Allows gathering multiple opinions as well as discussions. • Good for both non-verbal/ verbal information. • Cost effective in finances and resources.	• Subjective/bias (interviewer). • Not good for scientific rigor because focus groups are not repeatable due to unique group dynamics. • Members can inhibit each other from participating (sometimes due to hierarchical association). • Translation and interpretation during discussions.	• Increase social network of the task force via supporters. • Understand and map layout of local social network. • Ability to collect longitudinal data (observable behavioral and attitudinal changes). • Ability to collect repeatable measures with same individuals.	• Level of hostility from the locals. • Some people may not want to participate in discussions (variety of reasons). • Some participants may attend against their will. • Discussion leader (seemingly in authority) may ask leading questions or steer discussions/opinions.	• There can be a significant administrative challenge/ burden organizing focus group events. • PSYOPS staff are usually trained to conduct Focus Groups; however, there is still a significant problem of the number of available PSYOPS staff. • PSYOPS staff can train infantry to conduct focus groups but often they are still not competent enough.

DATA COLLECTION METHODS MATRIX AND SWOT ANALYSIS

METHOD	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS	MILITARY OPERATIONAL ISSUES
Focus Group (cont'd)		• Never know who/how many will participate in advance. • Participants may not tell the truth because they are among others who may influence them. • Difficult in non-permissive environments.	• Focus group can be used to intentionally influence target audience. • Multiple observers enable more reliable data. • Ability to record and analyze carefully.		
Questionnaire	• Good for measuring attitudes. • Can be relatively inexpensive. • Can support quantitative analysis if appropriately designed. • Anonymity for respondents may elicit more truthful and accurate responses. • Can elicit both open and closed answers depending on design of questionnaire. • Can be used to question a large population sample, which can enhance validity and reliability.	• The focus of questionnaire is biased by the agenda of the researcher. • Respondents may not respond to every question. • Response rates could be poor, particularly depending on distribution method, such as e-mail or handouts in the street. • Uncontrolled or unmonitored distribution of questionnaires may undermine validity and ability to conduct statistical analysis, e.g. one person may complete and return more than one questionnaire.	• They can be contracted out, which can create job opportunities for local civilian companies. This also reduces the use of military resources. • They can be conducted without respondents knowing they are for the military. • Alternatively, they can also be a visible way of showing the population that the military is interested in what they have to say.	• Distribution and collection of questionnaires may be problematic or even dangerous, particularly in hostile environments. Companies employed to administer questionnaires may be unable or unwilling to access the population sample. • The military may have little or no choice over the caliber of the people administering questionnaires.	• Ability to post questionnaires on-line may be constrained by the availability of the Internet in the host country. • Collection of questionnaires could be a security risk, e.g. collection box for questionnaire returns could be a target for a bomb.

DATA COLLECTION METHODS MATRIX AND SWOT ANALYSIS

METHOD	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS	MILITARY OPERATIONAL ISSUES
Questionnaire (cont'd)				• Inappropriate collection practices may undermine validity. For example, people who are employed to administer questionnaires may complete the questionnaires themselves, rather than distribute them properly to the population sample. • Questionnaires are a relatively "Western" data collection method; items may not mean the same to respondents as to the researchers who developed them.	
Tally	• Non-invasive; no direct interaction with the subject of the tally required. This can mitigate the bias or the impact of the observer. • It has a high level of objectivity. • It can be conducted in non-permissive environments (e.g. soldiers can collect the data or others could be contracted). • Some things can be counted remotely (i.e. using satellite information).	• It can be time consuming to collect a significant amount of data each time. It can take time to actually see a change or trend. • The amount of data points collected will be quite low. • In order to determine what you want to count, you require a good understanding of the TA. • Not suitable for measuring attitudes unless they are manifested in easily observable things.	• Contracting counting to local contractors can bring employment opportunities and prosperity. • A count can tally more than one thing at a time.	• It requires a high level of validity in your assumptions regarding the degree to which what you are counting is indicative of the effect that you think it demonstrates (the underlying effect you are really interested in). • What you want to count may not be observable. • The number of uncontrollable variables may make correlating your count with an effect difficult.	• It may be difficult to get sufficient military resources (e.g. infantry) allocated to count things. • If the indicators require Intelligence material to identify them, buy-in will be required from the collection agencies to get sufficient material collected over time. • Requests for Information (RFIs) to the intelligence collection agencies for relevant material will need an appropriate security classification.

METHOD	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS	MILITARY OPERATIONAL ISSUES
Tally (cont'd)	• Counting is independent of the TA, which means it is not dependent on their characteristics (e.g. literacy). • Counting can be conducted without specific skills or training (e.g. by infantry soldiers). This means it also does not need to be conducted by PSYOPS officers. • Can be relatively cheap if conducted with military resources. • It can be used to measure the activities of all TAs (depending on the measures you choose). • Good for measuring directly observable behaviors. • Can yield both quantitative and qualitative data. • Data should be reliable, which can increase certainty in the analysis.			• It can be difficult to discern a change where the number of observations is small. • Behavioral observations may not always be representative of a TA's attitudes. This can lead to misinterpretation. • If the TA is aware they are being observed, they may behave differently, which can affect the validity of the count. The TA may also try to deceive (e.g. enemy might feint a retreat).	• Security clearance may be an issue depending on what needs to be counted, for example, if the selected indicators are to be found in TS Intel material – PSYOPS or Operational Analysts may need DV clearance.
Participant Observation	• Provides direct access to a TA. This can be very useful for gaining more valid insights (e.g. culture).	• It is more difficult in a non-permissive environment. • Not all TAs are accessible. • Can take a long time to gain access to a TA.	• Participation can help build up a rapport with a TA over time. • The data collected can be multi-purpose and support a range of different measures.	• There can be a physical threat to the participant in a hostile or non-permissive environment, particularly if they are remote or isolated from their own side (e.g. a spy).	• The use of qualified anthropologists may be constrained by their cooperation with the military: anthropological community maintains a relatively negative

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METHOD	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS	MILITARY OPERATIONAL ISSUES
Participant Observation (cont'd)	• May not require significant resources (e.g. can be done by one highly skilled individual). • The participant can "observe" both attitudes and behaviors (attitudes can be "observed" through communication with the observed individuals). • Can be a good way of identifying more sub-conscious attitudes, but only for a small sample size. • The granularity, depth and richness of the data collected can be high. • Supports qualitative analysis. • There will be a higher degree of certainty due to the depth of information.	• There can be a long lead time from establishing the participant to gaining the data. • Might require a highly skilled or trained individual to conduct the participation (e.g. linguistics skills). • Does not easily support quantitative analysis. • It can take a long time to collect the information. • The data will be less reliable because of the subjective nature of the collection. • The participant needs to be suited to the environment they are observing. This may require very specific characteristics.	• The method is dynamic as the observer can be tasked to observe different things over time.	• A negative experience with participant observation might result in deterioration in the relationship with the TA. • Resource costs to support a participant observer might be high. • The participant observer might go "native".	perception of, and relationship with, working with the military. • More feasible sources of participant observation in military operations may include Key Leader Engagement (KLE) or regular routine patrolling.
Request For Information (RFI)	• There are multiple intelligence collection methods and sources, which can be drawn upon. • RFIs can always be submitted (although the content in the returns may vary). • A large amount of information can be collected from one source.	• The availability of some sources will be limited by the permissiveness of the environment (e.g. HUMINT). • The return may not be specifically tailored to your response. It may have been used to support multiple RFIs.		• Timeliness: Possibility of Intelligence Community respondent sending information to solve the wrong problem (Type II Error).	• See RFI issues under Tally above.

METHOD	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS	MILITARY OPERATIONAL ISSUES
Request For Information (RFI) (cont'd)	• RFIs are cheap to the requester. • Data will be more relevant for qualitative analysis. • The data can be on both attitudes and behaviors.	• Some TAs might be more difficult to collect info on than others. • It can require specific resources such as satellites, or trained HUMINT collectors. • It is important to ask the right questions in the first place. • It can take time to collect the information – it may not already be available. • The data might be irrelevant by the time you receive it. • By the time you have asked your question, the window for getting the data might have closed. • The control of the requester over how the data is collected is limited, including control over the reliability and validity of any tools, techniques and methods.			
Media Monitoring	• Availability is not very dependent on the nature of the environment. It is readily available. • Media output can be collected remotely and directly.	• Requires a good understanding of cultural norms and how to interpret foreign media output.	• The process can be automated if the software is available. • The output could support a range of different measures.	• The media output might not represent "ground truth" (e.g. because of censorship).	• Media monitoring can be a complex activity and time-consuming activity – it could be useful to sub-contract this to external agencies such as BBC Monitoring.

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METHOD	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS	MILITARY OPERATIONAL ISSUES
Media Monitoring (cont'd)	• More appropriate for collecting attitudinal data. • It can be helpful for measuring sub-conscious attitudes if there is sufficient cultural info for "reading between the lines". • It can support both quantitative and qualitative analysis. • The data results can be very timely. • The reliability can be high – it can be a very structured and repeatable process. • The collector variables should be irrelevant because it is remote (except for skills, etc., mentioned above).	• Might require specialist capabilities to translate foreign language media output. • It will likely be very resource intensive, often requiring particular software and specialist training, skills. • It is time intensive. • It will likely be expensive financially. • The amount of data available and collected can be overwhelming. • The validity could be questionable – media reports can be very subjective or even deliberately biased.		• The media output might not represent the views of all TAs. For example, it might represent that of the educated classes, rather than the working classes. • It is difficult to determine which media output is important/available to the TAs.	
Literature Review	• Can be collected remotely. • May not require many people to conduct it. • It can provide the background historical info for the baselines against which attitudinal and behavioral change can be measured. • Can provide detailed contextual info on a TA.	• Can be difficult to collect info on a particular topic. It may not exist, it may not be in electronic format, it may not be available, etc. • Requires people with specialist skills (e.g. information specialists, translators).			• Could be difficult to read and absorb large volumes of data in operational timeframes.

METHOD	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS	MILITARY OPERATIONAL ISSUES
Literature Review (cont'd)	• The lit might have both quantitative and qualitative insights. • The process should be repeatable and the results should be reliable. • The level of certainty should be high (albeit dependent on the amount of info that is available). • Independent of collector characteristics.	• Requires domain knowledge to investigate the appropriate areas (e.g. anthropology, psychology, country expertise). • Can be expensive. • Will not provide current data for measuring any change. • The results will not be timely (although that is not why you do it).			
SME Consultation	• SMEs are typically remote from the environment (e.g. Diaspora, emigrants) can be good proxies for TAs in a non-permissive environment. • SMEs can be consulted on both attitudinal and behavioral effects. • The data collected will be mostly for qualitative analysis. • The data can be highly detailed and contextual. • The data can be collected in a timely manner.	• Can be difficult to know who a suitable SME is. How do you identify experts? How do you judge expertise? • Can be difficult to access an SME in a non-permissive or hostile environment. • Valid knowledge of the TA may not exist, or can be hard to find. • The SME will often be a member of the TA and will have their own point of view, which means their input may be biased. • SME may not be trustworthy. This affects the reliability of data and may compromise the safety of the mission.	• SMEs can provide awareness of previously unknown information. • SMEs can help open doors to other sources and increase your network. • SMEs might suggest relevant measures that you had not thought of.	• Interaction with an SME might compromise their neutrality, independence, etc. • Interaction with an SME might endanger their lives –they might be perceived as a collaborator. • Data from the SME might compromise the safety of your mission (e.g. if it is very inaccurate or even malicious). • The SME may not be an expert after all.	• May need multiple SMEs for cross-referencing. • May need indigenous and non-local SMEs. • There may be strict rules on what/who public money can be spent on. • CIMIC can be a good means for contacting SMEs for free (e.g. NGOs and members of the local population).

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METHOD	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS	MILITARY OPERATIONAL ISSUES
SME Consultation (Cont'd)		• Requires skills in eliciting info from SMEs, including an ability to speak with different types of people (e.g. academics, Int. Officers, Defence Attaches, members of the TA). • Can require someone skilled at accessing networks of SMEs. • Required SMEs may not exist. • The data collected will be subjective. • SMEs may not interact with some people, which would have an impact on the suitability of the collector (e.g. a conservative Muslim man might not speak with a Western female).			

Chapter 4 – DATA ANALYSIS

The aim of an intervention such as a PSYOPS mission is to bring about a change or series of changes, psychological or behavioral, in a defined individual, group, or even some larger collective such as a society. Typically, PSYOPS are aimed at achieving a psychological change – for example a change in attitude, belief, or mood – with the intention of bringing about a subsequent change in behavior. Another term for such changes, and one that has gained considerable currency in recent years, is ***effect***. As has been discussed elsewhere in this report, there is a subtle difference between measures of effect and effectiveness, and consequently, when considering the success or otherwise of an influence intervention there are two main questions we need to ask:

- Did the effect we wanted to see actually come about?
- Was it our influence intervention that brought about the change we have seen?

No matter which of the above we are interested in, there is a need for formal methods to underpin our investigation. It is not adequate to make an informal assessment of either the effects or effectiveness of influence activities. In the data collection methods matrix, we reviewed methods that could be used to collect data to more formally underpin such an assessment.

When you design an activity – PSYOPS or otherwise – you make a prediction that your actions will bring about a particular change in something that can vary: a ***'variable.'*** For example, you might suspect that by delivering a broadcast message you would improve the popularity of a particular leader amongst a specific element of the population. Here the variable of interest is the opinion of a defined group of people. Data-collection techniques allow us to collect information about specific variables systematically. (If data are collected haphazardly, it will be difficult to draw firm conclusions about whether or not the intervention was effective). In this example, you might use the data collection methods matrix to identify the most appropriate way to ***collect*** opinion data taking into account the specific context you are operating in. The purpose of ***analysis*** is to use the data you have collected to identify whether your prediction was correct or not. That is to say, whether conducting the specific (PSYOPS) activity has brought about the effect(s) your commander required.

4.1 CONDUCTING ANALYSIS

Data analysis in the social and behavioral sciences is a large and multi-faceted area of study. While some PSYOPS personnel will have the required training in appropriate research methods, the majority may not have the appropriate educational background to undertake this type of work. To this end, it is our recommendation that, wherever possible, PSYOPS personnel seek to work with professional analysts in the planning and conduct of studies designed to measure effects and the effectiveness of interventions. A supplementary recommendation is that PSYOPS organizations within the NATO Nations aim to ensure that at least one of their personnel on each mission has some appreciation, even if only from a basic training course, of research and analysis methods. The aim would not be to train a social science researcher, but to give individuals an understanding of the importance of research design and data collection and analysis, with a view to them an understanding why this is important and how to go about getting support.

4.2 GETTING SUPPORT

The most likely source of such support in theater will be the HQ Operational Analysis (OA) cell. Moreover, on recent operations in Iraq and Afghanistan, it has become more common for social scientists to be developed in this cell. Nevertheless, even in circumstances in which there is no available social

scientist to help in theater, the OA cell should be able to facilitate appropriate 'reachback' to the home Nation's Defence Research organization to provide the necessary support. It is stressed that ideally this should be done before data collection is undertaken since the utility of the analysis will depend on how data is collected and processed.

4.3 DO IT YOURSELF

In some circumstances, it will not be possible to secure appropriate support. If this is the case, the PSYOPS personnel themselves can still do useful collection and analysis, but will have to rely upon their own knowledge supported by the wide range of resources that are available on these topics in books and on-line. There is a great deal of information that can be used both to get basic advice and, where necessary, to move onto more advanced techniques. For example, you may simply want advice on how to derive and present descriptive statistics to summarize the data you have collected. Alternatively, you may need to demonstrate that the conclusions you are drawing from your data are robust, which might require that you conduct some appropriate statistical tests.

The provision of an introduction to data analysis techniques is beyond the scope of this report. Moreover, it is unnecessary since there is an abundance of such resources in books and on-line. In order to keep our advice simple here, we have provided links to a few basic resources for social scientists. This is not an exhaustive list; there are plenty more sources available. In addition, we have provided links to materials specifically designed for individuals and teams of non-specialists with a requirement to undertake field research. In this case, the field of investigation is health research in the developing world, but the principles are quite similar to a PSYOPS mission in that an activity is undertaken with a view to achieving a change. The guidance tells you how to collect data to analyze and then how to conduct analysis to tell you if the change you wanted to see has come about.

1) **Electronic Statistics Textbook by StatSoft**

   http://www.statsoft.com/textbook/basic-statistics/?button=1

   This Textbook offers training in the understanding and application of statistics. It begins with an overview of the basic concepts and continues with a more in-depth exploration of specific analytic techniques. A glossary of statistical terms and a list of references for further study are included.

2) **Hyperstat**

   http://davidmlane.com/hyperstat/intro.html

   This web site is very basic; it provides useful links to a number of other sites and books.

3) **What is Qualitative Data Analysis**

   Ann Lewins, Celia Taylor and Graham Gibbs

   http://onlineqda.hud.ac.uk/Intro_QDA/what_is_qda.php

   This is a link to a paper by scientists from two universities in the United Kingdom that provides a simple introduction to analysis of data that are not in numeric form (qualitative data analysis). Many of the data that you will be able to collect will be in this form – for example transcripts of interviews and focus groups or patrol reports.

4) **Designing and Conducting Health Systems Research Projects: Volume 2 – Data Analyses and Report Writing**

   Corlien M. Varkevisser, Indra Pathmanathan, and Ann Brownlee

http://www.idrc.ca/en/ev-33013-201-1-DO_TOPIC.html

http://www.idrc.ca/en/ev-56451-201-1-DO_TOPIC.html

This report was prepared for the International Development Research Centre, a Canadian crown corporation, and provides a systematic and understandable introduction to the design and analysis of field research. While it is prepared with health professionals in mind, the nature of the applied research environments considered makes this (and its partner volume) a potentially very relevant source for PSYOPS practitioners. The first link is to the book's introduction, while the second is to the section on qualitative research methods.

Chapter 5 – COMMUNICATION AND BRIEFING OF RESULTS

5.1 PRACTICAL APPLICATION OF SCIENTIFIC RESEARCH

The HFM-160/183 approach delivers the means for gaining a comprehensive understanding of the principles of MOE for Influence Operations. However, even with the examples and exercises we have worked out, this is largely theoretical knowledge. For this knowledge to have the maximum value and effect, it needs to be capable of being applied in an operational setting, enhance military capability and so "make a difference" to the desired effects. Commonly, there is little guidance available to scientists, analysts and military planners about how to transform rigorous scientific knowledge into a practical method. There are several elements to this challenge, but here we will focus on communicating the results to the military staff so that the commander has the best information with which to make decisions. This requires succinct and clear briefing of scientific methods and results.

The guidance that follows is applicable to broader Influence Operations, consistent with the rest of the HFM-160 approach, although the examples are of tactical level Information Operations (IO) and PSYOPS.

5.1.1 The Importance of Successful Briefings

The IO or PSYOPS professional intends to support the commander's mission. For IO/PSYOPS to be included in the overall campaign plan it must be briefed understood and supported by the commander who will usually have to prioritize between IO/PSYOPS and other activities competing for limited resources. The IO/PSYOPS professional must be able to win the belief in and confidence of the command for his plan. Once implemented, it will be equally important to communicate the results of activities and the assessed effects. Very good data collection, analysis and assessment will be of limited value unless they are communicated effectively to the end users. Military staff responsible for policy, training and doctrine may have time to read lengthy technical reports. However, for front line operations in a field Headquarters (HQ), the fast pace or tempo of operations means that a military commander and his staff do not have the time to read and assimilate long reports. Briefs have to be much shorter, information more concise and immediately relevant to the mission. The researcher or analyst has to be able to summarize complex work into a much smaller format. As a rough guide, a document longer than four pages may not be read or a briefing of more than 15 minutes is unlikely to be programmed. A risk exists that the loss of detail means that the conclusions will not contain all the fine nuances and the recommendations may be open to misinterpretation. Therefore, a lot of the analyst's skill and experience will come in knowing what can be left out and what warnings, limitations or caveats need to be applied so that the research can be used effectively.

The outputs of Influence Operations, Information Operations and PSYOPS are obviously focused on adversary and neutral forces, but analysts should bear in mind that first they have to influence their own people. This is not as simple as one might assume. A military HQ is a complex organization. The day is taken up with many meetings and briefings in a set order and of limited duration so that everything can be done efficiently. Staff officers follow a busy program and have little time in which to study and evaluate complex issues. The commander is especially busy with meetings and he will have very little time in which to make careful consideration of a complex soft effects/non-kinetic PSYOPS plan.

It is unwise to assume that the commander will recognize the importance of IO/PSYOPS.

Firstly, most senior commanders are experienced in the combat elements of infantry, artillery, armor and maneuver but are less practiced in evaluating the non-kinetic effects from Influence/Information/PSYOPS.

Secondly, there is little value in conducting IO/PSYOPS unless one can show the value of the effort to the command. Whilst a great deal of doctrine has been developed on Influence Operations and its sub-areas,

this requires not just the general but also his staff officers to support the process. If the Commander believes in the IO/PSYOPS message then his staff will believe in it as well. IO/PSYOPS personnel need to be ready to argue strongly to persuade the commander and his staff of the importance of IO/PSYOPS because he will have lots of other staff officers each pressing the importance of their own activities. If the commander does not value IO/PSYOPS then few of his staff officers will give the support needed.

Thirdly, at senior levels it may not be the IO or PSYOPS professional who will be briefing the results and the IO/PSYOPS staff officer has to be prepared for higher level briefings to be given by non-PSYOPS specialists who will not understand the detail or might not be enthusiastic about the work. Therefore, the results have to speak for themselves – they have to be clear and easily understandable to the commander and his staff.

It is also important to communicate the IO/PSYOPS results down to the tactical level so that the troops and their junior commanders on the front line understand the significance and importance of what they are doing.

5.1.2 Briefing the Command

Know the audience. If giving a top level brief to a senior commander then time will be limited and the IO/PSYOPS leader is likely to be allocated 90 – 120 seconds and may have time for only one or two PowerPoint slides. The commander will not need or want a description of routine activity or a detailed description of the complex technical issues. He will expect his staff officers to make an assessment and make sensible recommendations having considered all other factors and liaised with other staff branches. His priority is to have the ‘So what?’ question answered, that is ‘What does this mean to me? Do I have to make a decision, and if so, which decision should I make?’.

If the IO/PSYOPS specialist is briefing fellow experts then there will be more time to brief and discuss in detail and cover all the analysis questions.

5.1.3 Assessment of IO/PSYOPS

Almost every issue or subject can be solved using the standard analytical questions:

- Who?
- What?
- When?
- Where?
- Why?
- How?

Military activity is subject to measurement, using metrics or Measurement Of Effectiveness (MOE). The term MOE is often used to denote a generic measure but it is one of several measures in a defined hierarchy of assessment: Measurement of Effectiveness for the effectiveness of what is done and Measures of Performance for the actual activities that are done.

Often the Subject-Matter Expert (SME) will advise on what is important and how to combine several factors into one measure. Operational Analysts (OA) can be tasked to conduct quantifiable analysis and should always be consulted to ensure analytical rigor and consistency.

This needs cooperation between the military planners and those doing the analysis. Developing MOE needs military specialist/SME input and takes time in order to develop metrics that are relevant and practical,

for example, patrols in the front line, which are able to collect the required data. It is important to have metrics agreed upon at the start otherwise data requirements will not be identified and there will be no baseline assessments from which to measure changes.

At higher levels of command, the effects of IO/PSYOPS will be aggregated into a larger Influence Operations effect which in turn will be an input into the overall Campaign Effectiveness Assessment (CEA). Therefore the analysis, format and presentation of IO/PSYOPS results and effects should be consistent and compatible with the top level CEA. This needs common analysis assumptions and good liaison with analysts in higher command HQs to ensure consistency of methodology and format.

The planning of operations may be done by different military doctrines depending upon whether it is a NATO or coalition mission or which Nation is leading the operation. Each military campaign has many different factors, some of which may be unique, or will be combined in different ways. The variability does not lend itself to a standard method of doing assessment or an automated tool. Therefore analysts need to develop an assessment method for each campaign (or modify one used in a previous campaign) and must be prepared to modify or amend the method further as the campaign progresses.

It is highly advantageous to have the planners working with the analysts early on to determine how the campaign or mission effectiveness is going to be assessed and what information will have to be collected. This will need to be part of the mission orders, not added as an afterthought after the campaign starts.

5.1.4 Campaign Planning and Metrics

The diagram in Figure 5-1 illustrates the general correlation between planning, measures or metrics and analysis at the different command levels, together with an indication of the relative proportions of quantitative analysis and qualitative military judgment. Aggregate measures of effect should normally inform campaign effectiveness assessment. As one conducts assessment at the higher operational or strategic levels, so the assessments rely more on military judgment and less on tangible or 'hard' evidence. Whilst military judgment is always subjective, it can be misleading to assume that quantitative analysis is always objective, because the assumptions underpinning quantitative analysis can be just as subjective.

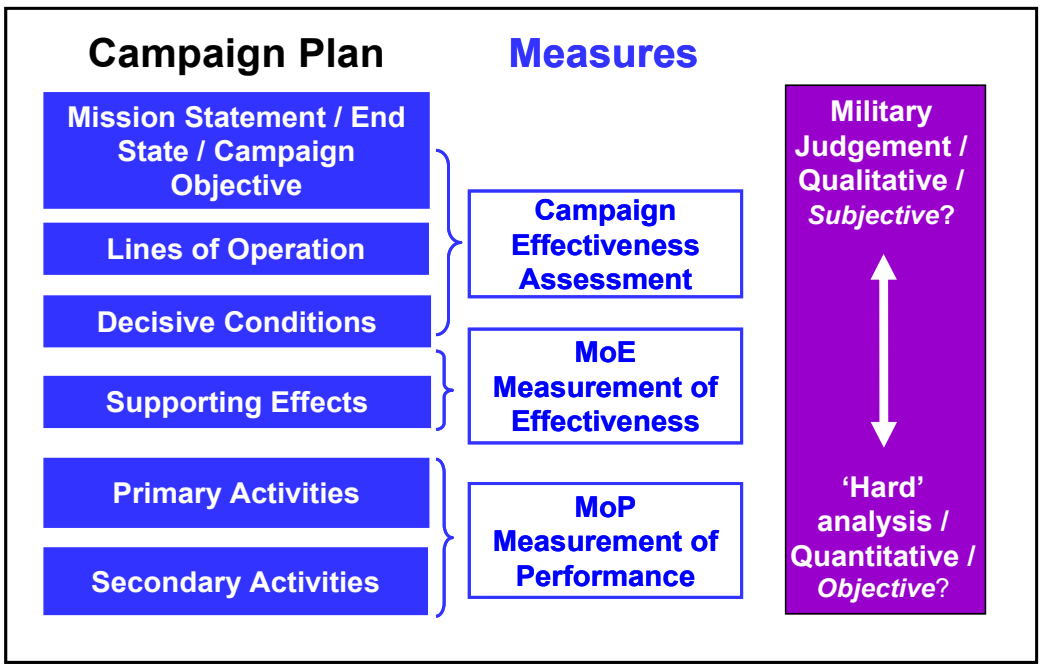


Figure 5-1: Links Between Campaign Planning and Measures.

The core principles of campaign assessment that need to be observed by IO/PSYOPS personnel are:

1) Reporting must be common across all components and allies. The requirements should be specified by the Joint Force Commander (JFC).
2) Formats in common use include Red-Amber-Green (RAG) or 'traffic light' systems which can be either different colors in boxes, or a long bar of changing color, the 'rainbow' bar. Other shapes and colors may be used to denote improvement or worsening. It is important to maintain consistency of format because anything different will cause delay as the audience has to figure out the meaning of information that is being presented.
3) It is crucial that the commander will understand the information presented to him. The aim is to communicate the results to the commander so that he can make decisions and, if necessary, brief the recommendations higher up in his command chain. If he does not understand what is being shown to him then he will not do that. The analyst needs to ensure that the commander understands what he is being shown. This may require arranging time with his aides in advance to explain what will be covered in the IO/PSYOPS brief.
4) An important distinction is whether one will be measuring ***progress*** towards an effect or ***percentage of achievement*** of an effect? Activity and assessed effects can be shown either as Green (Satisfactory progress) or Red (Not yet achieved).
5) All assessment benefits from recording textual justification to record military judgment.
6) A further consideration is to beware of a tendency to meet the commander's desire for improvement. It is human nature to want to declare 'good news' to senior commanders and politicians and avoid reporting bad news with the implication of personal failure. This can generate an undesirable culture of individuals or a staff HQ collectively being unwilling to report accurately and always putting the most optimistic and positive interpretation on events. This can create a false picture and can ultimately be disastrous as the commander's assessment becomes increasingly detached from the reality of events on the ground.

5.1.5 MOPs and MOE

Figure 5-2 and Figure 5-3 below give a simple example of the differences between MOPs and MOE. These are taken from an example of PSYOPS to distribute handbills or leaflets to the local population. The handbill's message will have been developed by the Target Audience Analysis team. The metrics may seem simple but operational experience is that if the metrics are made more sophisticated, the analyst will not be able to collect all the information needed and the analysis will take too long and will not report quickly enough.

	75 >	**Handbills distributed to all target audiences**
	50-74	**Handbills distributed to most target audiences including key areas**
	25-49	**Handbills distributed to some target audiences but missing some key areas**
	< 25	**Handbills not distributed**

Figure 5-2: Distribution of Handbills – MOP.

	75 >	Handbills are fully effective in conveying NATO message and are well received by most/all target audiences
	50-74	Handbills are largely effective in conveying NATO message and are accepted by most target audiences including some key audiences
	25-49	Handbills are only partly effective in conveying NATO message but are not well received by target audiences
	< 25	Handbills are not effective in conveying NATO message and are badly received by target audiences

Figure 5-3: Distribution of Handbills – MOE.

5.1.6 IO/PSYOPS Assessment Key Points

IO/PSYOPS analysis and assessment need:

- **Simple and robust assessment procedures.**
  - The procedures need to be simple so that they can be understood by everyone, and procedures must be robust so that they can be used when things do not go according to plan.
- **Definition of criteria for MOE and MOPs.**
  - It takes time to define the criteria and good definitions of MOPs and MOE, but this step is essential for meaningful analysis.
- **Rapidity to accord with operational tempo.**
  - Assessment needs to be fast enough to fit in with the operational tempo (sometimes called the battle rhythm) so that it can inform and influence the campaign, not just be analyzed afterwards as to what went well or was done badly.
- **Lots of timely information.**
  - Analysis needs information but this is usually difficult to obtain, either in the amount of data, the timeliness or the accuracy. Robust procedures are needed to be able to cope with limited, partial, and late data and when there are doubts about the accuracy.
- **Consistency with bigger campaign assessment.**
  - IO/PSYOPS will contribute to the overall campaign as part of wider Influence Operations but the scale of the contribution can be assessed only if it is presented in the same format and can be combined with all the other inputs from Fires and Maneuver.
- **Experienced staff.**
  - Assessment needs experienced staff who understand influence, who are enthusiastic and passionate about the subject and have the ability to persuade senior officers to believe in the product.
- **To show added value to the HQ staff and to the troops in the front line.**
  - Influence sometimes has a poor reputation amongst the ‘warriors’ in the fighting arms who perceive IO/PSYOPS as a soft and fluffy activity on the periphery of traditional military action. All staff in the influence domain including IO/PSYOPS need to persuade the rest of the staff and also the troops in the front line that influence activity is essential and that it can be the campaign winning capability.

5.2 PRESENTATION OF RESULTS

Just as a campaign plan is unique because every situation is different, there is no single recommended method of doing campaign assessment. Most methods use similar principles: involving the MOPs of a large number of factors and aggregation into broader MOE. At each stage weightings are applied to represent relative importance of factors and command priorities.

Automated tools are being developed for use in main HQs, for example, JFC. These are powerful, complex and data-hungry computer models and require a separate assessment cell to run the process. At lower levels, for example, component commanders or at the tactical level, the analysis and assessment is likely to be conducted using a locally-produced PC tool using Microsoft Excel. Some HQs may have specialist civilian or military Operational Analysis (OA) staff, whereas in tactical formations the assessment is likely to have to be done by the staff in addition to their other duties. Guidance on all aspects of CEA is available from NATO HQs, for example, HQ ARRC and some national scientific and technical authorities[1].

What follows are some examples of how results can be presented. These are taken from NATO exercises where the results have been declassified. Figure 5-4 and Figure 5-5 show different Excel worksheets used in a typical CEA process in an exercise. The procedure is easily adapted for a lower level or more specific activity such as Influence Operations.

[1] For example, the UK MOD Defence Science and Technology Laboratory (Dstl) Support to Operations Group.

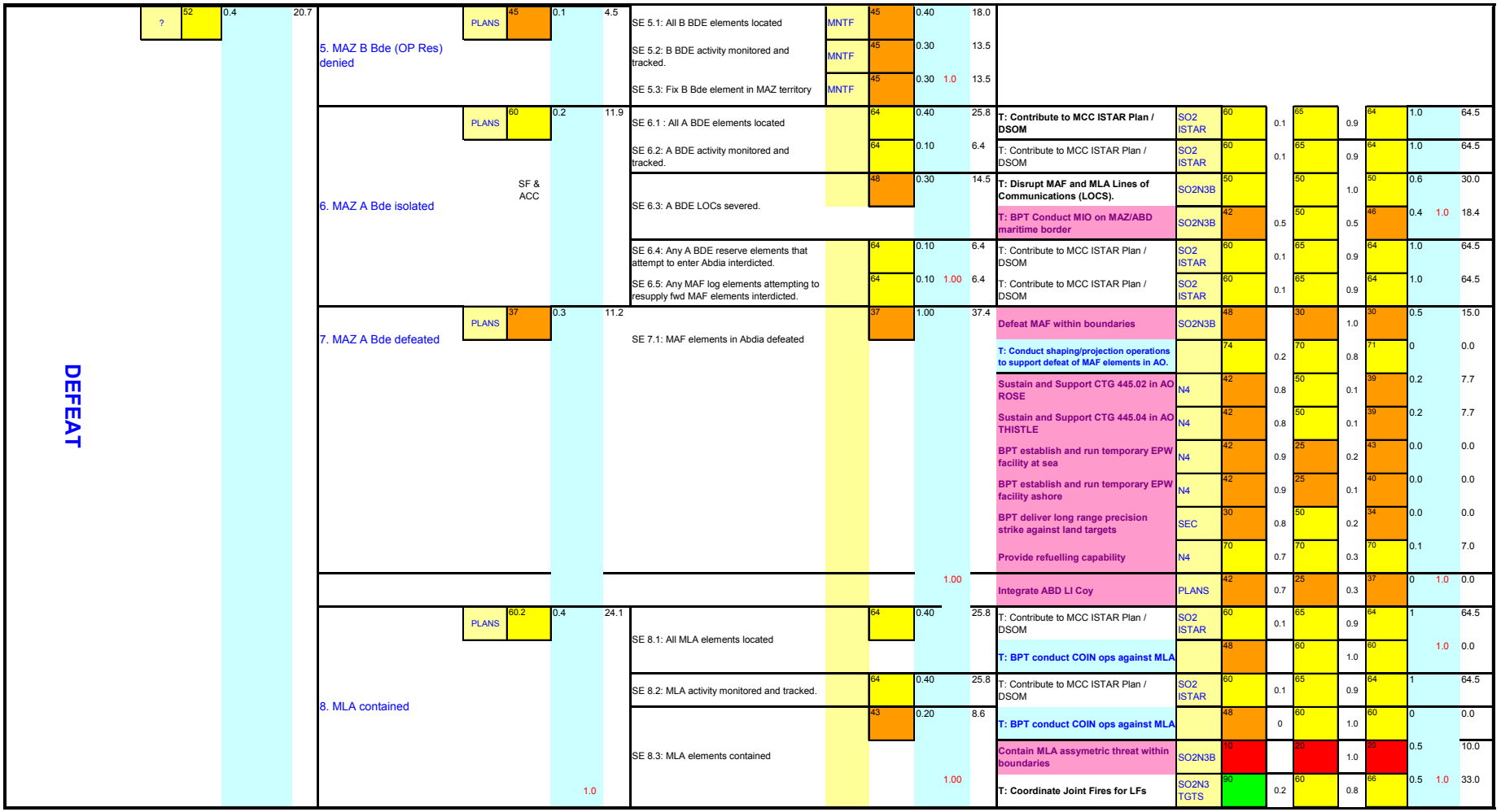


Figure 5-4: CEA Worksheet – Task and Supporting Effect for One Line of Operation.

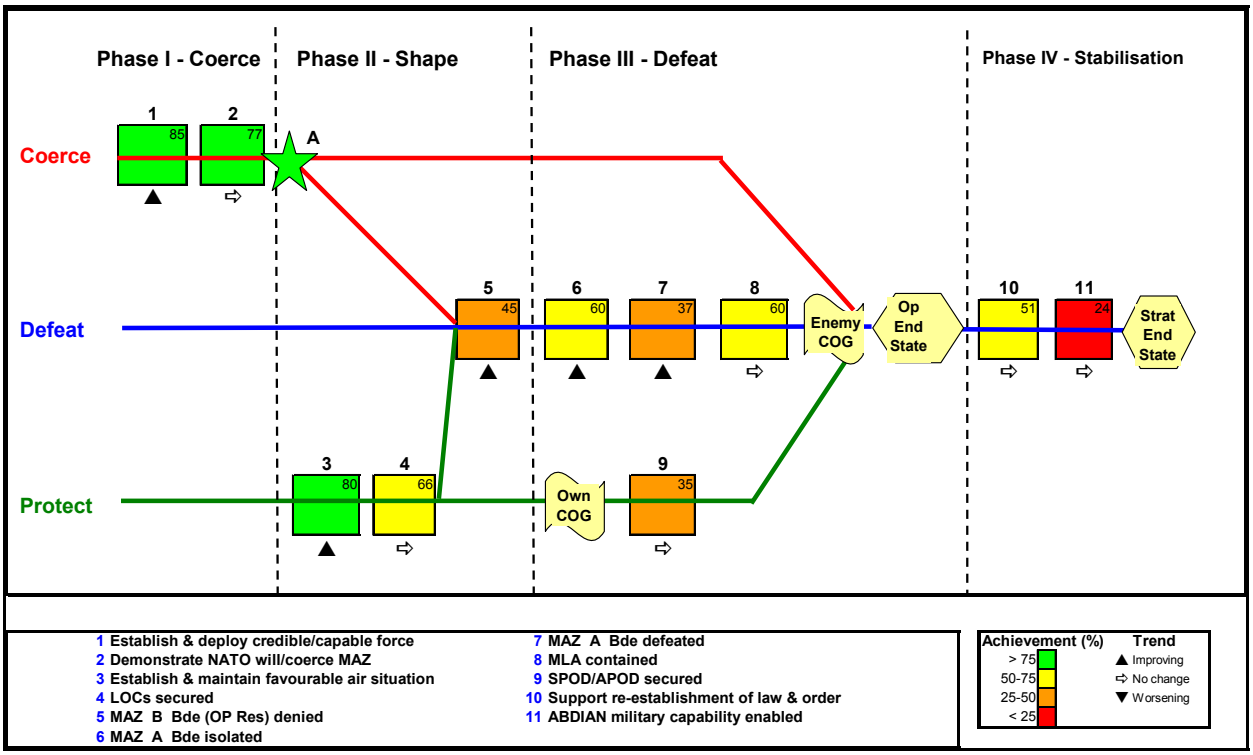


Figure 5-5: CEA Worksheet – Lines of Operation.

Figure 5-4 is an extract of a much larger and more detailed worksheet that lists all the Lines Of Operation (LOOs). This figure shows the activities or tasks, the aggregation into supporting effects, the further aggregation (with weightings to reflect command priorities) into decisive conditions and finally a summation for the overall assessment of progress on a single LOO. This method ensures that individual positive or negative events do not distort the higher level assessment and provides an audit trail of how assessments change over time.

This CEA tool is used by analysts but is too detailed for presentation to the Command.

Above is another page in the same spreadsheet and is linked to the previous worksheets. This schematic reflects the campaign plan and shows the lines of operations, the decisive points or conditions and the centre of gravity and the strategic end state. The color symbology follows the usual convention: green is good, yellow is average, amber is poor and red is bad. The calculations on the previous worksheet are automatically carried through to replicate the campaign plan LOOs with color coding and symbology where the arrow symbols show if a measure is improving, getting worse or staying the same.

This is used by the analysts to work with the J3 and J5 staff branches on planning and execution of operations. However, this is still too much information for the senior commander.

5.2.1 'Rainbow' Bars

The key to success is to be able to present the senior commander with a single picture that shows him how his campaign is doing so he can answer the question from the media or from the government minister 'General, how is your campaign going, are you winning?' The most effective product is a strong simple visual image or a single page or PowerPoint slide that the commander can take to his next meeting or press conference. Influence/IO/PSYOPS will be part of this. A format that has been widely successful is a

rainbow diagram, using similar symbology with red being bad and green being good, such as shown in Figure 5-6. The dark blue line shows where the overall assessment is now and the grey line shows where it was at the last assessment. Arrows can be added for clarity to indicate the direction that reflects improvement or worsening of the situation. This method can also be used as a planning aid to answer the 'What if?' questions and demonstrate the likely scale of change if more resources and effort are allocated to Influence/IO/PSYOPS activities.

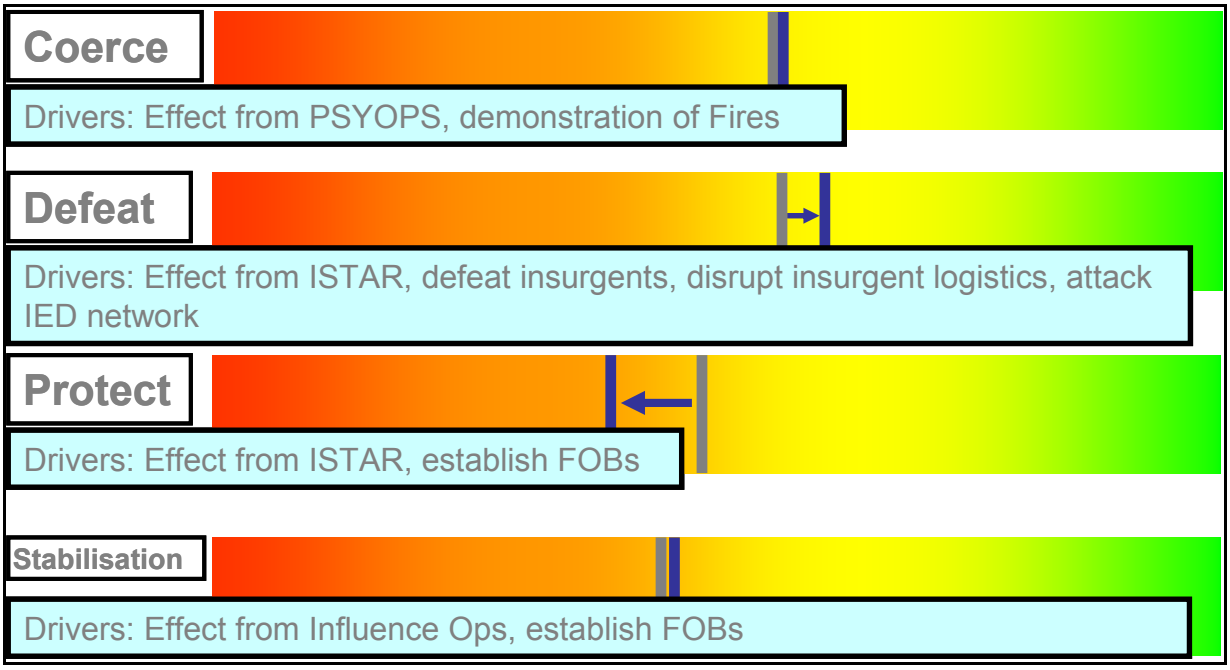


Figure 5-6: Lines of Operation – 'Rainbow' Bars.

5.2.2 Trend

An enduring operation will need longer term assessments to identify trends and correlate changes to significant events. Two methods of presenting trend are in Figure 5-7 and Figure 5-8.

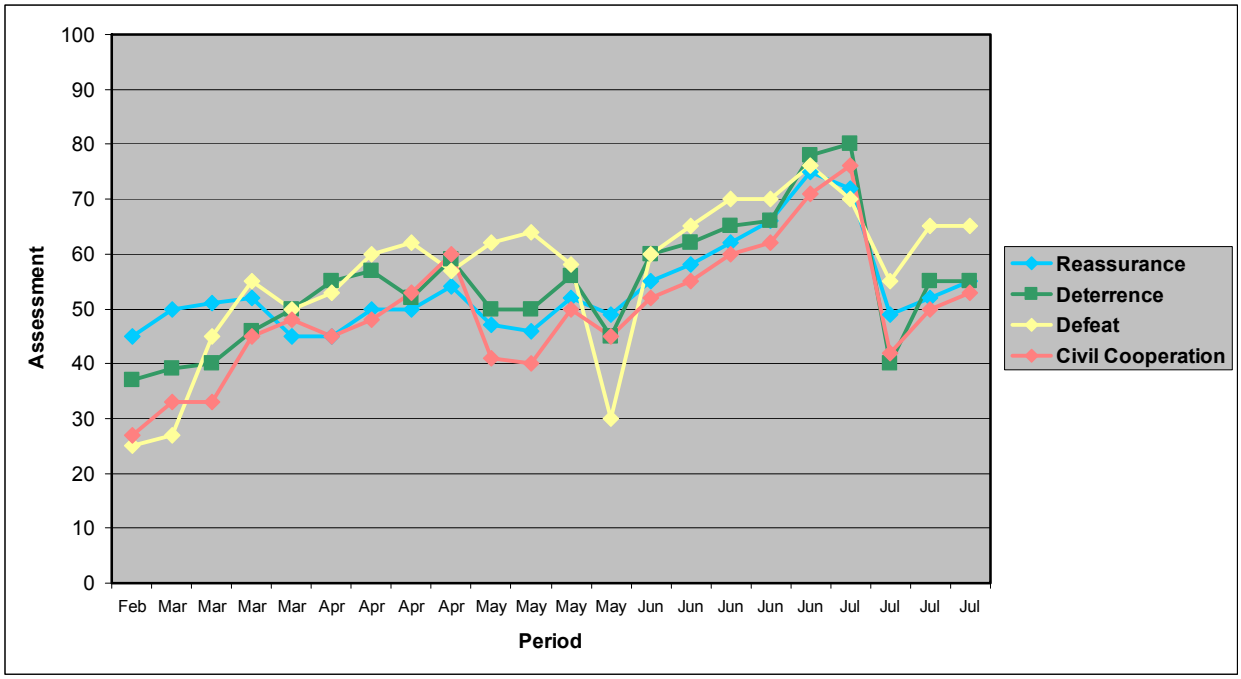


Figure 5-7: MOE Trend (1).

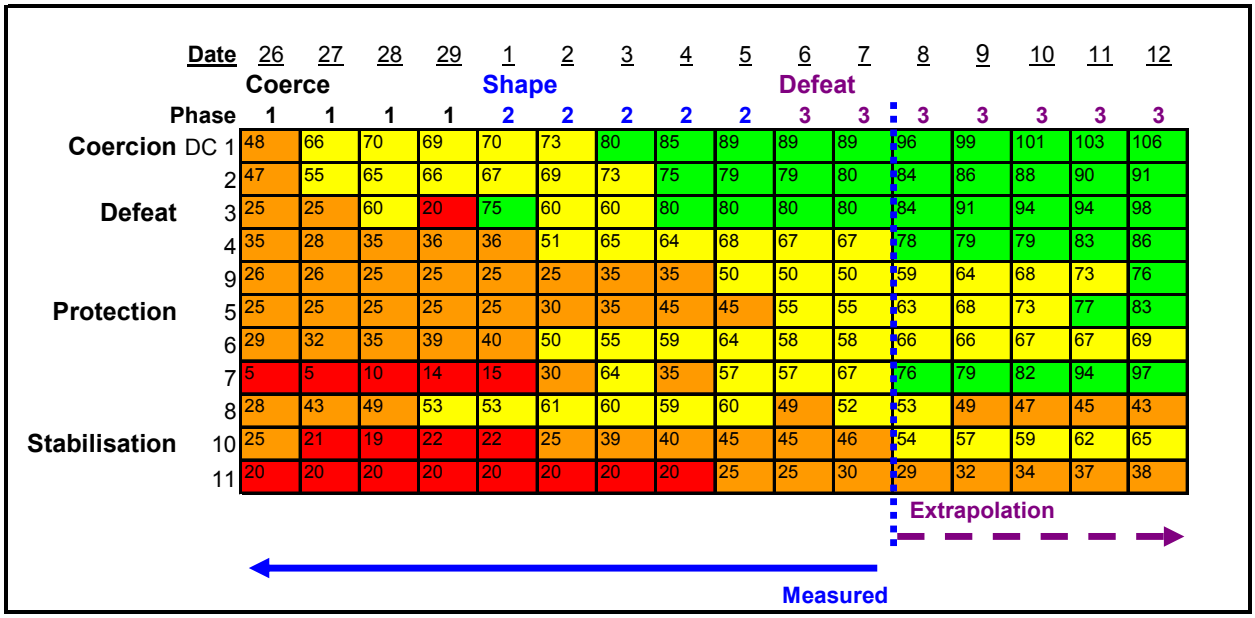


Figure 5-8: MOE Trend (2).

Metrics are plotted by level of assessment against time. Baseline data is needed to establish a reference point. In this example, there have been two decisive acts by terrorists in May and July that have shown that allied forces have not yet been able to defeat the enemy, that deterrence is not yet working, reassurance to the population is reduced, and as a consequence the cooperation of the civilian population with the allied forces reduces. To this one can add thresholds.

The RAG (Red, Amber, Green) color code for each decisive condition or decisive point is recorded for each reporting time interval. The change of color over time provides a simple visual interpolation of change, be it improvement or worsening. A simple mathematical prediction or extrapolation function in Excel can be used to show the future trend on the assumption that conditions are unchanged. This has the advantage that visual integration can assist the command to assess where over-achievement of objectives exists, for example, DC 1 and DC3, and where further effort is needed, for example, DC 8, 10, 11. This indicates that resources can be reallocated from the over-achieving and over-resourced DCs to those DCs where more progress and hence more resources are required.

5.3 SUMMARY

The essential principles of IO/PSYOPS analysis and assessment are:

- Brief the commander and his staff on the IO/PSYOPS plan and win their support.
- Allocate adequate time and effort to define MOPs and MOE.
- Establish a practical plan for data collection and ensure that it is communicated to the troops who will be collecting the data, ensure that they understand the importance of it and check that they are meeting the requirements.
- Assessment methods need to be simple and robust because the high operational tempo means that advanced analytical methods rarely get used.
- The methodology and format of the IO/PSYOPS assessment should be compatible with the wider CEA.
- Establish baseline data.
- Results need to be presented clearly and concisely by someone who understands what they mean and can answer any questions that arise.

Chapter 6 – TECHNICAL COURSE PROGRAM

6.1 HFM-183: MEASURING THE EFFECTS OF INFLUENCE OPERATIONS ON ATTITUDES AND BEHAVIOR

The program for the Technical Course is as follows, this program may be adapted as needed. In the remainder of this chapter, we explain the program in a bit more detail.

DAY 1

08:30	REGISTRATION
09:00	WELCOME AND INTRODUCTION
09:15	**Briefing**: HFM-160/183
09:30	**Discussion**: Operational experience and course expectations
10:00	**Discussion**: What is MOE?
11:00	BREAK
11:15	**Briefing**: The HFM-160 approach: the Guidelines
12:50	LUNCH
13:00	**Briefing**: Exercise scenario
13:30	**MOE Exercise 1**: REASSURE
14:45	Break
15:00	**Presentation and discussion** of results of Exercise 1
16:30	End of Day One

DAY 2

09:00	Sum-up Day 1
09:15	**MOE Exercise 2**: DETER
10:30	BREAK
10:45	**Presentation and discussion** of results of Exercise 2
12:00	LUNCH
13:00	**Briefing**: Communicating and presenting results
13:30	**Exercise 3**: Communicating and presenting results
14:15	**Presentation and discussion** of results of Exercise 3
15:15	BREAK
15:15	General discussion, feedback
16:00	END

6.2 BRIEFING: HFM-160/183

The briefing given at the beginning of Day 1 focuses providing the background of HFM-160. Outline the goals and describe the process through which the approach and products were developed.

6.3 DISCUSSION: OPERATIONAL EXPERIENCE AND COURSE EXPECTATIONS

In order to get a better idea of the type of participants present, we recommend a group discussion. Important for is to get a good impression of the participants' expectations of the course. Direct the discussion specifically towards the knowledge and skills participants expect to get out of the course. Questions such as *What will you understand after the course? What will you be able to do after the course?* are key.

In addition, try to get insight into participants' current ideas about MOE. Participants may discuss on one hand things like their background and experiences with MOE. On the other hand, engage participants in a more abstract discussion on what kinds of activities influence behavior and attitudes, how you can tell if behaviors/attitudes have been influenced and how the environment affects your success.

6.4 DISCUSSION: WHAT IS MOE?

We consider it important that course participants understand the problems with doing MOE before they can understand our approach. Indeed, if you do not see a problem, then a solution is not required. So, before presenting the approach to MOE, let participants discuss in sub-groups questions such as:

- What is MOE?
- What is the difference between effect and effectiveness?
- What is the purpose of doing MOE?
- What are the problems with doing MOE?

6.5 BRIEFING: THE HFM-160 APPROACH

This briefing of the Guidelines is the core of the Technical Course and of the overall approach. The Guidelines are detailed in Chapter 2. Here we provide an overview of the briefing.

We frame our approach by discussing MOE as it is included in the AJP-3.10.1, which is not very extensively. Specifically, the point is that, though MOE is mentioned a number of times in the AJP as an activity that must be undertaken, nowhere is information provided on how to do MOE.

Ideally we could aggregate experiences of different approaches to MOE using successful and less successful cases. This is based on the assumption that there are best practices, which can be disseminated, and can be used to develop a general conceptual model of MOE. However:

1) There is a severe problem of confounded terms and definitions. There is little clarity on what MOE is exactly, and different contexts use different definitions. MOE was defined as, among other things:
    a) A specific effect being sought (e.g. positive attitude towards NATO troops).
    b) A specific data collection method (e.g. survey/focus groups).
    c) A specific analysis method (e.g. ethnographic method).

2) Experiences from theater have not led to the identification of characteristics of one best practice. In actual fact, there is very little information describing any characteristics of any best practice at all.

3) A very large percentage of IO/PSYOPS officers in ISAF (ca. 50%) have **no** previous training in IO/PSYOPS before deployment. As a result, they are given a tool, but they don't know why, when or how to use it.

The realities of ISAF do little to improve the situation. Generally speaking, MOE is significantly improved by the establishment of a baseline against which to compare changes observed in the environment. In 2007 a baseline study was conducted, but due to prohibitive costs, cannot be repeated to assess change. The OPTEMPO is often so fast (*'Oh no, we need another billboard by Friday!'*) that there is little opportunity to embed MOE properly. Finally, measuring performance (*'We distributed 10,000 leaflets…')* is often preferred to measuring effectiveness (*'…but they all landed in the lake.'*). This has much to do with short rotations and pressure to show results.

The specific objectives of the HFM-160 Guidelines are to:

1) Establish a common (NATO) language and common definitions;

2) Improve understanding of the challenges in the planning and measurement of influence effects; and

3) Increase knowledge of the range of potential MOE measurement techniques.

We hope that by doing this, we will help course participants learn to interpret better the Commander's Intent (CI) from an influence perspective and to use this knowledge when doing MOE in the field.

The Guidelines are made up of a four-part process.

1) Effects, which are extrapolated from the CI. The definitions of effects and related concepts are shown in Table 6-1 below.

2) The key concept 'impact indicators' is broken down into either behavioral or attitudinal.

3) Data collection methods. There are many ways of collecting data, some of which are commonly used, while others may be less familiar. We have included an overview of these methods and an analysis of their strengths and weaknesses in Chapter 3.

4) Data analysis and presentation. There are many different kinds of data analysis, many of which are not commonly used in current MOE activities. We advocate that people be aware that there are many techniques available to help understand data, but in order to use them correctly, we recommend that they are employed by someone with a statistical background (see Chapter 4).

Table 6-1 below provides an overview of the most important key concepts and the definitions developed/ used by HFM-160.

Table 6-1: Key Concept Definitions.

Concept	Definition Used in HFM-160/HFM-183
Effect	A change that has occurred. This can be attitudinal, behavioral, material… An effect may be intended or unintended, expected or unexpected, related to your goal or unrelated. To identify an effect, ask yourself: What happened after my activities (for example, people handed in firearms after I distributed my flyers)?
Effectiveness	Refers specifically to your actions and the degree to which your actions have led to achieving the desired effect. To identify a measure of effectiveness, ask yourself: How can I measure or assess if *my activities* (e.g. flyers) were responsible for the desired effect (e.g. collected firearms)?
Impact Indicator	Something that can be assessed to provide insight into the effect. This is the variable you want to see changed. Ask: What will the world look like when I have achieved my goal? What can I measure or assess to find out if I have achieved my goal / if the world has changed the way I expect? (For example, the goal is increased support for ISAF. If this occurs there should be fewer IED attacks. The impact indicator is thus the number of IED attacks.)
Threshold	The expression of the desired effect that describes a satisfactory outcome. Usually a desired level or change in an impact indicator. Ask: How much change do I want to see in order to conclude that my activities have been successful? Think about change in terms of percentages (from 20% to 50% of people who feel safe on the streets) or absolute change (from 100 to 150 children per day in school). Ideally you should also specify conditions relevant to the desired change, such as a time span (e.g. by the end of the month), a location (e.g. in the vicinity of Miresk) or population (e.g. JeS rebels).

Finally, in order to sum up the approach, we presented participants the following overview:

- Work top down! (That is: start with the effect you want to achieve rather than the activity to influence the target audience).
- What is your goal? (Intent statement).
- If you have reached your goal, what does the world look like? What behavior or attitudes do people have?
- What can you measure to show this?
- The products used to influence the target audience are secondary!

The process hereby is:

- CI breaks down in to various effects. Identify these.
- Identify the target audience.
- Define impact indicators.
- Determine the desired threshold.
- Choose a data collection method.
- Choose an intervention.
- Identify an indicator specific to assessing effectiveness (as opposed to effect).

6.6 MOE EXERCISE 1: REASSURE AND MOE EXERCISE 2: DETER

Here we describe Exercises 1 and 2. The materials for these exercises are presented in Chapter 8.

In order to practice using the Guidelines to develop MOE, participants engage in two exercises. **Exercise 1** focuses on developing MOE to assess the effect and effectiveness of PSYOPS activities carried out in order to reassure the local population after an IED attack in the fictitious country of Maricha. First, brief the course participants on the scenario. Then, participants receive additional information to review on their own: an information package on Maricha (Chapter 7), an overview of key concept definitions (see above), Commander's Intent (Chapter 8), and an Effects Specification Table (Chapter 8, see also Chapter 2). In sub-groups, the course participants are asked to fill in the Effects Specification Table.

The sub-groups are given about one hour to complete the exercise. After that, each group presents their solution and there is a plenary discussion about the exercise. Finally, the lecturers present a solution they have developed. Make explicitly clear that there is no definitive answer; this is a problem to which there are many potentially correct solutions.

Exercise 2 is much the same except for a few aspects. First, the scenario involves deterring the local rebel groups. In this way the focus of the MOE is redirected from assessing specific activities to assessing more at the campaign level.

Second, in order to increase the difficulty, groups may receive restrictions (e.g. the cultural advisor has just gone home).

Third, in Exercise 1, the lower order effects and interventions were pre-specified in the Effects Specification Table (e.g. the CI 'REASSURE' can be operationalized into 'Reduced support for JeS'). In Exercise 2, participants should identify the lower order effects and interventions on their own.

6.7 BRIEFING AND EXERCISE 3: COMMUNICATING AND PRESENTING RESULTS

In our view, the Guidelines address how to think about what MOE are, how to plan them, how to execute them, and how to understand the results. The final link in this chain is how to distill the take-home message: what is the most important message the data can provide and how do you present this so that your message gets across? To address this issue, brief participants on how to present results – and how not to present results. Emphasize the importance of knowing your audience and consistency in reporting (e.g. do not use a different color scheme every time you brief the CO). Address the difference between reporting measures of performance, effect and effectiveness. To illustrate, show a number of different examples of data presentation.

In **Exercise 3**, the sub-groups are given a fictitious data set describing school attendance and local nationals' feelings of security in two districts over a 21 week period (see Table 6-2).

Table 6-2: Fictitious Data Set Used for Exercise 3.

REASSURE	Goal: you want to see more kids in school										
Week:	1	3	5	7	9	11	13	15	17	19	21
District 1 received flyers at:			X				X			X	
objective measure (% kids in school District 1)	50%	40%	50%	60%	55%	60%	70%	75%	70%	75%	80%
subjective measure (feelings of security District 1)	very low	very low	low	med/ low	medium	med/ low	med/ low	medium	med/ high	medium	med/ high
District 2 did not receive flyers											
objective measure (% kids in school District 2)	50%	40%	50%	45%	55%	50%	40%	45%	50%	55%	60%
subjective measure (feelings of security District 2)	very low	very low	low	low	med/ low	med/ low	med/ low	medium	medium	med/ low	medium

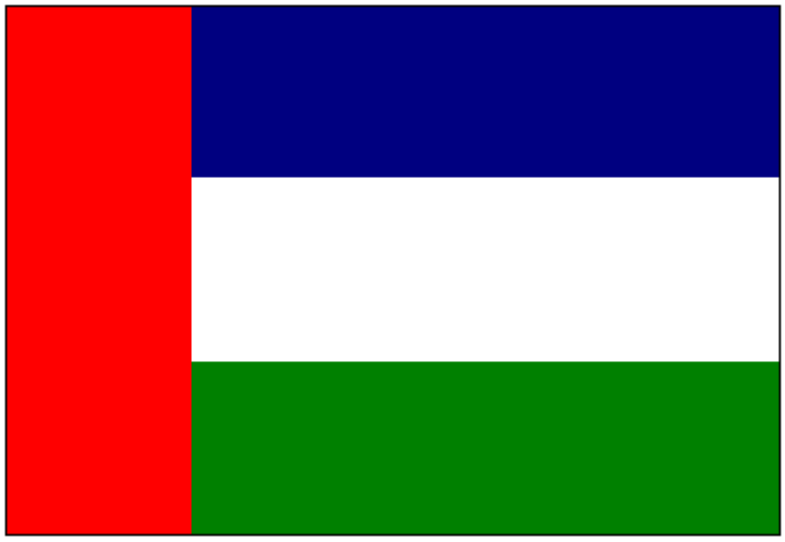
Data are presented at two-week intervals. The data shown that in one district, flyers intended to help increase school attendance and feelings of security were distributed at three time points. No activities were carried out in the other district. The sub-groups are asked to prepare and give a presentation of the results for the Commanding Officer. They are instructed to consider the following questions:

- How do you indicate achievement of success?
- Across which time points do you present the results?
- Do you present effects, effectiveness or both?

After making a presentation, participants present their work to a 'Commanding Officer' played by one of the lecturers. Presentations are followed by group discussion.

Chapter 7 – MARICHA BRIEFING PACK

Background Briefing Pack for the Islamic State of MARICHA



REGIONAL MAP

The Islamic State of MARICHA is situated between the Middle East and South-Central Asia. It has borders with KURAS (from which it broke away in 1992), PAKISTAN and AFGHANISTAN. MARICHA is not considered a significant regional power although the ethnic Asad's (the ruling group) recent poor treatment of the Bashires, who are also present in PAKISTAN and AFGHANISTAN has caused regional condemnation of the state.

COUNTRY OVERVIEW

Country Name: The Islamic State of MARICHA

Capitol: Char Bahar

Official Languages: Arabic/Farsi

Establishment: 1992 (independence from KURAS)

Population: 17,238,376

GDP: $9.6 billion

GEOGRAPHY

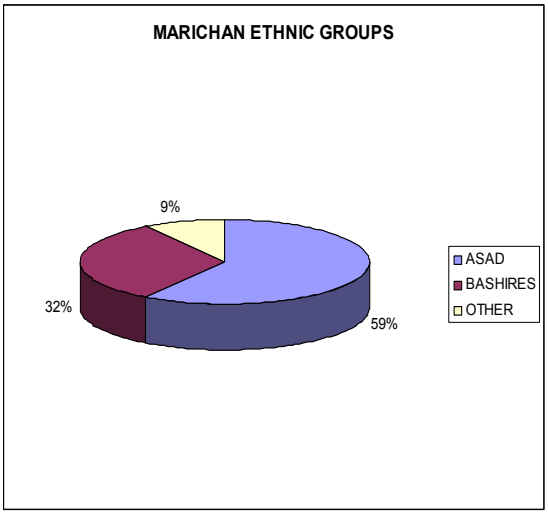
MARICHA is a mountainous country situated between the Middle East and South-Central Asia, with plains in the north and southwest. The highest point is Rajh, at 7,485 m (24,557 ft) above sea level. Large parts of the country are dry, and fresh water supplies are limited. MARICHA has a continental climate with hot summers and cold winters. The country's natural resources include gold, silver, copper, zinc and iron ore in south-eastern areas; precious and semi-precious stones such as lapis, emerald and azure in the north-east; and potentially significant petroleum and natural gas reserves in the north. The country also has uranium, coal, talc, barites, sulphur, lead, and salt.

HISTORY

After its independence from KURAS in 1992 the country entered turmoil as the dominant Asad and remaining Bashires fought for control. However, later in 1992 the Asad political party Hizb-ul-Shabab (Party of Youth) gained

power. The Hizb-ul-Shabab dominated MARICHAN politics and made steps towards implementing its religious policies, which included the adoption of Sharia and the way of Asad. Influential members of the party became increasingly frustrated with the slow progress of its religious policies and formed a militant wing known as the Jaish-e-Shabab (JeS) or Army of Youth. Growing paranoia surrounding the ethnic Bashires (reluctant to adopt Asad ways) resulted in the JeS splitting from the Hizb-ul-Shabab and commencing a campaign of violence against the Bashires and "non-pure Muslims" whilst taking control of the country. In 2007 the country was nearing collapse and was a safe haven for International Terrorist Organizations (ITO). In 2010 the international community agreed for a NATO force to enter the country to remove the JeS and prevent use of MARICHA by ITOs as a safe haven.

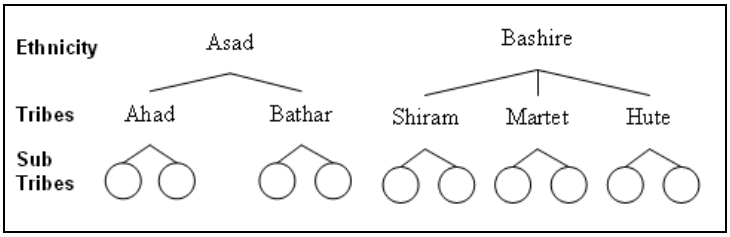
DEMOGRAPHICS AND CULTURE



Since MARICHA broke away from KURAS in 1992 the dominant ethnicity has been the Asad accounting for 59% of the population. The next largest group is the Bashire who chose to remain in MARICHA rather than head over the border to KURAS.

The most common languages spoken in MARICHA are Farsi and Arabic however, some tribal dialects still remain.

MARICHA is a highly tribal society. The tribes are based on ethnic divisions and spend a lot of time developing their dominance within particular areas of MARICHA. Tribes will defend their territory aggressively particularly against tribes of differing ethnicities and can often join forces to counter larger threats. The ethnicities and tribal breakdowns can be seen below.



ASAD

This is the dominant ethnicity within MARICHA and is split into the Ahad and Bathar tribal groupings. The Asad follow Sharia (Sunni) and the way of Asad which is very similar to Afghan ***Pashtunwali. The Asad dominate the*** Hizb-ul-Shabab, the principal political party in MARICHA.

BASHIRE

This is the smaller ethnicity within MARICHA and comprises the Shiram, Martet and Hute tribal groupings. The Bashire (Shia) refuse to follow the way of Asad.

GROUP PROFILE – JAISH-E-SHABAB (JeS)

Group Symbol:

Overview:

Group Name: Jaish-e-Shabab (JeS) or Army of Youth

Date of Founding: 1994

Group Type: Militant Islam

Leader: Abdul AHAD (Ethic Asad)

Background:

The JeS initially formed as a militant wing of the political group Hizb-ul-Shabab (Party of Youth), which dominated MARICHAN politics since the country's formation in 1992. The Hizb-ul-Shabab, which represented the dominant Asad ethnicity, governed the country responsibly but influential members of the party became increasingly frustrated with the slow progress of its religious policies, which included the adoption of Sharia and the way of Asad. Growing paranoia towards the ethnic Bashires, (reluctant to adopt Asad ways) resulted in the JeS splitting from the Hizb-ul-Shabab and commencing a campaign of violence against the Bashires and "non-pure Muslims" whilst taking control of the country. In 2007 the country was nearing collapse and was a safe haven for International Terrorist Organizations (ITO). A NATO force agreed to enter the country to remove the JeS and prevent use of MARICHA as a safe haven for ITOs.

Aims and Objectives:

The JeS's aim is to rid MARICHA of foreign influence, restore the Asad-led Islamist regime, and enforce the rigorous interpretation of Sharia and the way of Asad they believe is necessary to purify the country. The leadership claims to have no expansionist ambitions beyond Maricha's borders and no interest in attacking Western countries. However, as long as the JeS remains associated with ITOs, such claims will continue to be treated with skepticism by Western governments.

Tactics, Techniques and Procedures:

JeS tactics have focused on mobile guerrilla attacks and evasion, avoiding direct confrontation with better armed NATO forces. After sustaining heavy casualties in the early phase of the conflict, JeS has learned that to stand and fight is to court disaster from the enormous aerial firepower that is brought to bear on even small numbers of fighters. JeS has changed to a campaign of IED and suicide attacks on NATO and civilian (predominantly ethnic Bashire) targets. Intimidation tactics are also used, including listing potential targets and carrying out executions to discourage links with the government and Western forces. Key figures in influencing MARICHAN communities such as local mullahs and provincial governors are particularly vulnerable to intimidation, and the JeS have threatened, and in some cases killed, those who have shown support for the Government of MARICHA (GoM).

Chapter 8 – EXERCISES ONE AND TWO

8.1 MARICHA SCENARIO INTENT STATEMENTS

8.1.1 Background

MIRESK is a small town on the A3 road which leads to the capitol CHAR BAHAR. The town is mixed and is predominantly Hute (Bashire) tribe. The other tribe in the town is that of the Ahad (Asad). On 28MAR09 a large IED was detonated in a crowded part of MIRESK resulting in 15 LNs killed and 34 wounded (All Bashires). G2 assessed that the IED was planted by JeS militants, and the MIRESK council assumed as much. MIRESK has been a JeS target before but attacks are infrequent and this is largest so far. A NATO QRF was deployed to the area to provide medical support and conduct clearance patrols.

8.2 EXERCISE 1: REASSURE

8.2.1 Commander's Intent

I intend to REASSURE both Ahad and Hute local nationals in the vicinity of MIRESK in order to REDUCE tribal tensions in the area. I intend to create good communication methods to REASSURE the local population while at the same time reducing the JeS support base within the local Ahad population.

Desired End State:

- Reduced ethnic tension with MIRESK.

Timeline:

- Operation will start in 3 weeks and take 4 weeks to conduct.

8.2.2 PSYOPS Mission

Target Audiences:

- Primary TA: Ahad and Hute local nationals in vicinity of MIRESK.

Possibilities to Reach TA:

- KLE/Shuras.
- Public announcement/loud speaker.
- Hand bills.

PSYOPS Effects:

- Reduced support for the JeS.
- Increased confidence in NATO security forces.

Instructions:

- You are the PSYOPS MOE team that has been tasked to plan how to assess the effectiveness of the PSYOPS mission. Please fill in the table below to outline your plan.

Table 8-1: Effects Specification Table – Exercise 1: REASSURE.

		Effect 1: Reduced Support for the JeS	Effect 2: Increased Confidence in NATO Security Forces
		PSYOPS Activity 1 (intervention): KLE/Shuras	PSYOPS Activity 2 (intervention): Loud Speaker and Handbills
Impact Indicator			
Threshold			
Data Collection Method			
	When		
	Sample		
	Advantages of the Chosen Data Collection Method in this Specific Situation		
	Disadvantages of the Chosen Data Collection Method in this Specific Situation		
Analysis Method(s)			
Indicator of Effectiveness			
Unintended Effects of the PSYOPS Activity (either desirable or undesirable)			

8.3 EXERCISE 2: DETER

8.3.1 Commander's Intent

I intend to DETER further JeS activity in the vicinity of MIRESK in order to SECURE route A3. I intend to conduct offensive operations and messaging to DETER JeS activity while at the same time reducing the support base within the local Ahad population. While enduring activities are ongoing, it is essential to maintain the psychological pressure on JeS in order to ISOLATE them from their traditional support base and DISRUPT their C2 capability.

Desired End State:

- A MIRESK with reduced JeS activity and a more secure route A3.

Timeline:

- Operation will start in 48 hours and estimated to take 2 weeks.

8.3.2 PSYOPS Mission

Target Audiences:

- Primary TA: JeS militants operating IVO MIRESK.
- Secondary TA: Ahad local nationals who support/facilitate JeS activity.

Task Force Activities:

- Increased kinetic activity.
- Increased patrolling.
- PSYOPS leaflet drops.

Instructions:

- You are the CJ3 Campaign Assessment team. Please fill in the table below to outline your assessment plan.

Table 8-2: Effects Specification Table – Exercise 2: DETER.

	Effect 1:	**Effect 2:**
Impact Indicator		
Threshold		
Data Collection Method		
When		
Sample		
Advantages of the Chosen Data Collection Method in this Specific Situation		
Disadvantages of the Chosen Data Collection Method in this Specific Situation		
Analysis Method(s)		
Tactical Activity (intervention)		
Indicator of Effectiveness		
Unintended Effects of the PSYOPS Activity (either desirable or undesirable)		

SECTION 2:

HFM-160 ACTIVITIES

SECTION 2: HFM-160 ACTIVITIES

Chapter 9 – ADVANCED RESEARCH WORKSHOPS

This chapter provides a report of the HFM-160 Advanced Research Workshops (ARW), held at Farnborough, UK, on 10th and 11th February 2009 and at Toronto, CA on 23rd September 2009. The report describes the background, aims, attendance, format, material covered and recommendations made from these workshops.

9.1 ARW I – FARNBOROUGH, UK

The ARW I was designed as an opportunity for the TG to expose draft work to a range of stakeholders in order to gain early validation and feedback. It looked specifically at the draft guidelines, the data collection methods matrix and preliminary ideas and materials for the Technical Course.

9.1.1 ARW I Aims

The principal aims for the ARW I were to:

1) *Gather feedback* – Present draft guidelines and the data collection matrix to an audience that had practical experience in designing, contributing to and assessing MOE for PSYOPS. To gain feedback from the audience on these draft products.
2) *Understand context* – To better understand from the audience – as representatives of the perceived user community – the place for the HFM-160 TG work within the broader operational context. For this to be used to inform the content and style of the TG's products.
3) *Develop contacts* – To support the development of international contacts and networks that would be used to promote the TG's final products.

9.1.2 Attendance

The ARW I was pitched as an interim workshop as opposed to a mature demonstration, and the size of the invitation list for the workshop was set accordingly. Most invitations were accepted and given the location of the workshop, the attendance was predominantly from UK-based personnel. The attendees are listed in Table 9-1 below:

Table 9-1: ARW I Attendees.

Invited Attendees	**HFM-160 TG**
LtCol. Sandi Bannerjee (CAN)	Heather Griffioen-Young (NLD)
Maj. Simon Bergman (ret'd) (GBR)	Steve Moore (GBR)
Trevor Howard (GBR)	Alexander Schilling (DEU)
Lt. Shamus MacLean (GBR)	Keith Stewart (CAN)
Rebecca Mingham (GBR)	Mark Westbury (GBR)
First Lieutenant Jacob Schop (NLD)	Erik Wetter (SWE; PfP)
Joanna Spencer (GBR)	
Maj. Bob Todd (GBR)	Non-TG invitee: Nick Hamer (GBR)
Capt. Tom Wood (GBR 15 POG)	

9.1.3 Format of the Workshop

Timing – The ARW ran across one and a half days in order to cover all of the material required by the TG.

Scenario – In order to present the guidelines and data collection matrix within an operational context, a scenario was used during the workshop. This scenario was for a fictitious country where a NATO force had been deployed to undertake peacekeeping and counter-insurgency activity. The scenario centered on a region that had previously seen little insurgency activity but had recently experienced an Improvised Explosive Device (IED) event. This event formed the basis for the Commander's Intent which focused on NATO forces seeking to reassure the local population regarding the security situation and to deter the adversary from undertaking further attacks. A set of PSYOPS activities were described as part of the scenario and the workshop was then broadly based around developing and assessing the MOE for the PSYOPS activity in relation to the REASSURANCE and DETERRENCE effects sought.

Facilitation – Attendees were given a brief on the scenario and a series of facilitated sessions broadly based on the scenario were then used to present and discuss the guidelines and data collection matrix. The application of the scenario was deliberately not tightly enforced and the attendees were encouraged to provide feedback broader than that related solely to the scenario. The second day of the workshop made little reference to the scenario as the attendee group was able to provide highly effective feedback without requiring the prompt of the scenario. The scenario remained as a back-up if the discussions required stronger focus, though this requirement did not materialize.

Data Collection – Data was collected by using a mixture of real-time electronic data capture projected to the group and through notes taken by the HFM-160 TG attendees.

9.1.4 Key Points and Recommendations

This section reports the key points made by the workshop attendees. Key points are not cited to individual contributors. The points have been separated into broad categories for ease of interpretation. This section does not provide any analysis in terms of the validity or suitability for implementation of these points and recommendations.

9.1.5 Guidelines

Baseline Data – There is a requirement to have baseline data but it is not clear how this can be collected before there is a requirement for it as part of an MOE process. In other words, this is, practically speaking, a bit inconsistent: you have to collect data before you actually know what you need to collect. There are options to create baselines post hoc by, for example, asking survey respondents to evaluate changes in their lives over a period of time (e.g. "Do you feel safer now than three months ago?"). Note, though, that this method is not foolproof and is fraught with methodological and internal validity concerns.

Relationship between Effects, Indicators and Objectives –It was suggested that the TG should include the following within the guidelines:

1) The definitions of Effects, Indicators and Objectives.
2) A clear view on the hierarchy and relationship between these elements and where each element occurs within the guidelines.

Creating Specific Indicators from Vaguely Expressed Effects – There is a challenge to express specific indicators when desired effects are expressed abstractly. This was demonstrated particularly when looking at the deter effect in the scenario.

Data Collection / Analysis Technique Matrix – A matrix was proposed with data collection methods on one axis, analysis techniques on the other and conditions (resources, time scales, pros and cons) in the cells. The precise specification or utility of this was not explored.

9.1.6 Indicators

Requirement for Operationalization of MOE Indicators – The group identified the importance of including the operationalization in terms of, among other things, contextual information when expressing indicators. This includes defining timings, geographical locations and limits, and specific people or groups of people related to each indicator. This would avoid vague indicators that cannot be assessed because the limits and scale of their application are unclear.

Requirement to Understand the "Norms" for Each Indicator – It was suggested that in order to understand the change experienced in indicators it was vital to understand the "norms" or normal parameters for each indicator. This would help establish key changes over time, and particularly "the absence of the normal and the presence of the abnormal". A key element here is to provide the cultural context for the impact indicators, that is provide information to help choose and interpret the impact indicators in a culturally relevant context.

Use of Scales for Indicators – It was suggested that indicators should have assigned scales, normally defined by an SME or the commander. It may be possible to make approximate quantification of qualitative data to use on a scale. MOE involves some form of change so even if you do not know the absolute baseline you can give an indication of directional change. A scale, in an ideal world, is expressed on an interval or ratio level. However, in the real world, which is far from ideal, it may not be possible to define a scale which reflects more than an improvement or deterioration in a particular situation or variable (ordinal level).

9.1.7 Data Collection Matrix

Requirement to Clarify Subject-Matter Expert (SME) Consultation in the Data Collection Matrix – It should be made clearer whether the SME is within theater or out of theater and whether this affects the description and SWOT analysis for this data collection method. It should also be noted that SMEs may be limited in number and have their own biases. Ideally more than one SME would be used.

The Importance of Mixed Methods – The group underlined the requirement of having more than one type of datum in order to do MOE. It was implied that the data collection matrix should reflect the importance of undertaking mixed data collection approaches.

Acknowledgement of Patrol Reports as a Data Collection Method – The use of data from patrol reports should be made explicit within the data collection matrix. It was identified that patrols should be briefed on data capture requirements before they go on patrol as they may not provide quality data if they are not pre-briefed. Patrols could also be given pre-determined formats outlining different behaviors that the patrol then tallies based on their observations.

Application of Data Collection Matrix in Training and in Theatre – It was identified that the data collection matrix in its current form would be valuable for training "top level" environments but would have a lesser impact within theater due to its format and style. For in-theater use there is a requirement for a shorter, Tactical Aide Mémoire-style format.

Identification of Local Experts for Data Collection – The matrix would benefit from inclusion of information on who may be a local expert on the choice and application of data collection methods.

Inclusion of Resource Requirements and Contextual Constraints – It was strongly felt that the matrix should give a sense of the resources required for each of the data collection methods, in terms of scale of

resource and training/capabilities. This would also include the time it takes to develop a sufficient database of data, that it, how many data points are required to be able to draw reasonable conclusions. It was also strongly felt that the contextual constraints for application of each method (e.g. certain methods may be possible only in permissive environments) should be made clearer. A related point is that the choice of method depends on how fast the results are needed and who is asking for the data.

Inclusion of Guidance on Reliability, Validity and Bias – This guidance was felt to be vital to prevent inappropriate use of data. Such guidance could be broken down by qualitative and quantitative data. Guidance on expressing confidence levels attached to MOE assessment is required.

Interviewing Detainees – Data collected from detainees may be a source of useful data for MOE assessment. As a method this is heavily bound by legal constraints which should be reflected if this is added to the data collection matrix.

Use of the Local Population as a Proxy for the Adversary – The collection of data on adversary attitudes is highly problematic but opinions expressed by the local population may be a suitable proxy. Collecting such data from the local population is constrained legally in relation to the level of training for those collecting data from certain sources.

Direct Feedback – There are examples where direct feedback may be achieved from a PSYOPS target audience by using technology, for example, SMS messages in response to radio broadcasts.

Use of Interpreters and Translators – Data collection is often done using interpreters and translators in some capacity. Issues surrounding the use of such resources are important in relation to the reliability and validity of the data collected. These issues include consistency, male versus female personnel, the role of interpretation alongside translation, use of more than one interpreter in order to mitigate bias and the ethnicity/social status of the translator or interpreter.

Non-Representative Samples in Face-to-Face Encounters – A key weakness of face-to-face encounters is that data collection can rarely be based on a representative sample of people.

Training for Face-to-Face Encounters – These are generally not spontaneous but the person collecting data needs some training in order to collect and report the correct type of data in the best way.

Interviews – Many interviews will be part-structured and part-unstructured. Unstructured interviewing may require a higher level of training than structured interviews. The choice of whether to do structured or unstructured will likely depend on the culture of the people being interviewed, that is, their likely response to taking part in either a structured or an unstructured interview. There is also a requirement for a significant number of interviews to take place in order to get reliable data.

Focus Groups – There is a risk that any focus group may get broken up by local authorities and/or be perceived as a security risk as it is a gathering of people. The use of focus groups by commercial organizations also tends to be for product testing and exploration rather than assessment of past products/issues.

Tallies – A key weakness of tallies is that the data that could be used may have been collected by highly classified assets, limiting the use of such data.

Participant Observation – There are different levels of detail and reliability of these data, ranging from anthropologists (who are immersed in a culture for lengthy periods and gain deep insights of that culture) to experts in Human Terrain Teams who have functional but less detailed knowledge) to brief observations made by non-experts, e.g. soldiers on patrol visiting a village.

Specific Techniques Not Included – The data collection matrix does not currently include word association or associative network techniques, though the skill set and level of guidance required for undertaking these may preclude them from inclusion.

9.1.8 Operational Context

Gaining Resources for Data Collection – Gaining support to obtain the resources necessary for data collection given the resources it requires is a significant challenge.

Provision of an Education Piece on MOPs and MOE – The likely end-user would benefit from a succinct piece that describes the difference between MOPs and MOE and outlines the importance of moving from MOP to MOE assessment.

Presentation of MOE Assessment – The presentation of MOE assessment is vital and guidance on best practice would be welcome. It is important to remember that "you are not presenting the data, you are presenting the results". Methods include showing trends, bandwidths (i.e. between x and y), thresholds (e.g. above x) and providing subjective, qualitative narratives. Expressions of validity and reliability are also important here. It is likely that the commander / other audience for the MOE assessment will set the threshold/target for the MOE assessment.

Assessment of Kinetic MOE – The scales and indicators used for MOE related to kinetic activity may usefully advise the TG's work. It was recommended that the TG access current NATO work on campaign assessment.

9.1.9 Presentation of TG's Products

Single Document with Annexes and One-Pagers – It was recommended that the TG's output should be a single document with annexes for different audiences. This would prevent the duplication and overlap from tailoring a number of different documents to different audiences. The product should include one-page summaries of key information to ensure greater use within theater.

Simplicity and Use of Case Studies – The group promoted a simple, easy-to-use product, possibly using web-based technology to provide a web style structure to our products. Products should (where useful) provide case studies to show how the guidelines can be applied, though it was recognized that such use of case studies could constrain the use of relevant approaches outside of the contexts described in the cases studies provided.

Provision of Templates – Personnel in theater would make good use of any templates that can be provided by the TG. Such templates would decrease the time it takes such personnel to decide on reporting formats.

9.1.10 Conclusion

The ARW I workshop was highly valued by the TG members as a means of collecting good quality data from the attendees. The prepared scenario was used for the first part of the workshop but the facilitated sessions relied less and less on it to structure feedback during the workshop. Despite a lower than expected reliance, the TG felt that a scenario-based approach was useful for demonstrating the guidelines and data collection matrix. Such an approach was therefore planned to be used for the Technical Course. The TG also concluded that this ARW was well timed in relation to the group's development as it came at a time of sufficient maturity to gain solid feedback to direct the TG's development.

9.2 ARW II – TORONTO, CANADA

9.2.1 Background

Following the first successful Advanced Research Workshop (ARW I), a second, smaller-scale, workshop was held during the Toronto meeting in September 2009. ARW I provided an abundance of feedback to the RTG team from PSYOPS practitioners and researchers. In many places it provided a confirmation of the utility of the materials and approach to PSYOPS/Influence Ops MOE promoted by HFM-160. In others, it provided useful guidance on improvements and changes that might be made to increase the potential benefits of the HFM-160 products and the materials under development for the Technical Course. Much work was undertaken in the spring and summer of 2009 to update the materials in time for ARW II.

9.2.2 ARW II Aims

Whereas ARW I was conceived as an interim workshop intended to provide early feedback from experts and practitioners, ARW II was designed as a demonstration of maturing products with a specific emphasis on the use of those products within the planned Technical Courses (HFM-183). Nevertheless, the broad aims of ARW II were similar to ARW I in that the workshop was intended to:

1) Generate feedback on the materials from an audience with practical experience of PSYOPS missions. In particular, the RTG was interested in an assessment of the potential training value of the materials. In addition, participants were asked to consider the extent to which the materials might be exploited in ways that had not been anticipated by the RTG, for example within doctrine.
2) Provide an improved understanding of the operational context in which the RTG's materials will ultimately be used to enable an appreciation of the "real-world" constraints placed on influence practitioners. A key question that was posed was the extent to which the materials generated by the RTG would have real value for deployed influence operators such as PSYOPS personnel.

9.2.3 Attendance

Six members of the Canadian Forces agreed to attend ARW II as participants. Five had recent operational experience in influence roles as part of Task Force Kandahar. Three participants (Cpl, MCpl, and MWO) had operated in tactical PSYOPS teams. Two participants (both Majors) had posts in PSYOPS capability generation and PSYOPS force generation. The last participant (LCol) had recently returned from a senior role in Key Leader Engagement *(*KLE). Several of the participants had substantial experience of training PSYOPS personnel for deployments. Two had been authors of the Canadian PSYOPS doctrine. None of the participants had taken part in ARW I or interacted with RTG-160 in the past. Four of the participants were stationed in Toronto. Two travelled from Montreal for the day.

9.2.4 Format of the Workshop

Program: The workshop was based around presentations by members of HFM-160. In contrast to ARW I, participants were not required to undertake the scenario exercises designed for the Technical Course. Rather they were asked to provide feedback on the materials that were presented to them, giving particular consideration to their use in the upcoming Technical Courses. The following briefings were provided:

- *Introduction:*
  - NATO RTO.
  - HFM-160 – goals, products.
  - Aims of ARW II.
- *Products:*
  - Guidelines.

- Data collection matrix.
- Effects specification table.
- Technical course.
- Scenarios and exercises.

The workshop was conducted in a relatively informal manner, with participants invited to provide feedback both during and after presentations. Their feedback was captured by the HFM-160 team.

Duration: Since participants were not required to actually undertake the exercises, as had been the case in ARW I, the workshop was scheduled to run for only half a day.

9.2.5 Key Points and Recommendations

9.2.5.1 HFM-160 Products

A participant, with a background in the communications industry, agreed with the suggestion, made during the guidelines presentation, that current PSYOPS practice does not deal at all well with the issue of *effectiveness* (defined by our Task Group as the extent to which an observed change can be attributed causally to an activity). He noted that in commercial practice there was a tendency to attribute good sales figures to the advertising intervention, but to explain poor sales in terms of other factors, outside of their control.

Participants with tactical PSYOPS experience were very keen to emphasize the requirement for data collection techniques to be kept quick and simple to administer, owing to time pressure and security concerns. It was pointed out that they might only have 15 minutes to collect some information and that this could be within the constraints of a foot patrol in a village following an operation.

Participants with some experience in trying to measure effects on operations, strongly agreed with the TG's recommendation for the collection of baseline data before PSYOPS activities were undertaken. One participant went further and suggested that there is a need for a standard set of indicators that can be collected from day one of an operation with a view to tracking changes.

The practitioners agreed that there should be more consideration given to how to report the results of PSYOPS activities and the analysis of the data collected for effects assessment. It was proposed that it is desirable to present a simple scale with criterion success measures to evaluate the extent to which an intervention or interventions were achieving the desired effects.

The importance of writing short, effective, patrol reports was stressed; although it was also noted that the emphasis should be on personnel getting out and "influencing" not spending time in report preparation.

There was agreement that influence practitioners need to be aware of the unanticipated effects of their interventions. It was suggested that perhaps the effects matrix might draw the distinction between undesirable higher order effects and unintended, yet desirable, effects.

One participant felt strongly that influence practitioners require an improved "anthropological understanding" of their target audiences. This would clearly have benefits for influence activities in general, but would be a critical contributor to effects assessment owing to the need to appreciate the cultural context and implications of observed change in foreign environments.

There was agreement that a database detailing previous effective operations would be an asset. This should necessarily include advice on successful efforts to assess effects and effectiveness. In relation to this point, it was also noted that one reason for undertaking assessments of effects and effectiveness was to enable

commanders to judge where best to invest effort, that is, to decide which PSYOPS activities are worth the investment of scarce resources and which should not be undertaken.

One participant expressed the opinion that influence practitioners need to have an improved appreciation of the relationship between attitudes and behavior. It was felt that it is important that influencers do not fall into the trap of assuming espoused attitudes are a strong predictor of future behavior.

9.2.5.2 Technical Course HFM-183

There was agreement that a pre-reading package would be useful to Technical Course participants and students in any subsequent training course.

It was suggested that more emphasis might be placed upon the very different challenges presented by effects assessment within a non-permissive environment compared to a permissive environment. In this regard, it was noted that this factor entirely dictates the dissemination plan, and clearly will have a similar impact upon the ways in which data can be collected later on to underpin effects assessment.

Further to the previous point, it was observed that there needs to be an improved understanding of the "social psychology" of non-permissive environments to enable influence practitioners (and others) to have an appreciation of how to operate in such circumstances and what effects such an environment has on ordinary people and their behavior.

One suggestion was that we might aim to teach Technical Course participants best-practice by demonstrating "how not to do it". In this regard, it was suggested that it would be useful to show participants how one would go about introducing bias and error into an MOE assessment as if that were the aim. There was agreement that this would be facilitated by some information on "typical mistakes to avoid".

One participant felt that RTG-160 should aim to practice what it preaches and to assess the effects and effectiveness of our Technical Course rather than simply our performance in delivering three courses!

9.2.6 Conclusion

Following ARW I in Farnborough, ARW II provided an extremely valuable opportunity for the RTG members to expose their materials and general philosophy for MOE to an audience of influence professionals. This was all the more important since the group's organic PSYOPS practitioner experts (Nathalie Ketelslegers and Alexander Schilling) were both unable to attend the Toronto meeting. The CF influence personnel who attended engaged very effectively with the group and provided a high standard of constructive feedback that contributed substantially to the final products that were used at the HFM-183 Technical Courses in early 2010.

More generally, we took a number of the recommendations described above into account during subsequent work in the TG, such as making an explicit distinction between MOP and MOE in Chapter 2 of the present report, and including exercises in both permissive and non-permissive environments in the Technical Course. However, we were unable to address a number of these recommendations due to limitations of time and resources. For this reason, we did not address issues such as how to present our work in a compact format suitable for personnel in theater, nor were we able to develop an extensive pre-reading package for TC participants. Some of these issues could be taken up in work subsequent to this Task Group.

Chapter 10 – HFM-183: THE TECHNICAL COURSE

As a final activity of HFM-160, we developed a two-day Technical Course, in which the goal was to teach participants about our approach to MOE. The TC, HFM-183, was entitled "Measuring the Effects of Influence Operations on Attitudes and Behavior".

As each situation, in which the effect or effectiveness is to be measured, is unique, it is not possible to construct a 'list' of MOE strategies or do's and don'ts. As a result, in order to effectively conduct MOE, one must understand the process from key concept operationalization to interpretation of results to communication and presentation of those results. Clearly, it is impossible to become an MOE expert after two days of training. As a result, in the TC we aimed to improve participants' understanding of the complexity of the process and how to embed MOE in operations, be they PSYOPS or otherwise. By implementing knowledge and support tools from the TC in operations, participants' ability to design and conduct MOE will improve. With it, NATO's ability to successfully assess operations' effects and effectiveness on attitudes and behavior will also advance.

The TCs were held in Western Europe (Brussels, Belgium) from 10-11 February 2010; North America (Dayton, Ohio, USA) from 10-11 March 2010; and Eastern Europe (Izmir, Turkey) from 23-24 March 2010. Table 10-1 below shows which HFM-160 members were present at the various TCs. All HFM-160 members were present at the first TC in Brussels, though only four were 'formal' lecturers. At each of the remaining two TCs, four HFM-160 members were present.

Table 10-1: Task Group Members Present at the TCs.

TC Location	Lecturer
Brussels	Heather Griffioen (TC Director) Inge Wetzer (Lecturer) Keith Stewart (Lecturer) Erik Wetter (Lecturer) Nathalie Ketelslegers (Local coordinator) Stephanie Swindler Alexander Schilling Mike Dobson
Dayton, Ohio	Stephanie Swindler (Lecturer; local coordinator) Keith Stewart (Lecturer) Mike Dobson (Lecturer) Alexander Schilling (Lecturer)
Izmir	Heather Griffioen (TC Director) Inge Wetzer (Lecturer) Erik Wetter (Lecturer) Nathalie Ketelslegers (Lecturer)

The program for the TC involved a combination of briefings, group and sub-group discussions, and sub-group exercises. Details of the program are provided in Chapter 6. Here, we provide a short overview.

On Day 1, the goal was:

- To help participants become aware of the complexities of MOE.
- To define the key concepts.
- To brief participants on the HFM-160 approach in the form of the guidelines presented in this Report in Chapter 2.
- For the participants to complete Exercise 1 on how to measure the effect(iveness) of PSYOPS meant to reassure the local population after an IED attack (see Chapter 8 for the materials for Exercises 1 and 2).

The morning of Day 2 was devoted to Exercise 2, which was similar to Exercise 1, except that the goal of the operation was to assess the effect(iveness) of activities intended to deter rebel forces. For Exercise 2, we also provided participants with the Data Collection Methods Matrix (Chapter 3). In the case of the Izmir TC, the sub-groups also received restrictions regarding, for example, the availability of key personnel, in order to make the exercise a bit more challenging. The afternoon of Day 2 looked at the presentation and communication of results, with a briefing on different ways to present results. This was followed by Exercise 3, in which sub-groups were given a fictitious dataset and asked to make a presentation of the data and subsequently brief a Commanding Officer. The CO was played by either one of the TG members or, in the case of Izmir, one of the Lieutenant Colonels who participated in the course.

We will now briefly report on each of the TCs individually.

10.1 BRUSSELS, BELGIUM

The Brussels TC was held at the Prince Albert Club. Nine participants attended, with backgrounds varying from operational experience in PSYOPS to a scientist working on how to do empirical measurements in the field. The group was quite international, with participants hailing from the Netherlands, Belgium, UK, France, the Czech Republic, Norway and Germany.

Overall, we felt that the course went well, though there was no formal evaluation. Initially, it was difficult to engage the group in discussion, but as the course progressed, they became more actively involved. The participants found the exercises challenging, though achievable; the TG members also observed a definite improvement in the participants' skills from Exercise 1 to Exercise 2.

At the end of Day 2, we had a formal feedback round in which participants could offer suggestions of how to improve the TC. Seven suggestions were made. These are listed below, together with our response:

1) One participant suggested omitting Exercise 2, as he found it repetitive. Another participant said that she did not share that opinion, though, and found the second exercise useful. We decided to keep it in the program.
2) Exercise 2 was good, but should be more explicitly different from Exercise 1. Exercise 1 is more geared towards the effectiveness of products, whereas Exercise 2 is focused on how to assess the effect of Influence Operations in general. We agree that the individual exercises should be more explicitly framed, and we changed the instructions for the exercises accordingly.
3) We were advised to present the definitions more formally. We decided to follow the briefing of the guidelines with a summary of the guidelines and key concept definitions before participants start on the first exercise.
4) A number of participants said they would have found it useful if we had distributed preparatory information before the start of the course. We concur that this would be a good idea (it had also been mentioned in ARW I), but as we did not have such information available due to constraints on resources, we decided not to do this.

5) Participants reported that they found the information on Maricha used in Exercises 1 and 2 too extensive with too much extraneous information. In response, we slimmed down the Maricha information package and removed much information that was not essential for the exercise.

6) Participants reported that they found that some of the elements of the program had misleading names. For example, in the morning of Day 1, one activity was called Characteristics of MOE, which in practice referred to a sub-group discussion on what participants thought MOE is. Participants, however, expected a briefing on what characteristics MOE should have. We addressed this by changing the names of some of the activities in the program.

7) Participants noted that they missed more context of the background/history of HFM-160. We added this to the program by describing the TG in more detail and communicating that in the TC we will lead the participants through our process so that they can learn our approach to MOE. We did not develop a presentation on this specifically, but rather included it verbally in the introduction on Day 1.

In sum, the most important changes we made to the program were:

1) In terms of framing the course, we felt that participants came with expectations of receiving a cut-and-dried overview of MOE: a list of MOE strategies or perhaps definitive characteristics of good MOE. Given the inherent nature of operations and MOE to assess them, however, this is impossible. In the following two TCs, we therefore spent considerable effort on expectation management. That is, making clear to participants that there is no silver bullet, but that the key to better MOE is a better understanding of the process and that we have developed an approach to this process, which we will impart to them in the course.

2) In Exercise 1, we originally meant for participants to try to develop the MOE on their own, so that they can experience the hurdles first hand. From the first TC, however, we realized that this was not realistic and that participants would get more out of the exercise if they were given more help. As a result, we explicitly summed up the steps they should take and the definitions of key concepts to help them along.

3) We restructured the materials for Exercises 1 and 2 by presenting a shorter background information package and presenting the materials in a more logical structure (e.g. including the commander's intent with the instructions and effects table separately for each exercise).

4) We developed 'solutions' for Exercises 1 and 2. There is no, single correct solution for these exercises. However, we found that participants had a need for more direction and some sort of standard in order to better learn from the exercises. In Brussels, we developed a quick ad hoc solution to Exercise 1, which we used as a basis for solutions used in Dayton and Izmir.

Overall, the participants had the most difficultly with understanding the key concepts, specifically what is effectiveness (= the degree to which your activities were responsible for changes in the impact indicators) and how to isolate this from 1) the effect and 2) change in general (many participants indicated they would measure effectiveness by looking at 'change'. But what exactly would need to change to draw conclusions about their activities remained difficult to identify). That these aspects were considered the most difficult is not surprising, as these were elements that were most difficult for the Task Group as well.

10.2 DAYTON, OHIO, USA

The Technical Course in Dayton was held at Tec^Edge, which is a modern conference facility with leading-edge technology and classrooms set up to facilitate collaboration and learning. It was the largest Technical Course held with 22 participants in attendance. The majority of attendees were from the National Air & Space Intelligence Center (NASIC). Other participants were from the Air Force Research Laboratory (AFRL), and there was a mix of military and civilian participants. The course went well and a

lot of feedback was received. (However, course evaluation forms were not handed out because the team members forgot to do so before all the participants left.) The feedback was both positive and negative. Some of the positive comments included, '…the level of discussions were very, very good throughout the course;' 'the exercises were good and sharing among the groups to hear how others applied the information was useful'. Also, a flight chief who sent the majority of his group to the course responded with, 'this training was a great success from my point of view!! We got two days of training on IO and different perspectives'.

Some of the constructive feedback included, 'the first day was somewhat slow and at a basic level for us;' 'should have focused on the importance of the graphical representation rather than the brief itself [referencing the Communication exercise];' 'I think that more course time should have used to focus on techniques you mention in your course theme rather than the PEs [exercises]'. Other feedback included, 'another possible dimension [need] is the complexity of working in a joint environment like NATO;' 'create a classification level to give real-world examples;' 'step through the process [exercise table] then give them a scenario'.

Overall the Technical Course held in Dayton, OH, was a success. The adjustments that were made after the Brussels course seemed to be effective for the Dayton course. Throughout the two days, participants were engrossed in the course and learned a lot from the material and the exercises.

10.3 IZMIR, TURKEY

The Technical Course in Izmir was held at the Izmir Hilton Hotel. There were 14 participants from seven countries: Turkey, US, Germany, Italy, Greece, Norway and Romania. Their backgrounds were more heavily military than in the other two TCs: all but three participants were active military. Consequently, they were more familiar with certain aspects of the TC, such as how to brief a Commanding Officer, than other participants.

No significant changes were made to the course material for the Izmir TC, in comparison to the Dayton TC. Though we did sharpen the definitions a bit after the Izmir TC in order to overcome a few remaining unclear points. These revised definitions are the ones used in this final report.

As noted after the Brussels TC, providing more explicit information on the steps in the MOE process before Exercise 1 was helpful: the sub-groups completed Exercise 1 quite successfully. For Exercise 2, we gave participants restrictions in order to make the exercise extra challenging. These restrictions included, for example, that the cultural advisor had left theater or that the task force has a negative image.

This TC was formally evaluated, and the forms were sent to the RTA. The evaluations were generally very positive, though there were a couple of critical notes. Specifically, one participant noted that they thought the briefings did not go deep enough into the material. Another participant felt that a briefing on how to give a briefing was unnecessary. Finally, a participant found the course too short and thought that an extra day would have been beneficial. In terms of overall evaluation, one participant rated the course as 'good'. All other participants rated the course as 'very good' or 'excellent'.

As mentioned earlier, expectation management was an issue. Though we tried to address this problem early in the TCs, we found that it was difficult to overcome; the idea that there should be some objective overview of good MOE or explicit do's and don'ts was difficult to eradicate.

Nevertheless, we feel that we were successful in impressing upon the participants that MOE are difficult, complex and subjective…but not impossible. Most participants left the course with a basic understanding of the MOE process and the steps involved in understanding what you need to do to ascertain both the effect and effectiveness of your actions.

Chapter 11 – SUMMARY OF ACCOMPLISHMENTS

Over the course of the period 2007-2010, the HFM-160/183 Task Group successfully developed a useful and well-founded approach to MOE. The regular meetings of the Task Group, the combination of various expertise, elaborate discussions, the combination of insights and best practices from various countries, and last but not least feedback from the military environment led to a series of accomplishments. A summary of these accomplishments demonstrates the breadth of their scope and the Task Group's – our – ability to disseminate our viewpoint and materials to people in the military environment who will benefit from this work.

In short, as described in detail in the introduction of this report, the importance of conducting MOE is recognized by NATO (AJP-3.10.1). However, the doctrine does not elaborate on *how* this should be done; it expresses the importance of determining the effects of activities, but it does not guide people in doing so. We focused on this gap and developed various important insights, resulting in a new approach to MOE, supported by useful products. We disseminated this knowledge through advanced research workshops and Technical Courses.

One of our main accomplishments is the development of insights into the complicated and complex topic of MOE through elaborate discussions involving a variety of countries. We concluded that ***problem definition*** is crucial for successful MOE. In contrast to the ad-hoc approach that many countries have adopted in the past, the approach we developed provides advice on a carefully considered start to measuring effectiveness. We pointed out that, in the first place, people need to define their problem very carefully: What is it exactly you want to know? This means that the broad aim (e.g. 'Reassure') should be expanded into concrete measurable concepts. Besides the realization of this important point, our approach offers guidance in carrying out this difficult translation. During our meetings, we defined the different steps we believe people should follow in order to conduct proper measurements of effectiveness. One of the most important contributions in this respect is that we provided definitions of the various relevant concepts (such as effect, effectiveness, and MOE) upon which the six NATO-countries represented in HFM-160/183 agreed.

In addition to clearly defining the desired effect, one should specify how will this be measured (what kind of data will you need and how are these to be collected), and how will these data be analyzed. In order to support this difficult process, we developed a ***general framework*** – an approach including guidelines – for how to conduct MOE.

Another contribution of our Task Group is that we address the question of how to acquire the data necessary to make statements about effects and effectiveness of an operation. This resulted in an inventory of different methods appropriate for data collection for MOE, on which we conducted a SWOT-analysis. The resulting ***Data Collection Methods Matrix***, the first Task Group deliverable, provides an overview of the data collection methods that were identified by the Task Group and the accompanying SWOT-analysis for each of these methods (see Chapter 3).

In addition, we delivered an ***Effects Specifications Table*** which provides a guide for people who want to conduct MOE by presenting a top-down approach to MOE. The table helps break down which activity would be most suited to achieving a desired effect. This is a very practical contribution, as it assists people in the military environment in carefully considering the different steps needed to assess or evaluate changes in attitudes and behavior (see Chapters 2 and 8).

Other accomplishments are two ***Advanced Research Workshops*** (ARWs) and a series of three ***Technical Courses*** (TCs; HFM-183). In these workshops and Technical Courses, our insights and products were disseminated to a broad audience, including operational practitioners (planners), operational analysts,

and researchers who support operations. We thus not only developed theoretical insights, but also conveyed to others the complexity of MOE of attitudes and behaviors and how to embed them in operations.

In sum, the approach to the complex task of measuring the effects and the effectiveness of military operations, developed in HFM-160 and HFM-183, significantly contributes to a better understanding and execution of these activities.

11.1 RECOMMENDATIONS

Clearly, there is still work that needs to be done, not the least of which involves structurally embedding the approach in doctrine and transferring the knowledge to the field so that it is actually applied. These are the next steps to realizing a significant advancement in the area of MOE and as a result improved military operations.

Specifically, we have five recommendations for improving the dissemination of knowledge about MOE and the implementation of MOE in theater:

1) Develop a NATO MOE knowledge database. This should include best practice (both classified and unclassified) and effective key indicators.
2) Develop a separate MOE appendix for AJP 3.10.1. We recommend that this appendix be based on our approach and describe the steps needed to develop, implement and evaluate MOE.
3) Improve knowledge of attitudes and behaviors of local populations both on mission in by reach-back. This links with a more extensive anthropological/cultural analysis of the local population. Improved cultural analysis will make possible the improved identification of suitable impact indictors for the various target audiences.
4) We recommend that NATO School training on developing, implementing and evaluating MOE be better embedded into the standard curriculum for planners and others involved in the operationalization of EBAO.
5) Link up with relevant working groups, such as the NATO PSYOPS.

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14. Abstract

In HFM-160 we endeavored to develop an approach to assessing the effectiveness of military activities and operations designed to change attitudes and behaviors. Up until now, though these activities are frequently undertaken, there is no method to systematically evaluate if and how they aid in reaching operational goals. Odd, considering that the NATO PSYOPS doctrine (AJP 3.10.1) specifically states that MOE should be conducted to evaluate the outcome of PSYOPS activities. We designed our approach for operational and tactical levels working with, commissioning, developing or interpreting MOE for any type of influence activity. Readers should gain an understanding of the complexity of attitudinal and behavioral MOE, the basics of how to embed MOE in operations and of how to develop MOE such that it yields the desired – or at least useful – information. Our stepwise approach includes the following seven steps: 1) Define the effects you want to achieve; 2) Define impact indicators for each effect, which are measurable concepts that indicate attitudinal and behavioral change; 3) Define thresholds, which explicitly identify the level of change necessary to conclude that you have been successful; 4) Specify data collection methods; 5) Specify suitable data analysis techniques; 6) Specify which activities you are going to undertake in order to achieve the desired effects (interventions); and 7) Define separately indicators of effectiveness, to determine the degree to which *your actions* led to changes in the impact indicators.

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