NORTH ATLANTIC TREATY ORGANISATION

RESEARCH AND TECHNOLOGY ORGANISATION

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RTO TECHNICAL REPORT **TR-SAS-027**

Handbook on the Analysis of Smaller-Scale Contingency Operations in Long Term Defence Planning

(Manuel de l'analyse des opérations de circonstance de moindre échelle pour la planification de la défense à long terme)

Report prepared by the RTO Studies, Analysis and Simulation Panel (SAS).

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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 Studies, Analysis and Simulation 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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Handbook on the Analysis of Smaller-Scale Contingency Operations in Long Term Defence Planning

(RTO-TR-SAS-027)

Executive Summary

Purpose of this Handbook

The purpose of this handbook is to complement the work done on Long Term Defence Planning (LTDP) by SAS-025. The handbook focus is on the LTDP process applicable to smaller-scale contingency (SSC) operations across the NATO community. This is achieved by making available principles pertinent to analysis of SSC in a LTDP context. In addition to serving as a guide, the handbook also serves as a common framework that is meant to facilitate communication about LTDP issues within the alliance and its members. It may also facilitate the communication between the planners and the decision maker.

Smaller-Scale Contingency Operations (SSC)

SSCs generally fall between routine peacetime engagement activities and major theatre war (MTW), and typically involve international intervention in an affected nation. Usually these interventions – that may or may not involve military forces – are complex emergencies involving both a civil conflict and humanitarian crisis, and require multi-dimensional application of resources to restore order. The military forces are typically in a supporting role and it is important that the military objectives support the achievement of the political objectives.

What is perhaps more important is to recognise the new challenges that SSC operations pose to analysis when compared to more traditional analysis of MTWs. An MTW is characterised as a high density, high intensity war-fighting operation involving 100,000 or more personnel with the potential to generate significant casualties. In contrast in a SSC there may be many more independent actors, the aims of the actors are unlikely to be achieved through military means alone, the aims of all the actors may not be well understood, and the social factors may have a significant role.

Long Term Defence Planning (LTDP)

Long Term Defence Planning deals with shaping tomorrows defence forces for an alliance or a nation. Given the significant period it takes to implement a new force structure, partly due to the lengthy development and acquisition times for military equipment, LTDP usually focuses on issues ten to thirty years into the future. LTDP is very important since it will shape the future capability of nations' defence forces. Yet, faced with limited defence budgets, difficult to define threats and the complexities of planning in an alliance, LTDP professionals find themselves confronting a particularly challenging situation today.

Scenario-Based Planning

Scenario based planning is an essential aspect of LTDP. It is highly correlated with a well developed and influential LTDP process. Scenarios form the link from a general national security policy to cost-effective force structure development. In the current security environment no single scenario is likely to be broad enough to cover all eventualities and security interests, thus a portfolio of scenarios is needed.

Analytical Framework

SAS-025 identified an analytical framework for the long-term defence planning process. Analysis of Smaller-scale Contingencies is an integral part of this process, but raises a number of difficult issues. This framework is equally applicable to broad force structure analysis and to detailed equipment balance of investment analysis although the focus of the analyses may be in different steps of the process.

Broad force structure analysis will involve the development of an appropriate set of scenarios representative of the nations defence policy and the anticipated security environment. The analysis will focus on the ability of alternative possible force structures to provide the forces necessary for a range of scenarios, including analysis of the impact of concurrent scenarios. The breadth of such analysis will generally not allow a detailed representation of equipment characteristics.

A detailed equipment balance of investment analysis will tend to focus on the performance of the equipment under scrutiny in each of the scenarios, with less focus on issues of concurrency, except as a method of evaluating performance of different equipment, or mixes of equipment, across a range of scenarios. Scenarios developed to support force structure analysis should be adopted for equipment balance of investment studies, rather than new scenarios being developed.

Measures of Merit (MoM)

Establishing an objective set of relevant metrics is crucial for any analysis of the capability of military forces to undertake a SSC operation but, due to their complexity, this can be problematic. There is no generally applicable set of MoMs for SSC operations, rather appropriate MoMs must be derived as part of the analysis. The SAS-026 Technical Team developed a useful hierarchical taxonomy for defining measures of merit (MoM) for analysis of command and control. These have been used as the basis for defining more broadly applicable taxonomy for use in the analysis of SSCs. Simplification is an essential step to defining appropriate MoMs.

The Role of Analytical Methods and Models within the Framework

The wide problem scope and the complexity of SSCs require a suite of analytical methods and tools. Traditional combat models do have core value in this respect, but in a number of cases they do not suit the problem well enough, so new methods and tools are required. A database of national model inventories has been developed to facilitate multinational knowledge exchange on methods and tools.

Data Issues

History is arguably the best single indicator of the types, frequencies, and durations of operations a nation might expect in the future. A database has been developed of SSC operations world-wide since 1990 as a data source to support LTDP analyses.

Recommendations

Analysis in support of long term defence planning should be undertaken in accordance with the analytical framework developed by SAS-025, and should be based on a broad portfolio of scenarios including MTW and SSC operations.

Manuel de l'analyse des opérations de circonstance de moindre échelle pour la planification de la défense à long terme

(RTO-TR-SAS-027)

Synthèse

Objectif du présent manuel

Ce manuel a pour objectif de compléter les travaux effectués sur la planification de défense à long terme (LTDP) par la SAS-025. Il privilégie le *processus* LTDP applicable à des opérations de circonstance de moindre échelle (SSC) dans tous les pays de l'OTAN. Il s'agit de l'examen de principes pertinents à l'analyse de SSC dans un contexte LTDP. Conçu non seulement comme guide, ce manuel doit servir également de cadre commun, permettant de faciliter les échanges concernant le processus LTDP au sein de l'Alliance et de ses pays membres. Il pourrait aussi faciliter la communication entre concepteurs et décideurs.

Opérations de circonstance de moindre échelle (SSC)

En général, les SSC se situent entre les activités d'engagement de routine du temps de paix et celles d'une grande guerre de théâtre (MTW). D'habitude, ces interventions – comportant ou non des forces militaires – constituent des états d'urgence complexes entraînant des conflits civils et des situations de crise humanitaire, qui nécessitent la mise en œuvre multidimensionnelle de moyens afin de rétablir l'ordre. Typiquement, les forces militaires jouent un rôle de soutien et, par conséquent, il importe que les objectifs militaires appuient la réalisation des objectifs politiques.

Ce qui est peut-être plus important, est de reconnaître les nouveaux défis posés à l'analyse par les opérations SSC, par rapport à l'analyse plus classique des MTW. Une MTW se caractérise comme une opération de guerre de haute densité et de haute intensité mettant en jeu 100,000 personnels, voire plus, et pouvant engendrer un très grand nombre de pertes. Par contre, un SSC peut faire intervenir beaucoup plus d'acteurs indépendants, dont il est peu vraisemblable que les objectifs ne soient réalisés que par des moyens militaires. En plus, il se peut que les objectifs de tous les acteurs ne soient pas bien compris et que les facteurs sociaux jouent un rôle important.

Comité sur la planification de la défense à long terme (LTDP)

La planification de la défense à long terme concerne la conception des forces de défense de demain d'une alliance ou d'un pays. Etant donné la période non négligeable demandée pour la mise en application d'une nouvelle structure de forces, ainsi que les délais d'acquisition du matériel militaire, habituellement, la LTDP examine des questions à horizon allant de dix à trente ans. La LTDP est très importante puisqu'elle va dicter les capacités futures des forces de défense nationales. Et pourtant, face à des budgets de défense limités, à des menaces qui sont difficiles à définir, ainsi qu'aux complexités du processus de planification au sein d'une alliance, les professionnels de la LTDP se trouvent confrontés aujourd'hui à une situation particulièrement difficile.

Planification à base de scénarios

La planification à base de scénarios est un aspect indispensable de la LTDP. Elle est en étroite corrélation avec un processus LTDP bien développé et influent. Les scénarios constituent le lien entre une politique générale de sécurité nationale et le développement d'une structure de forces rentable. Dans le contexte

actuel de la sécurité, il est peu vraisemblable qu'un seul scénario soit suffisamment complet pour couvrir toutes les éventualités et toutes les questions de sécurité, ce qui explique la nécessité d'un portefeuille de scénarios.

Cadre analytique

La SAS-025 a défini un cadre analytique pour le processus de planification de la défense à long terme. L'analyse des opérations de circonstance de moindre échelle fait partie intégrante de ce processus, mais elle soulève un certain nombre de difficultés. Ce cadre est applicable indifféremment à l'analyse générale d'une structure de forces comme à l'analyse détaillée de la balance des investissements en matériel, bien que le but précis des analyses puisse concerner les différentes étapes du processus.

L'analyse générale de la structure de forces nécessitera l'élaboration d'un jeu de scénarios appropriés, représentatifs des politiques de défense des différents pays membres et de l'environnement sécuritaire probable. L'analyse sera axée sur la capacité d'autres structures de forces éventuelles à mettre à disposition les forces nécessaires à l'exécution d'un éventail de solutions, y compris l'analyse de l'impact de scénarios concurrents. En général, l'étendue d'une telle analyse ne permet pas de fournir la représentation détaillée des caractéristiques du matériel.

Une analyse détaillée de la balance des investissements en matériel s'intéressera plutôt aux performances du matériel considéré dans chacun des scénarios, avec moins d'intérêt porté aux questions de concurrence, sauf en tant que méthode d'évaluation des performances de différents types de matériel, ou de combinaisons de matériel, dans un large éventail de scénarios. Il est recommandé d'adopter des scénarios élaborés pour le soutien de l'analyse de structures de forces, plutôt que d'en élaborer des nouveaux.

Mesures de mérite (MoM)

L'établissement d'un ensemble de paramètres objectifs valables, quoique capital pour l'analyse de la capacité des forces militaires à entreprendre une opération SSC, peut s'avérer problématique en raison de leur complexité. Il n'existe pas d'ensemble de MoM généralement applicable aux opérations SSC, d'où la nécessité d'en extrapoler de l'analyse réalisée. L'équipe technique SAS-026 a développé une taxinomie hiérarchique qui est intéressante pour la définition des mesures de mérite (MoM) servant à l'analyse du commandement et du contrôle. Ces MoM ont servi de base à la définition d'une taxinomie d'application plus générale, pour l'analyse des SSC. La simplification est une étape essentielle de la définition de MoM appropriées.

Rôle des modèles et méthodes analytiques au sein du cadre analytique

Le large spectre et la complexité des problèmes rencontrés lors des opérations SSC nécessitent de disposer d'un ensemble d'outils et de méthodes analytiques. Si les modèles de combat classiques présentent toujours un certain intérêt de ce point de vue, dans de nombreux cas ils s'avèrent plutôt inadaptés, d'où la nécessité de nouveaux outils et de nouvelles méthodes. Une base de données des inventaires de modèles nationaux a été créé afin de faciliter des échanges multinationaux sur les outils et les méthodes.

Les données

L'histoire est peut-être le meilleur indicateur des types, des durées et de la fréquence des opérations prévisibles à l'avenir pour un pays donné. Une base de données des opérations SSC dans le monde entier depuis 1990 a été créée en tant que source de données pour les analyses LTDP.

Recommandations

Il y a lieu d'effectuer des analyses pour le soutien de la planification de la défense à long terme à l'aide du cadre analytique élaboré par la SAS-025. Ces analyses doivent être basées sur un large portefeuille de scénarios incluant des opérations MTW et SSC.

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Preface

The post Cold War era has witnessed a proliferation of peace support operations, humanitarian operations, and a variety of other smaller-scale contingency operations. These have challenged NATO and others with heir frequency, complexity, intractability, and cost. Such operations are likely to remain a major task for the alliance and the international community for the next decade. More recently, the attacks of 11 September 2001 have highlighted the importance of operations to counter international terrorism.

The SAS-027 technical team was established by the NATO RTB under the SAS Panel in March 2000 to review current NATO and national planning experiences to devise a comprehensive approach that integrates those experiences in face of new planning challenges. The SAS-027 technical team has had an evolving membership with participation from Australia, Canada, France, Georgia, NC3A, the Netherlands, Norway, Sweden, Turkey, United Kingdom and USA.

This “Code of Best Practice” is meant to serve experienced analysts and decision makers involved in Long Term Defence Planning. We also hope this handbook will serve as first in a series of efforts to better link national Long Term Defence Planning communities within NATO and perhaps with others as well.

For SAS-027 Technical Team “Analysis of Smaller-Scale Contingencies”.
Richard Underwood
Team Leader

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Chapter 1 – INTRODUCTION

1.1 AIM

This document provides an overview of the current 'state of the art' in the analysis of smaller-scale contingencies. It is intended as a guide to operational analysts tasked with conducting such analysis in support of long term planning, whether force structure planning, analysis in support of equipment acquisition or other analysis of other issues such as the organisation of forces. The work has drawn heavily from the work done by the SAS-025 technical team on Analysis to Support Overall Long-Term Defence Planning.

The group did not consider the requirements for analysis directly to support operations (whether 'crisis' planning immediately prior to an operation or support to commanders during ongoing operations). While some of the issues and techniques are common there are sufficient differences to warrant separate consideration[1]. Analysis to support operations is therefore the subject of a separate SAS technical team (SAS-044 Support to CJTF[2] and Component Commanders).

1.2 WHAT IS A SMALLER-SCALE CONTINGENCY?

There is no clear definition of Smaller-scale Contingency. Indeed, the term itself is not universally recognised among the profusion of similar terms such as "non-warfighting", "low intensity operations", etc. SSCs generally fall between routine peacetime engagement activities and major theatre war (MTW), and typically involve international intervention in an affected nation. Usually these interventions – which may or may not involve military forces – are complex emergencies involving both a civil conflict and humanitarian crisis, and require multi-dimensional application of resources to restore order. Military forces are not always used in these operations and currently 18 of 34 ongoing UN recognised complex emergencies employ only civilian resources. For the purposes of SAS-027, we adopted the following working definition; however, it is not proposed as authoritative:

> *A Smaller-scale Contingency (SSC) is defined as an operation involving a coalition force initially deployed for up to six months and of no more than 100,000 personnel. The operation may continue at significantly reduced force levels for a longer duration.*
>
> *The emphasis is on the military contributions to operations whose primary objectives are diplomatic, humanitarian or other non-military outcomes. The military task will generally be to create and maintain a set of conditions within which a non-military goal can be achieved.*

[1] For example, when evaluating longer term force structure and equipment acquisition options, the comparison of alternatives is based on how well the military force performs its assigned tasks, independent of the mandate or the contribution of the other partners. Analysis in support of operations, on the other hand, must take these factors into account because the military force is only one of the many contributors responsible for the success of the operation.

[2] Combined Joint Task Force.

This definition therefore includes a broad spread of types of operations. NATO doctrine identifies 9 types of SSC[3] operations under two headings:

- NATO Agreed Tasks.
  - Peace Support Operations (PSO), which includes Peacekeeping (PK), Peace Enforcement (PE), as well as conflict prevention, peacemaking, peace building and humanitarian operations.
  - Humanitarian Operations (in non-PSO scenarios).
  - Search and Rescue Operations (SAR).
- Tasks Conducted Nationally, Bilaterally or Multinationally.
  - Counter-insurgency Operations (COIN).
  - Combating terrorism.
  - Non-combatant Evacuation Operations (NEOs).
  - Military aid/support to the Civil Authorities.
  - Counter drug.
  - Enforcement of sanctions.
- National doctrines[4] also recognise additional MOOTW tasks:
  - Arms control
  - Enforcing exclusion zones
  - Ensuring freedom of navigation and overflight
  - Maritime intercept operations
  - Nation assistance
  - Protection of shipping
  - Recovery operations
  - Show of force
  - Strikes and raids
  - Support to insurgency

The UN, NATO and national definitions of these MOOTW terms are displayed in Annex A in tabular form to facilitate side-by-side comparison, but a more comprehensive set of SSC terminology is provided in Annex B.

1.3 IMPORTANCE OF ANALYSING SSCs

The post Cold War era has witnessed a proliferation of peace support operations, humanitarian operations, and a variety of other smaller-scale contingency operations. These have challenged NATO and others with their frequency, complexity, intractability, and cost. Such operations are likely to remain a major task for the alliance and the international community for the next decade. More recently, the attacks of 11 September 2001 have highlighted the importance of operations to counter international terrorism.

[3] Under the term MOOTW; Allied Joint Operations Doctrine AJP-01.

[4] For example, U.S. Joint Pub 3-07.

Therefore, it is imperative to develop improved analytical tools, techniques, and approaches to help to achieve more efficient, effective, and economic SSC operations. Such improvements will also ensure that future alliance capabilities are better balanced to deal with emerging operational challenges without hindering warfighting (NATO Article V) capabilities.

1.4 BACKGROUND TO THE WORK OF THE SAS-027 TECHNICAL TEAM

At the November 1998 meeting of the Studies, Analysis and Simulation (SAS) Panel, the United States proposed that an exploratory group be formed to develop terms of reference for a technical team to address analytical and planning issues relating to smaller-scale contingencies. The SAS Panel approved the U.S. proposal and the exploratory team was established as SAS-E06. SAS-E06 met in conjunction with SAS-025 at Gran, Norway and Brussels, Belgium on 10 Jun 1999 and 4 Nov 1999 respectively. In March 2000 the Research and Technology Board (RTB) accepted the exploratory group proposal and formed the SAS-027 technical team. The first meeting was held in Washington DC in April 2000. Subsequent meetings were held in Istanbul (October 2000), Stockholm (April 2001), Den Haag (January 2002), Ottawa (March 2002) and Farnborough, UK (May 2002). Members of the group also participated at Cornwallis VII in March 2002. The work of the group was finally presented at a SAS Specialists' Meeting in Winchester, UK in October 2002. The group included representatives from UK (Chair), Australia, Canada, France, Georgia, Netherlands, Norway, Sweden, Turkey, US and NC3A. The participation of Georgia and Sweden was under the auspices of Partnership for Peace.

1.5 RELATED WORK GROUPS

As the focus of the SAS-027 technical team was analysis in support of long term planning, the framework for analysis developed by the SAS-025 group on Long Term Planning has been adopted.

SAS has sponsored a number of groups related to analysis of smaller-scale contingencies. SAS-026 (Analysis of the Military Effectiveness of Future C2 Concepts and Systems) has developed a code of best practice for analysis of C2 systems[5] that includes a great deal of general advice that is applicable to all analysis and will shortly publish a code of best practice for analysis of C2 systems in operations other than war. Also SAS recently established Technical Team SAS-044 to consider techniques for Decision Support for Joint Task Forces and Component Commanders.

The Cornwallis Group holds an annual symposium at the Pearson Peacekeeping Centre, Cornwallis, Nova Scotia, Canada, on analysis of peace support operations. The symposium proceedings represent a valuable resource for analysts working on SSC issues.

The Technical Co-operation Program (TTCP)[6] organised a workshop on MOEs in February 1999 that considered a number of SSC scenarios[7].

[5] RTO Technical Report 9, "Code of Best Practice (COPB) on the Assessment of C2", Produced by NATO RSG-19 (SAS002) AC/243 (Panel 7)TR/8.

[6] Australia, Canada, New Zealand, UK and US participate in TTCP.

[7] Proceedings from a Workshop Organised by Technical Panel JSA-TP-3 of The Technical Cooperation Program (TTCP) titled "Defining and Measuring Success in the New Strategic Environment" held in Ottawa, Canada, 2-5 Feb 1999.

Chapter 2 – THE NATURE OF SMALLER-SCALE CONTINGENCIES

2.1 THE POST-COLD WAR OPERATIONAL ENVIRONMENT

Today's security environment is no longer shaped by concerns over global war between two superpowers and their allies, but instead is based on the potential for major theatre wars (MTWs) and more frequent and wide ranging Smaller-Scale Contingencies (SSCs).

The global security environment is still dominated by the system of sovereign nation states, but the number has grown from 54 when the UN Charter was signed in 1945 to 190 today. In the past half century, the operating environment was relatively stable on the surface because the two superpowers and their allies dominated it. Turbulence and periodic crises generally occurred in countries where the superpowers competed for influence. Many nations continued to be faced with internal political and economic challenges caused by local political crises, civil or regional wars, and man-made or natural disasters and these often less visible situations were frequently handled by neutral members of the international community or by surrogates of the superpowers.

In today's environment, the direct competition between superpowers has essentially disappeared, and regional or local situations termed complex contingencies – situations involving both conflict and humanitarian components – have become more visible to the entire international community. Many interventions today are initiated by UN Security Council resolutions. They typically occur when the internal conflict threatens regional stability or when abuses of human rights become so widespread that fleeing refugees or internally displaced persons create large scale, man-made humanitarian disasters affecting an entire region.

There are many situations that require intervention, but there are no internationally agreed criteria for determining when an intervention will be carried out. When necessary, interventions require the application of multi-dimensional resources (involving both military and non-military agencies, international, national and civil organisations) based on the specific needs of the affected nation. **Figure 1** represents one template that is used to plan and conduct these types of operations when they are deemed necessary. It establishes eight sectors with military forces leading only one sector, but supporting civilian agencies in the other sectors.

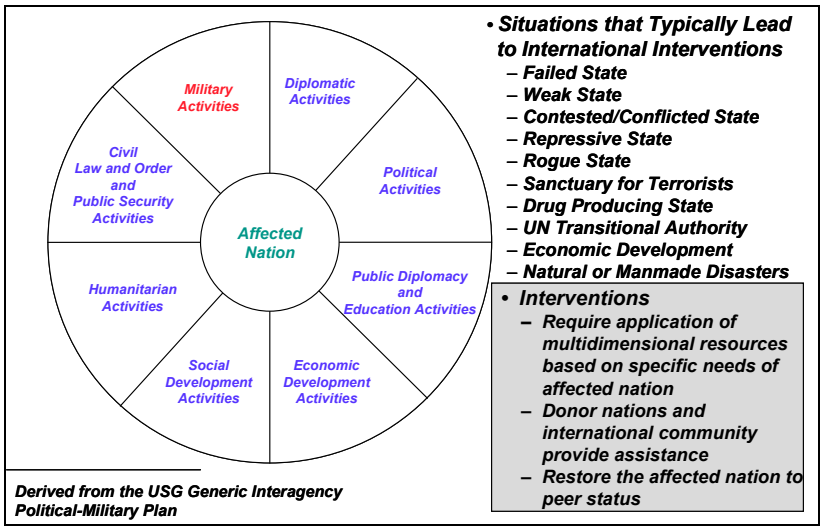

Figure 1: Multidimensional Sectors of National Power.

The environment is further complicated by the plethora of players typically found in SSCs. In the past, if the political situation became intractable and war broke out, the role of the military was dominant. In today's environment, the role of the military is generally one of support to civilian authorities. Political leaders retain control and apply military resources along with civilian resources to achieve their objectives. To carry out its assigned tasks it is often necessary for the military to co-ordinate and collaborate with a large number of civilian organisations from donor nations, the United Nations (UN) and other Inter-Governmental, International, and Non-Governmental Organisations (IGOs, IOs, or NGOs), as well as with companies from the private sector hired to perform selected tasks. This is especially true in peace support and humanitarian operations. Each of these participants brings unique capabilities and resources to the operation, and all efforts must be co-ordinated to achieve unity of effort.

Figure 2 overlays these organisations on the affected nation, but places them in their respective semi-circle: Governmental or Non-Governmental, and Civilian or Military.

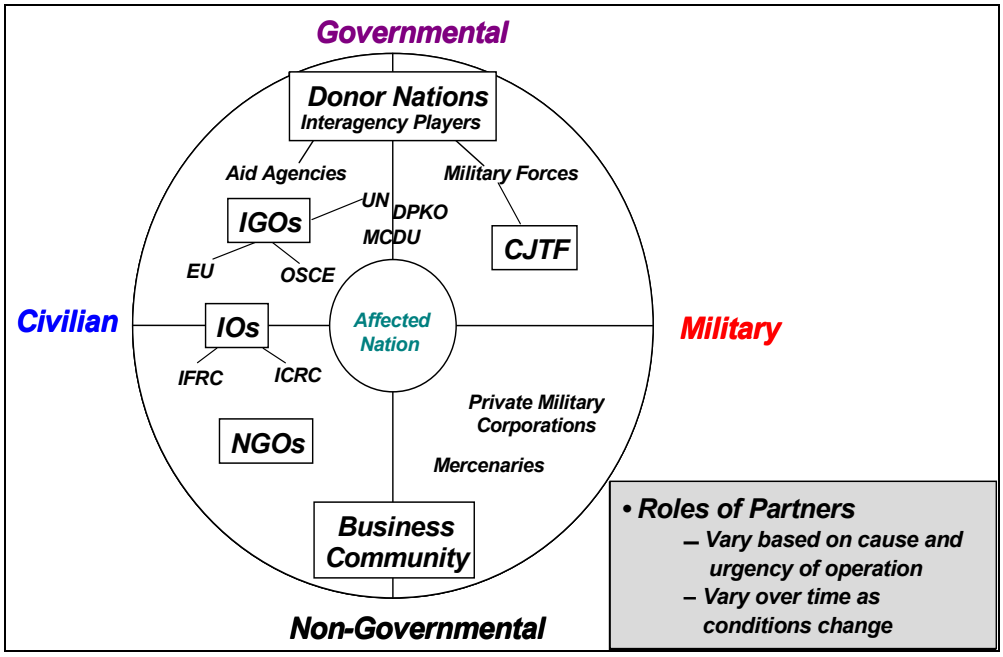

Figure 2: Potential Global Partners during International Interventions.

Potential global partners, other than sovereign nations, are typically divided into four categories: IGOs, IOs, NGOs, and commercial businesses. The mandates, authority, and responsibilities of the many partners also vary based on the characteristics of the partners[1]. IGOs are consultative bodies formed and governed by member governments. IOs and NGOs are directed by private citizens but IOs have unique sovereign status based on international law. NGOs are non-profit and governed by private citizens, but do not have the other status held by IOs. Commercial businesses are governed by private citizens with a goal of making a profit.

It is important to note that those organisations falling in the governmental semi-circle in **Figure 2** are the entities with responsibility and authority for carrying out a mandate from the interested and willing donor nations. The organisations in the Non-Governmental semi-circle may support governmental entities through contracts or grants, but otherwise typically have no formal authority or responsibility, and usually operate independently. These relationships often make unity of effort difficult.

[1] See Focus Paper "Achieving unity of effort during complex contingencies" M. Lidy.

Civilian agencies operate through a process of co-ordination unlike military command and control. Because there is no central authority or set of objectives for a multinational contingency operation, it is more difficult to achieve unity of effort during SSC operations. Both civilian and military organisations must share information and intelligence in this environment if common understanding and unity of effort are to be achieved.

Security is another characteristic that is different. Many of today's contingencies require the application of military force to establish military security in the region. Military security often may be accomplished quickly by a superior military force that is capable of separating the factions and demobilising their military capabilities. Public security and civil law and order, on the other hand, are more difficult to establish because the institutions upon which they are based frequently must be rebuilt. Unless both components of security are in place, stability and progress towards restoring the affected nation to peer status will be elusive and continued military presence will be required.

Few organisations or governments can devote the financial resources to maintain robust standby capabilities to respond to these situations. The capabilities they do have are usually already committed to ongoing contingencies. Consequently, military forces, while effective may be the only resources immediately available for an urgent humanitarian response even though they may be less efficient.

2.2 PHASES OF AN SSC

SSC operations, like MTWs, comprise a number of phases. The military phases of an SSC are typically:

1) Advance Planning and Military Planning
2) Preparation
3) Initial deployment
4) Operations
5) Disengagement

An SSC operation will normally start with the first phase and sequentially go through all the phases from one to five although phases may overlap; intelligence-gathering assets may be operating while other forces are in preparation and different nations may be in different phases during the operation. In order to save time some initial planning/preparation for all phases 1- 4 (even 5) will often take place in parallel.

Typically, in a scenario-based analysis it may be necessary to assess activities in more than one phase.

The starting point of an SSC is an event or events leading up to a contingency where use of multinational military forces is considered as one possible instrument to deal with the situation[2]. In SSC situations, the military force may be deployed into an ongoing civilian operation because of urgent security needs or because the scale of the operation overwhelms the civilian authorities. In such a case, the entry of the military forces into the operation should be considered as being comparable to a 'passage of lines' during a military operation to minimise disruption of the civilian partners' operations.

Advance Planning[3]. Before the military planning phase of a SCC operation, a phase here labelled the advance-planning phase will occur. This phase begins when nations recognise that a crisis is about to occur or has actually happened. Interested nations and the UN Security Council will consider a range of

[2] The phase outline presented is taken from the perspective of the whole SSC operation, but could possibly be adapted to the individual national force.

[3] Also known as 'initiation'. The term 'advance planning' is used here in preference to eliminate confusion with a term NATO has already defined with other meanings.

options to defuse the problem. This planning period involves consideration of the factors causing the crisis and the full range of possible actions to prevent, mitigate, or respond to the situation. This phase will typically result in a UN Security Council resolution and, if necessary, a mandate for the intervention which may, or may not, include use of military forces. In some situations, military force is deemed necessary only after diplomatic, political, or economic measures have been tried without success, or the security of the civilian partners is threatened. When military force is required, interested nations will be requested to contribute sufficient forces to accomplish the mandate, and the command and control arrangement for the force will be agreed.

Military Planning. Military Planning is the phase starting with request for military forces to the contributing nations and ending with national implementation directives. The planning process is a parallel activity undertaken by the authorities of the contributing nations, and the international military authorities (e.g. NATO, UN) involved in the operation. The activities will include planning and decision of force composition, dimensioning of force strength and resources - force packaging. It will take into account C2-arrangements, restraints, ROEs, resources (including money). The main objective of this planning at the national level is to arrive at a political decision stating the national military force contribution. Part of the national planning phase is operational planning resulting in the issue of an implementation directive. This planning includes analysis of mission, alerting selected units, operational area reconnaissance, and will result in an implementation directive.

Preparation. The preparation phase is the phase starting with national decisions on how to implement the SSC operation and ending with the formation of combat ready troops ready for deployment. Main activities in this phase are national training of personnel and units, and preparation of equipment. Important activities in this phase includes: development of operational requirements, planning of force production, training and organisation, development of implementation orders, preparation of personnel and materiel, mission rehearsal, preparation for deployment, Task Force organisation, sustainment and logistics. The preparations are planned and lead by the national military service staff level.

Initial deployment. The initial deployment phase starts when the forces are ready for transport and ends when the forces are deployed in the area of operation (or, for some forces, in the base areas from which the area of operation can be reached). The phase includes initial transfer/transport of forces (strategic lift), arrival of the force in the area of operation, reception and staging, movement to the location where the force will accomplish its tasks and transfer of authority to the task force commander.

Operations. The operations phase starts when the forces are deployed to their area of operation, are integrated into the CJTF, and have received their mission and ends when it is decided to disengage and withdraw the forces. The activities during this phase depend heavily on the particular mission. An important activity is to maintain desired operational status – sustainment. The operations phase will also include any redeployment within the area to carry out assigned tasks or to meet changing requirements. An important ongoing consideration during this phase, both nationally and internationally, is termination or extension of the mission.

Disengagement. The disengagement phase starts when a decision is reached on terminating the mission of the SSC operation, and ends when the forces have returned to their home base and the finishing work has been completed. The main activities included are: plan for disengagement, hand over the responsibilities and tasks to the appropriate civilian authorities within the area or responsibility, transfer of authority of forces to national authority and termination of Task Force, redeployment to home base with the initial inspection on arrival, possibly discharge of personnel. Finishing work, like lessons learned, is also part of the disengagement.

2.3 CHALLENGES FOR ANALYSIS

SSC operations pose many new challenges for analysis when compared to more traditional analysis of Major Theatre Wars (MTWs). In contrast to MTW in a SSC:

- There may be many more independent actors[4];
- The aims of the actors are unlikely to be achieved through military means alone;
- The aims of all the actors may not be well understood and are likely to be carried out using different strategies and timelines.

Because of these factors it is often difficult to establish causal links between action and effect.

It can be seen from the list of types of SSC that the term covers a very broad range of operations, with very diverse characteristics. It is difficult, therefore, to generalise about the characteristics of SSC operations. While some types of SSC may be of long duration (UN peacekeepers have been deployed in Kashmir since January 1949 and Cyprus since 1964), non-combatant evacuation operations typically last only a few days. Peace support operations may involve many independent factions each with its own agenda, but in humanitarian operations all the actors share a common goal.

A key element in the link between action and effect is the 'intent' or 'will' of an actor. MTW analysis generally assumes that the enemy forces are willing to fight. In SSC analysis it is often unclear whether, or in what circumstances, an actor's military forces will be used, either against alliance or coalition forces or against other actors.

Generally an analysis will assume that in peacekeeping, because the parties have agreed to the terms of the operation, it is not necessary for peacekeepers to have sufficient force to defeat any potential aggressor; whereas, in peace-enforcement, where the intent of the other actors is less certain, greater military force is needed to impose stable conditions that enable civilian organisations to carry out their tasks.

MTW analyses generally assume that the intensity of a MTW will mean it will not be protracted. By contrast, some SSCs may last for many years. In such protracted operations the aims of the participants may change over time, further complicating the analysis. Where the tasks assigned to our forces change over time this is commonly referred to as mission creep[5]. Mission creep makes it difficult to assess whether a force will be able to achieve its objectives, as these are not fixed.

SSC analysis requires an understanding of a wider range of activities than MTW analysis, including many activities undertaken by non-military arms of government and civilian agencies. Some of these activities are well understood, albeit not in the defence analysis community, for example the provision of aid to refugees. These tasks are therefore amenable to analysis, although they may require data to be collected from non-traditional sources which may itself be a challenge. However, some other activities, such as negotiations between parties to a conflict or influencing public perceptions and modifying the public's behaviour, are not well understood, making them difficult, if not impossible, to model at present. Development of techniques to conduct analysis of these activities will have to be undertaken together with research into the human aspects of decision making.

[4] Including international civilian organisations, multinational military forces, donor nations, non-governmental civilian organisations, and commercial entities, possibly including private military corporations (sometimes called mercenaries), as well as warring factions, the affected nation's government and its population.

[5] Mission creep – A change in tasking for a military force caused by either (1) a change in the operational situation or desired end state recognised and directed by civilian authorities, or (2) a need to fill an urgent void as perceived by and within the authority of the operational force commander. (Source: Derived from paragraph 0216 of AJP-01(A) change 1)

Mission creep is not limited to SSCs; however it is recognised as a common feature of SSCs, particularly those that are enduring.

Human aspects of decision making may also affect purely military activities. The overall success of a coercive strike against a rogue state may be as dependent on the psyche of the leadership of the state as upon the damage inflicted by the strike. In peace support operations, the actions of warring factions may be influenced as much by emotions, such as hatred and revenge, as by a logical plan to achieve certain fixed objectives.

The degree to which these issues arise in a given analysis depends on the type of SSCs analysed and the purpose of the analysis and is significant in the choice of appropriate measures of merit (see Chapter 'Measures of Merit'). These issues may constrain the ability to answer particular types of questions regarding SSC operations, particularly high level questions such as "will this force achieve its aims in this scenario?" However, they need not prevent useful analysis being undertaken on a range of other issues, provided that analysis is appropriately structured.

Moreover, it should be recognised that these factors can be relevant in MTWs, even though their influence is not generally considered. For example at present MTW analysis does not generally consider the impact of activities aimed at the enemies' will to fight, but focuses only on their physical strength. Developing techniques to address these issues in the SSCs context may therefore bring additional benefits to MTW analysis.

Chapter 3 – LONG TERM DEFENCE PLANNING

3.1 WHAT IS LONG TERM DEFENCE PLANNING?

Long-term defence planning is a process that investigates possible future operating environments and develops a force structure development plan to best fit military forces to those environments, given a host of constraints – including financial ones.

'Long-term' is different for each defence sector. The time period associated depends on how long it takes to make changes. Major new developments and investments, implementing new required capabilities and competencies as well as changing organisational structures take a long time. Consequently, the appropriate long-term time horizon is 10-30 years.

Long-term defence planning can be broadly categorised into three main types:

- **Force Structure Analysis**. Evaluation of overall balance of NATO or a nation's forces, between services and between arms of each service. It is broad in scope but does not generally require a detailed representation of equipment characteristics.
- **Equipment Investment Analysis.** Analysis generally in support of equipment acquisition that is narrower in scope than Force Structure Analysis but with a more detailed representation of equipment characteristics.
- **Other Long-Term Defence Planning Issues including Organisation of Forces.** Analysis to determine the best way to organise forces within a force structure (as distinct from the size of different arms within the structure), balance between active and reserve components, personnel issues etc.

The three types of analysis can be considered within a common analytical framework (see Chapter 'Analytical Framework'), although the steps in the framework on which each type of analysis focuses differs.

3.2 SCENARIOS

3.2.1 Rationale for Scenario-Based Planning

Future operating environments may be described in scenarios. These scenarios support detailed evaluations of proposed operational concepts and force structure solutions. Scenarios are explicitly not intended to predict. While prediction is aimed at forecasting a specific result that will occur in the future, the scenario method emphasises the process that leads to specification of defence plans. Its power is the way in which a large number of variables and their dynamic relationships are integrated in a tangible and comprehensible picture. Thought processes and creative ideas can be expressed and shared by using the 'language' of the scenario as a basis.

A scenario portrays a possible future situation in which military units and civilian resources are or might be employed. Which characteristics of that situation at what level of detail are described depends on the problem context: the type of planning or policy questions that are to be addressed using the scenario. Depending on the intended use, the description might be highly stylised, e.g. dealing with a crisis between Blue Land and Red Land, or could be quite realistic, e.g. placed in one of the crisis-prone regions of the world. Some scenarios explore alternative futures that are considered plausible.

These could be different paths that could be taken from a major decision point, possible states of affairs between nations or different conditions that could characterise the world as a whole.

The use of scenarios is not inconsistent with capability-based planning, which seeks to evaluate force requirements in the absence of a real-world operational context. In this case the scenarios used are representations of the capability required in a form suitable for analysis. The lack of clarity in the level of threat needs to be included in the analysis through appropriate scenario variations.

3.2.2 Scenario Selection

Scenario-based analysis generally needs to consider multiple scenarios, both MTW and SSC, as all relevant issues are unlikely to be addressed within any single scenario. The very different nature of SSC operations compared to MTW operations and the broad spectrum of types of SSC makes it important to consider a number of separate SSC scenarios in most studies. Hence, the analyst must balance limited resources with the need for a large scenario set. Therefore, scenario selection is a critical activity.

A specific challenge in developing SSC scenarios is the lack of knowledge and information about many non-military aspects of SSCs. This points to a need to include people with a wider range of knowledge and experience in the scenario generation process as compared to the generation of MTW scenarios.

For the results of the analysis to be acceptable the scenarios must have the appropriate approval. To meet the scenario needs of the long-term defence planning process within these constraints requires a scenario portfolio from which an appropriate mix can be specified for a particular study. The scenario portfolio reflects the security objectives and defence goals of a planning entity.

It may not be necessary to analyse all scenarios to the same level of detail. A detailed analysis of small number of scenarios with a simple, possible judgmental, assessment of a larger number may be sufficient and will certainly be better than the detailed analysis of a smaller selection.

Chapter 4 – ANALYTICAL FRAMEWORK

4.1 SAS-025

SAS-025 identified an analytical framework for the long-term defence planning process. This framework is equally applicable to broad force structure analysis, detailed equipment balance of investment analysis and other LTDP analysis although the focus of the analyses may be in different steps of the process. Analysis of Smaller-scale Contingencies is an integral part of this process, yet was not considered fully by the SAS-025 group. This section therefore expands on the guidance on the process where analysis of SSCs raises particular issues.

4.2 SAS-025 PROCESS

The SAS-025 process for long term defence planning is shown in **Figure 3**. Although presented in terms of 'steps', the actual process is more intricate than this. Some steps may run in parallel, and the process contains feedback (the double arrows in the diagram).

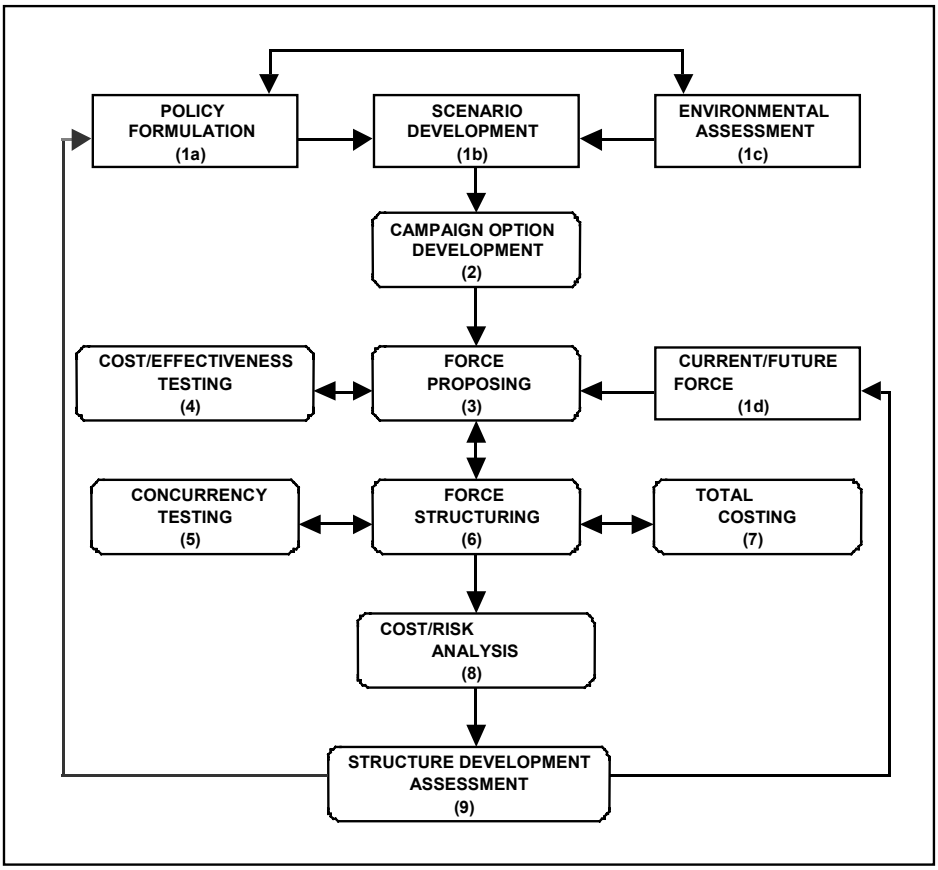

Figure 3: SAS-025 Long-Term Planning Process 'Best Practice' Model.

After the scenarios have been built, taking policy and environmental constraints into consideration, campaign and force package options are generated to fulfil mission objectives within each scenario. The packages are then tested to ensure that they are viable and suitable for the campaign. The aim is to refine the force packages so that there is confidence that they will meet the objectives with the minimum

required level of force consistent with the level of risk outlined by the policy for that particular scenario. The output is a set of ideal force packages for each scenario. These are then built up into an overall force structure, taking account of concurrency, rotation, maintenance and training.

The difference between the final force structure and the current planned equipment and manpower programmes give rise to the force structure development plan (SDP) that will align the long term force goal with current structure and future programmes. This first SDP will typically exceed budgetary expectations. Further refinement is then needed to balance the SDP plan with expected resources. If this "refinement" is a major iteration, it may indeed involve a full new cycle with a view to the risks involved. Revision of security and defence policy goals and/or scenarios may be needed to bring objectives and resources into balance.

4.3 ISSUES RAISED BY THE ANALYSIS OF SSCs IN THE SAS-025 PROCESS

4.3.1 Step 1: Inputs

Defence policy is the key driver in defining the operational spectrum that a nation's defence forces should plan to face. For virtually all nations, it is safe to say that SSC operations are not matters of national survival. They represent a class of operations that nations will commit themselves to as a matter of policy, but mostly because of their desire to be good international citizens. This means that an important policy input to the analytical process will be to clarify in which types of SSC operations the nation(s) are willing to participate. The selection of a robust set of SSC scenarios is a critical step in the planning process (see previous chapter).

4.3.2 Step 2: Campaign Option Development

In the case of SSCs the term "campaign" may need to be broadly interpreted. The degree to which the campaign needs to be developed will depend on the purpose of the analysis and the analytical techniques to be used in subsequent steps. The aims and aspirations of each actor (rather than opponent) will need to be identified in order to develop their potential courses of action. The levels represented could include grand strategic, joint, component, and lower levels for the military and their equivalent for some civilian organisations. The campaign will need to take account of the capabilities of all actors (e.g. military, IGOs, IOs, NGOs, contractors, local civilian organisations, etc.), however, it may not be necessary to represent exclusively civilian activities at the same level of detail as military activities.

The resources that will be required to develop campaigns for SSC scenarios will vary widely. Developing a full campaign plan for each actor in a complex peace support operation may require very significant resources to undertake fully or may not be possible at all due to a lack of understanding of the social issues fuelling the crisis.

4.3.3 Step 3: Force Proposing

Many SSCs will be multinational operations. For these operations it may be necessary to estimate the likely force contribution of coalition partners. Such estimates may be made either based on force holdings of likely coalition partners and their historical contributions or as a proportion of the total coalition force required. The most appropriate method is likely to depend on the proportion of the total coalition effort provided by the nation. In coalitions of the willing it is likely that the sum of the forces offered will not match the 'required' force package.

This will be taken into account more effectively if the estimates are based on historical contributions. Risk analysis can be undertaken in step 4 (Cost/Effectiveness Testing) to assess the impact on force

effectiveness of alternative force packages, or having to adopt alternative campaigns. National policy will also affect what types of contributions that are typically made by which countries, and which countries are willing to assume a leading role in a multinational SSC operation. This is important input to the analysis of force packages.

Depending on the level of detail of the analysis in step 4 it may be necessary to identify the contributions of civilian agencies as well as military forces to the scenario. This should take account of templates designed by IGOs[1].

In SSCs, it is more common to deploy only a portion of a unit within the normal peacetime organisation or to deploy composite units. The analysis needs to be able to take such aspects into account. For example, in any database used to record force packages, it may be necessary to record both the detailed composition of the unit deployed (for use in deployment analysis in Step 4) and the units from which it has been drawn, which therefore may be unavailable for subsequent deployment (for concurrency analysis in step 5).

Identifying the initial logistics and support elements required may be complicated as these are more likely to include composite units and role specialised national units. Problems with interoperability may also drive up the force requirements in multinational operations. In particular, identification of the command and control structures and the capabilities needed to implement them for more complex SSCs involving combinations of military and civilian components and hierarchies will be challenging.

4.3.4 Step 4: Cost/Effectiveness Testing

In step 4 the cost/effectiveness of the proposed force packages is tested to ensure they are appropriate to the scenario. This analysis can consider: Force Generation; Deployment; Operational Capability in Theatre; Sustainability and Rotation; Command and Control; Information Operations.

Force Generation. The identified readiness of military units is linked to their training, which is generally geared to warfighting operations. Their readiness for SSCs may therefore be different - either better, if risk may be taken on training – or worse, if troops require special operation-specific training before deployment. In 'coalitions of the willing', the lead nation may need to provide such training for units from some of the other nations in the coalition.

Deployment. It may be difficult to determine target times for forces to be ready in theatre in SSCs because these may be dependent on political issues. In the evolution of a crisis the decision to commit forces and the rapid arrival of the lead echelons may have significance irrespective of their military capability.

Deployment of military forces often relies on the use of chartered civilian assets or other nations assets. For SSCs there may be cost or political constraints which affect the assets used.

Operational Capability in Theatre. There are two main approaches to the assessment of whether the proposed force packages are appropriate for the scenario, comparison with past 'real-life' operations[2] and *ab initio,* building from the capability of the forces to undertake lower level task to assess their ability to achieve their overall mission.

[1] See for example: "The Sphere Project: Humanitarian charter and Minimum Standards in Disaster Response," at: http://www.sphereproject.org; "Handbook of Democracy and Governance Program Indicators" and "Democratic Electoral Assistance: A Practical Guide for USAID," U.S. Agency for International Development; and "Logical Framework (LogFrame)," The World Bank at: http://www.worldbank.org/html/oed/evaluation/html/logframe.html.

[2] If the force estimation in step 3 was also based on the force deployed in the historical operation then this effectively combines steps 3 and 4.

The choice of approach will depend on the purpose of the analysis and the resources available. The choice may also be constrained by the availability of appropriate data. For broad order force structure analysis comparison with past operations may be most appropriate. For equipment investment analysis it is likely that it will be necessary to undertake an *ab initio* analysis in order to represent the differences between equipment options.

When comparing with past operations, after-action reports should be taken into account as the force deployed in the real operation may not have been 'optimum'.

An *ab initio* approach will require a hierarchical decomposition of the scenario to identify the tasks that will be undertaken by the intervening nations' military forces and civilian agencies and the sub-tasks that will be undertaken by the components of the military force.

The simplest *ab initio* approach is a 'troops to task' assessment in which the forces required to undertake each task identified through the hierarchical task breakdown are identified using simple approaches such Military Handbooks or historical analysis.

A more complex *ab initio* approach might involve a full campaign level analysis of the operation; however, techniques for campaign level modelling of SSCs are in their infancy. In such an analysis the choice of appropriate Measures of Merit is critical (see Chapter 'Measures of Merit').

Sustainability and Rotation. Existing NATO planning guidelines, which are designed for warfighting, are inadequate for most SSC operations and must be augmented by data drawn from other sources. Data on sustainability requirements for SSCs may be available from ongoing or recent operations. However, interpretation of this data may be problematic because, as noted above in Step 3, the logistics and support elements are likely to include composite units, and in recent operations there has frequently been a degree of role specialisation in the logistics echelons by nations. Additionally, there may be a need to provide logistics support to other agencies or the civilian population of the affected nation[3]. In 'coalitions of the willing', a disproportionate burden for logistic support may fall on the lead nation. Contributed forces from some nations come 'as they are', with inadequate provision for sustainment in theatre. In assessing the logistic demand it is necessary to consider after-action reviews.

Rotation of forces can place significant additional demands on a nation's force structure, over those for the initial deployment to a scenario. Such rotation is most likely to occur in SSC operations. In these enduring operations the composition of the deployed force (including the logistics elements) is likely to change over time in response to changes in the mission or the environment and this needs to be considered in the analysis of the total force demands.

Command and Control. In many SSCs there will be additional C2 requirements over those for MTW due to the requirement for liaison among all the actors including military and civilian governmental organisations. Interoperability issues will need to be addressed. Analytical methods to conduct detailed assessments of these issues are only just coming into use[4].

Information Operations. In many types of SSCs Information Operations will be one of the major instruments employed by a commander to achieve his campaign objectives. Information operations cover a broad range of activities from public information and psychological operations to protection of computer systems, and there are no agreed definitions. Analytical techniques in this area are immature.

[3] Minimum standards for assisting civilian populations (water, housing etc) have been developed in the civilian international community (e.g. SPHERE).

[4] SAS-026 Technical Team 'Analysis of the Military Effectiveness of Future C2 Concepts and Systems'.

4.3.5 Step 5: Concurrency Testing

As noted previously, a feature of SSC operations is the deployment of ad hoc composite units. This may make concurrency analysis difficult. It is important to identify all units which are drawn upon to provide the force package and which are therefore not useable for other operations.

Substitution of assets is likely to be more important in the analysis of SSCs. A wider range of substitutes is likely to be allowable than in MTW. It may also be possible to use civilian agencies or contractors as substitutes for military forces, although they are likely to be constrained by readiness. When considering such substitutions the analysis needs to consider the acceptable risk level to these units, which may differ from that of military units. i.e., while those units may be used in some SSC operations, they may not be possible to use in other operations.

In order to undertake a 'dynamic' analysis of force demands it is necessary to estimate the frequency with which operations will occur in the future and, particularly for enduring operations, their likely duration. This can be drawn from historical analysis or defined in defence policy. In a dynamic analysis it may be necessary to consider the time required for regeneration of forces after operations.

4.3.6 Step 6: Force Structuring

Because of their higher frequency, SSC operations are likely to cause greater disruption to the peacetime activities of units such as training and equipment maintenance and as a result may have a knock on effect on their future readiness. It may therefore be more important to consider personnel and "OPTEMPO" aspects, and to allow for substitution where possible; cf. discussion in Step 4.

4.3.7 Step 7: Total Costing

It is usual in defence costing to consider only the peacetime cost of ownership of forces. However, because of the higher frequency SSC operations compared to MTW, it may be necessary to consider the cost of using forces on such operations in identifying whole life costs[5]. This again requires a realistic assessment of the frequency of future operations. In determining the cost of undertaking SSCs, the differing financial arrangements for UN/NATO operations needs to be recognised[6].

4.3.8 Step 8: Risk/Cost Analysis

It is likely that a force structure optimised to undertake MTW will differ significantly from one optimised to undertake SSC operations; a range of options in between will also be possible. It will be necessary to clearly identify the balance between capability to conduct MTW and capability to conduct different numbers and types of SSC in different possible force structure options.

4.3.9 Step 9: Structure Development Assessment

The final step of the analytical framework will be similar when SSCs are included in the analysis, and still equally important.

[5] This is particularly important when comparing the cost of a force element that has expensive consumables such as 'smart' ammunition with one that does not.

[6] A disproportionate financial burden is likely to fall to the lead nation in an ad-hoc coalition, because financial guarantees may need to be given to some contributing nations to gain their participation.

4.4 FORCE STRUCTURE ANALYSIS

The analytical framework as outlined above is designed mainly to facilitate long term planning of the overall force structure. Depending on the size of the problem (planning for a small or large country or for a coalition), and the time and resources available to do the analysis, the level of detail in each step may be different. For example, concurrency analysis will be even more important for countries that routinely are involved in several SSC operations at the same time.

The result of the overall long term planning activity will be based on a number of "soft" factors and judgmental input, even more so when taking SSCs into account. The influence of these factors should be clearly documented and transparent in the process. In that way, subordinate or subsequent activities will also be able to use than as input, e.g. equipment investment analysis.

4.5 EQUIPMENT INVESTMENT ANALYSIS

Step 1 of the framework, inputs, is usually not reconsidered from scratch when doing equipment investment analysis. Rather, policy assumptions, environments and scenarios produced within the overall long term planning are used as much as possible. However, it may be necessary to refine scenarios to show enough detail to allow for equipment analysis to be carried out. Likewise, output from other steps within force structure planning (e.g. campaign options and force packages) provides important input for equipment analysis.

Whilst concurrency testing (step 5) is unlikely to be the main focus of equipment investment analysis it can provide a framework for the comparison of equipment capabilities across a range of scenarios.

Note that equipment performance within a few of the more demanding scenarios may not necessarily carry the day. Equipment attributes such as a wider utility and flexibility across the full range of possible employment scenarios may be as important a consideration as operational effectiveness within a few key scenarios. Of course, the risk of experiencing much reduced utility of a cheaper (e.g. COTS) piece of equipment in non-benign scenarios must be balanced off against the cost-effectiveness of such equipment in the benign settings.

Because in equipment investment analysis it is necessary to analyse each scenario in greater detail than in force structure analysis the analytical resource implications of a broad scenario portfolio are more likely to be a significant issue.

4.6 OTHER LONG TERM DEFENCE PLANNING ISSUES INCLUDING ORGANISATION OF FORCES

In certain cases, other issues than overall force structuring or equipment investment analysis may also come to the fore in long-term defence planning. Examples can include:

- Balance between active and reserve components of the total force to better adapt the force to participation in SSC operations.
- Personnel issues on a strategic level, addressing recruiting, training or retention problems by redesigning certain aspects of the force, e.g. rotation policy for SSCs.
- Redesigning the organisational structure of units and C2 arrangements in order to have more suitable and efficient forces for SSC operations and SSC force packaging.

The analytical framework can be used as a starting point for such analyses as well, but may need to be modified.

It is common to use parts of units and ad hoc forces in SSC operations, as mentioned earlier. Current organisation of the force structure is not ideally suitable for this process, e.g. it is usually necessary to draw on limited divisional and corps resources to deploy a brigade to an SSC operation. This has implications for the possibility of deploying other elements of that division or corps. Therefore, analysis may need to consider redesigning the organisational structure of units and C2 structures. This means redesigning the modular "building blocks" available for force packaging. For analysis, this means evaluating the flexibility of different alternative organisation structures, and doing detailed troops-to-task analysis. This analysis will need to consider what tasks need to be performed, and what resources need to be included, at different command levels and in forces of different sizes, against a background of a variety of SSC scenarios. It is important to consider other factors as well, such as C2 and leadership aspects, since traditional force organisation structures have evolved over a long time. This has been the focus of the SAS-026 Technical Team 'Analysis of the Military Effectiveness of Future C2 Concepts and Systems'.

4.7 ANALYSIS USING THE SAS-025 FRAMEWORK

Analysis using the SAS-025 framework will require a range of analytical techniques. These may include conventional operational analysis (OA) tools such as combat models but also qualitative or 'soft OA' techniques may be required if all relevant issues are to be considered in the analysis.

In general there is an inherent inverse relationship at work – the less complex the question, the more complex the analytical method and vice versa. If the equipment choice is between two missile options against known threat systems, then a complex, physics-based, six degree-of-freedom missile flight simulation might be the right tool. But if the choice is between vehicle platform options to handle the complete spectrum of operations including SSCs, then simple modelling constructs incorporating a wide range of important factors may be the most suitable.

Chapter 5 – MEASURES OF MERIT

5.1 MEASURES OF MERIT

5.1.1 Introduction

Whether one considers using "traditional" or "soft" OA tools in analysis, establishing an objective set of relevant metrics is a vital precursor. This section addresses criteria for choosing metrics for the analysis of individual SSC scenarios, within a LTDP context.

MTW analysis is concerned predominantly with only the military component of operations, as the success of the military component dominants all other concerns in time of war. However, SSCs are complex operations that rely not just upon the success of the military component but also upon the success of economic, diplomatic and social activities. This complexity can make identification of appropriate measures of merit (MOM) problematic.

5.1.2 Definitions

While there is no agreed definitions of metrics used for analysis, the SAS-026 developed a useful hierarchical framework for defining MOM for analysis of command and control[1]. These have been used at the basis for defining more broadly applicable metrics for use in the analysis of SSCs:

1) Dimensional Parameter (DP): the properties or characteristics inherent in the physical systems or force elements.
2) Measure of Performance (MOP): measure how well a system or force element accomplishes a defined task. It is assessed by the combination of Dimensional Parameters in an appropriate model.
3) Measure of Effectiveness (MOE): measure how well systems or force elements accomplish their assigned tasks within an operational context.
4) Measure of Force Effectiveness (MOFE): measure the degree to which a force meets its objectives. In this context a force may be any organisation or group of organisations, civilian or military, generally under coherent direction.
5) Measure of Policy Effectiveness (MOPE): measure how well the overall objectives of the mandating authority are achieved.

Dimensional Parameters and Measures of Performance, while they may be dependent on the local environment, can be assessed independently of the operational scenario. MOEs, MOFEs, and MOPEs can only be assessed in the context of a scenario.

The appropriate MOMs will depend on the type of operation being considered. Examples of appropriate metrics for three types of SSC operations are shown in **Table 1**.

[1] RTO Technical Report 9, "Code of Best Practice (COBP) on the Assessment of C2", Produced by NATO RSG-19 (SAS002) AC/243 (Panel 7) TR/8.

Table 1. Example Measures of Merit for a Set of Scenarios

Operation Type	Non-Combatant Evacuation	Coercion	Peace Support
Example	Sierra Leone or Kinshasa (DRC)	Deliberate Force (Kosovo)	Bosnia
DP	Carrying capacity of a helicopter Range of a helicopter	Range & payload of an aircraft	Rate of movement of patrols. Number of patrols per company per week
MOP	Rate of evacuation using a single helicopter as a function of range, temperature, altitude etc.	Circular error probable of a system. Daily sortie rate	Area covered by patrol per day. Expected casualties if patrol attacked. Frequency of Patrol visits.
MOE	Rate at which a unit of helicopters can evacuate people in a non-permissive environment	Number of targets hit per day. Collateral damage based on accuracy of delivery.	Reduction in murder rate in patrolled areas. Patrol casualties. Time to next incident after a patrol.
MOFE	Time to complete evacuation. Percentage of people evacuated	Time to destroy all targets/total collateral damage. Own force casualties. Percentage of targets that can be destroyed.	Murder rate. Number of violations of cease-fire agreement. Displaced person returns. Percent of crimes solved.
MOPE	Total casualties among evacuees and military forces. People still at risk.	Response of opponent Minimisation of damage	Percentage of civil authority functions executed by local people. Percentage of popular support for government. Support by factions. Duration of military deployment. SSC force Casualties

5.1.3 Difficulty of Establishing Measures of Merit

In principle an analysis should identify a single MOM, which would be the MOPE. This would require all the important relationships to be captured and causal links established. In practice this is not generally possible because of the problem of establishing causal links between action and effect due to the complexity of many SSC operations (see section 'Challenges for Analysis') and it is therefore necessary to consider a number of MOMs. This may therefore lead to problems of conflicts between MOMs for different components of the force.

When dealing with multiple measures of merit it is important to explicitly identify their interrelationships. Several techniques exist to do this, such as cognitive and causal mapping. The analysis should begin with an ideal or desired set of metrics even if they cannot be directly measured and must later be replaced with 'surrogates'.

In SSCs there is a greater likelihood that there will be conflicts between different MOMs than in war-fighting operations. For example in a humanitarian operation the efficient delivery of food aid may damage the local agricultural economy and so slow down a return to normality. This makes it more

important to understand and track the impact of change on all MOMs and to take account of multiple criteria in setting objectives. This can be achieved either by selecting a primary MOM to be maximised and setting constraints on the minimum values that each of the other MOMs can take. In this case it is important to test the sensitivity of results to variations in the constraint values. Alternatively, a value function can be developed that combines a number of MOMs. This may be a weighted combination or some lore complex function. Again it is important to check the sensitivity of results to the choice of weights or other parameters.

In SSCs it is often important to consider the probability distribution of the range of possible outcomes. This is due to the strong linkages that can exist between tactical events and strategic outcomes. It may be necessary to consider separately the expected (or average) outcome of a task and the risk of failure of a task to achieve some 'mission-critical' level.

For the purpose of LTDP it is not necessary to have a complete understanding of SSC operations. It is not necessary to establish whether the SSC in its totality will succeed or fail, only whether the military component will succeed or cause a mission-critical failure in another component.[2] This allows significant simplifying assumptions to be made.

Although it is necessary to understand when the activities of the military component may cause failure in the other components (and vice-versa) it is not necessary to understand in detail why such failure occurs. The consequences of another component (such as a non-military component) failing to achieve its mission can be tested by running the analysis again with different assumptions.

Determining when a military task could cause a failure in another component (and vice-versa) can be achieved through discussion with experts in those domains or from lessons learnt from past operations. Again, it is not necessary to understand the whole system to determine where those failures could occur.

The scope of the analysis is illustrated in **Figure 4**. Military component activities are linked into a hierarchy and then linked to the overall MOPE. In addition the linked failure of military activities in non-military activities are considered.

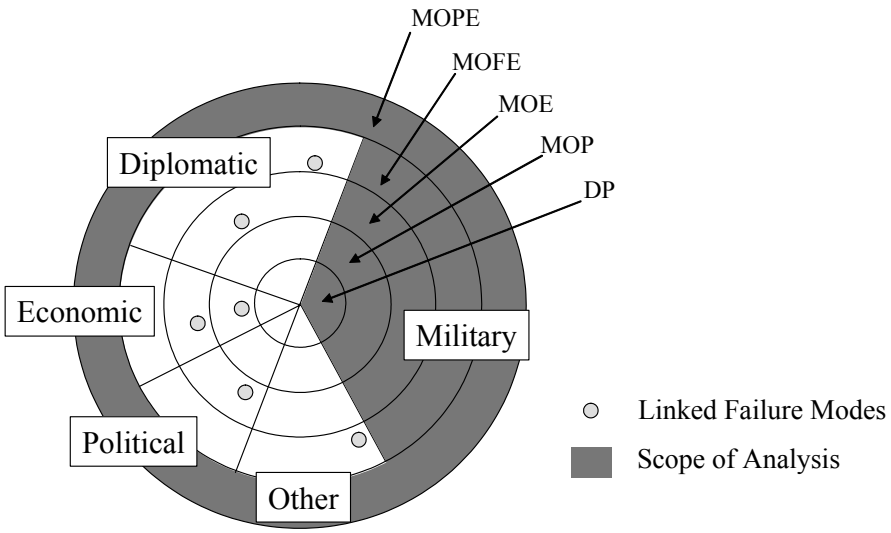

Figure 4: Solution Space for Acquisition and Force Development Studies.

[2] It is often assumed that all the mechanisms by which the military component is an SSC may fail must be represented in LTDP. Training, doctrine and operational decisions can also cause failures. As there is very little that can be done at the acquisition or force structuring state that will make such failures less likely, such failure mechanisms are irrelevant to LTDP analysis.

5.1.4 Developing Measures of Merit

In general measures of merit may be derived by inspection from a task, objective or goal orientated hierarchy[3,4] developed within the context of a scenario. Each MOM should describe, in as meaningful way as possible, the achievement of the tasks within the hierarchy. It is common for each element of the task, objective or goal hierarchy to require multiple MOMs to meaningfully describe its process.

MOP and DP can be developed independently of the elements in a task, objective or goal hierarchy, although for them to be useful they need to relate to MOPE, MOFE and MOE. Although there are 5 classes of MOM it may not be necessary to consider them all. For example, if the outcome of a single MOE or unrelated MOEs (i.e. ones that do not aggregate up to the same MOFE) is sufficient then it is acceptable to the end analysis at that level. However, it is not observed that considering an initially wider range of MOM (from which a smaller sub-set is down-selected) is an important part of the analysis in its own right.

In constructing the MOM hierarchy it should be noted that although there are only 5 levels (DP, MOP, MOE, MOFE and MOPE), there may be multiple layers of the same class in the final framework. However, the principle that hard measures of simple systems (MOP) will build up through MOE and MOFE to inform intangible measures in complex systems (MOPE) remains key to its construction.

Figure 5 demonstrates the analysis framework for developing and applying MOM. It considers a standard top-down decomposition of a high-level task, objective or goal (for example a UN mandate or resolution) into a series of layered tasks, objectives or goals that support the higher layers. Each of these elements is identified within the context of a given scenario. Although the decomposition is top down it is always worth iterating up and down the hierarchy, as supporting activities (e.g. command and control) do not always fall out directly from a high-level decomposition.

[3] The available methods for subsequent analysis might be mission based (tasks), capability based (goals), scenario based (objectives) or a mixture of all three. Regardless, the principle that tasks, objectives and goals completed at one level will build to provide success at higher levels is common to each approach. The concept of a hierarchy of tasks, objectives or goals therefore is a robust starting point for the development of MOM (See section on ‘Task decomposition methods’).

[4] In developing the task hierarchy, in addition to specified tasks, it may be necessary to consider a number of implied tasks of the form ‘Maintain the capability to…’ This can include the requirement for additional forces that do not take an active part in the operation may be required for deterrence or as a reserve for force extraction.

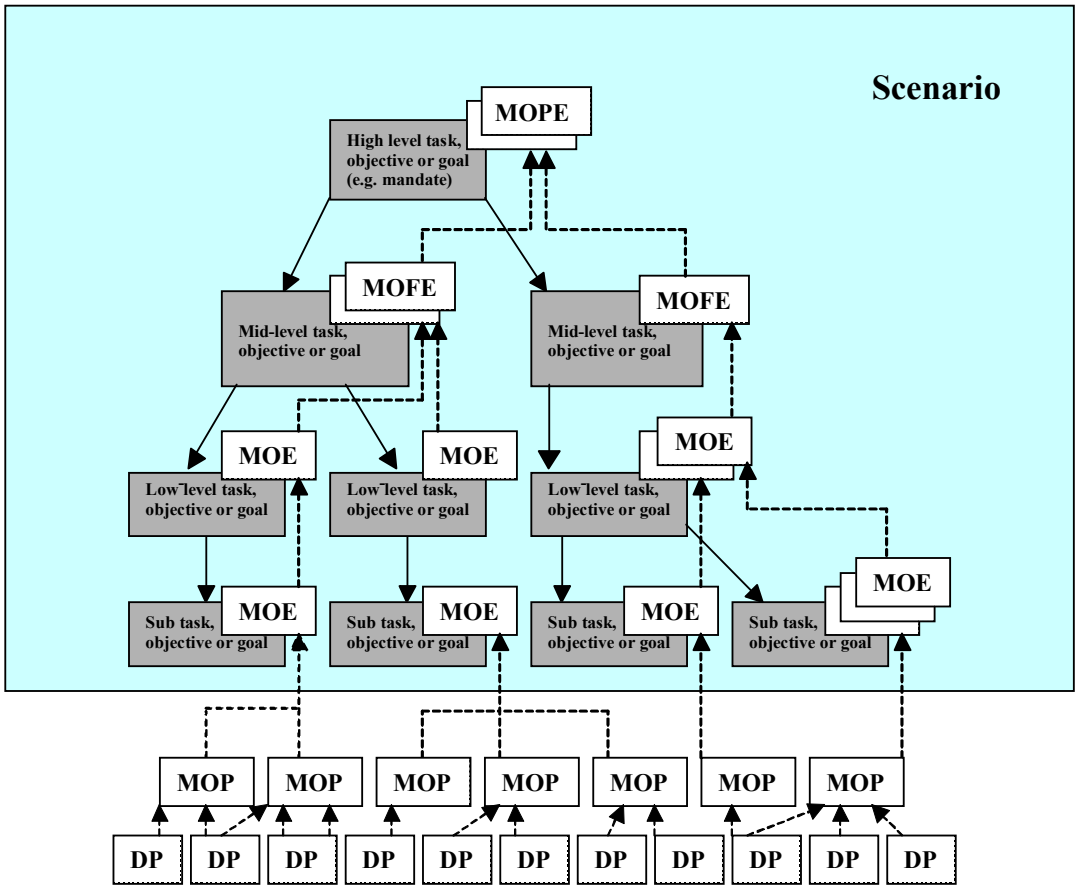

Figure 5: Constructing the MOM Hierarchy.

Following the building of the task, objective or goal hierarchy MOPE, and MOM not supporting the highest-level MOM required for the analysis are discounted (unless they can inform the analyst about failure modes caused by the military in other components or vice-versa). Finally, any MOP and DPs that will be required to support the scenario based MOM are identified.

This process will build an analytical framework for SSC acquisition and force development problems. However, it is important to note that the framework in itself cannot provide an answer for those problems unless values for the MOM can be derived and the relationship between MOM determined either quantitatively or qualitatively.

Where the desired measures are not directly measurable or estimable due to practical constraints, related metrics termed ‘surrogates’ or ‘indicators’ could substitute for the desired metric. These should be documented along with substantiating rationale for selecting those indicators. As indicators are only substitutes several may need to be chosen for each desired metric to ensure the completeness. These indicators may be MOMs at the next subordinate level, for example a number of MOFEs as a surrogate for a MOPE. For example deterrence plays an important part in the success of some types of SSC, particularly peace enforcement operations, yet it is not possible to directly measure the deterrent capability of a force. As a surrogate the actual combat capability of the force could be measured since it seems reasonable to assume that a more capable force would have greater deterrent capability.

Some SSC scenarios will presume a benign operating environment. In such conditions where the dynamic of potential conflict is not present, operational effectiveness can be expected to be relatively easily

determined. Examples include; measures such as amount of humanitarian aid delivered the number of patients treated in an earthquake area, or the number of checkpoints manned in a peace observation mission. The identification of force requirements is much more easily done in the non-threat realm, although the impact of differences in equipment capability may be more difficult to identify; this underlines the need to adopt a broad portfolio of scenario's, including benign and non-benign scenarios when conducting an analysis.

Each scenario will consist of several phases as discussed in the chapter on 'The Nature of Smaller-Scale Contingencies'. For the analysis of SSC it may be necessary to consider more than one phase while constructing MOM hierarchies. Where this is undertaken it should be noted that the MOM may change from phase to phase or that the value at which they are considered to be succeeding or to have succeeded may change.

Measures of merit and objectives are related concepts that are frequently confused. Generally a measure of merit is a continuous variable[5], for example, for a force undertaking a peace support operation a measure of merit might be the number of killings in a region per month. An objective is a single value, for example the objective may be to reduce the number of killings to a particular level (say 10 per month). Replacing a continuous metric with a binary metric, for example: is the objective achieved yes/no, is not generally good practice in analysis. Doing so can obscure valuable information; clearly a policy which results in 11 killings per month is better than one which results in 50 killings per month, even both fail to achieve the objective.

Where an analysis considers a stochastic process it is possible to consider the probability of achieving the objective as a measure of merit. This preserves as much of the information as most other simple measures, for example the average outcome.

In military analyses it may be as important to consider measures of merit relating to the risk that things will be worse than a certain level as to consider the average case. Thus the most appropriate measure may be the probability that the number of killings is greater than 30 per month, which might be the level expected to trigger media interest in the issue. Clearly it is possible to have an option, which gives a worse average outcome (median or mean) but carries a lower risk of an extremely bad outcome than the alternatives. The choice between options is then subjective.

In selecting appropriate measures for a study it is generally agreed that they should display the following characteristics:

- Valid
- Mission oriented
- Reliable
- Sensitive
- Measurable
- Meaningful
- Objective
- Discriminatory
- Inclusive
- Realistic
- Simple

[5] Possibly, as in this example, integerised.

5.1.5 Summary

Any hierarchy that is developed to answer a specific acquisition or force development problem identifies which MOMs (from amongst the many thousands of potential SSC MOM) are essential to any subsequent analysis. This in turn provides clear and unambiguous guidance for the development of the tools, techniques and models required to address SSC force development and acquisition issues. The pertinent issues should be well understood as a result of this process.

Chapter 6 – THE ROLE OF ANALYTICAL METHODS AND MODELS WITHIN THE FRAMEWORK

6.1 TAXONOMY

The aim of this chapter is to outline the analytical tools available, the type of issues they can be used to address and their relative strengths and weaknesses. To that end a taxonomy of models has been developed to allow functionally similar models to be grouped and general conclusions drawn. The taxonomy was developed by reviewing the descriptions of the methods and models in the SAS-027 database (see Chapter 'The Method and Model Database').

A number of other taxonomies have been developed. Dean S. Hartley III developed a problem domain or requires taxonomy for OOTW models[1] and the US journal *Military Operations Research*[2] has developed an OR methodology taxonomy, however, neither of these were considered to be appropriate in this case.

The taxonomy consists of the following categories of methods and models:

- Strategic forecasting
- Force generation models
- Scenario playout tools
  - Computer simulations
  - Interactive wargames
- Problem structuring methods
- Force allocation and concurrency analysis tools
- Task decomposition methods
- Checklist and handbooks
- Historical analysis
- Operational support tools

Each category is discussed separately in this chapter. Some categories correspond directly with steps in the analytical framework, for example Force allocation and concurrency analysis tools are used in Step 5, concurrency testing. Other categories contain methods and models which are applicable to several steps in the framework, for example historical analysis or problem structuring methods.

6.2 RELATIONSHIP OF METHOD CLASSES TO THE ANALYTICAL FRAMEWORK AND STRENGTHS AND WEAKNESSES OF CLASSES OF TOOLS

6.2.1 Strategic Analysis

Strategic analysis includes both quantitative and non-quantitative, judgmental approaches in a logical and systematic way to analyse the strategic environment. The strategic analysis approach categorises regions

[1] Dean S. Hartley III, Operations Other Than War: Requirements for Analysis Tools Research Report, K/DSRD-2098. Lockheed Martin Energy Systems, Inc., Oak Ridge, TN, 1996. Available at http://www.msiac.dmso.mil/ootw_documents/mrqmt71a.doc.

[2] Volume 6, Number 3, 2001.

of the world based on such factors as demographics, geographic location, religion or history in an attempt to identify possible future 'flash points' or the general nature of future crises.

Strategic analysis is useful both for the development of individual scenarios, and for ensuring that the overall mix of scenarios used in the long term planning process is appropriate. It needs to be an ongoing part of the planning process, since conflict areas change over time, and the portfolio of scenarios therefore need to be continually updated.

6.2.2 Force Generation Models

Force generation may be assessed as part of the operational analysis (step 4) and as part of concurrency testing (step 5). In step 4 it involves assessing the availability of forces to undertake a single operation; in step 5 it looks at the availability and readiness of forces to meet concurrent scenario demands.

The force generation analysis may consider issues of:

- Availability of personnel;
- Availability of equipment;
- Availability of consumables (e.g. ammunition, equipment spares);
- Training of units undertaken to make them ready to deploy on an operation (as opposed to normal peacetime training);
- Preparation of equipment ready to deploy.

It should identify where different units drawn on a common pool of people or equipment and also assess in the implication of competition for resources, such as training areas, between units preparing for an operation on the time taken to prepare.

Such analysis is usually undertaken with simple models, particularly spreadsheets, although scheduling models may also be used for more complex cases.

6.2.3 Scenario Playout Tools – Interactive Wargames

Expert wargaming, using experienced SSC planners and operators as wargame players, can be a valuable tool when assessing SSC scenarios. SSCs often have very complex interactions between multiple actors, which make computer-assisted modelling difficult. Wargaming is particularly useful for scenario and course of action development and for informing analysts of important issues that may require further research. On the down side, wargaming results and insights are generally not repeatable as adjudication will be an inherently subjective activity.

6.2.4 Scenario Playout Tools – Computer Simulations

Computer simulations for scenario playout are useful for operational analysis of SSCs (Step 4 in the analytical framework). They may also be useful for the development of campaign options (Step 2). They generally allow more quantitative analysis than interactive wargames, making them more useful for equipment investment analysis.

Some types of SSC can be readily analysed with computer simulations; others pose considerable difficulty. In the first category are operations which are mainly a matter of logistics, such as the distribution of relief supplies or Non-combatant Evacuation Operations. In the second category are operations such as Peacekeeping, where human factors are key.

There are relatively few models that have been developed specifically for analysis of smaller-scale contingencies. This reflects the difficulty of modelling *ab initio* the full spectrum of interactions in a SSC. However, many of the models developed for analysis of major theatre wars have some relevance to smaller-scale contingencies (see section 'Use of Conventional Combat Models').

The UK model DIAMOND, and the Australian model TEMPO are two examples of simulation models specifically developed for analysis of smaller-scale contingencies. DIAMOND is useful for analysis of many types of peace support operation, as well as humanitarian operations and evacuation operations. It is one of the few models which attempts to simulate peacekeeping operations. TEMPO is primarily designed to model evacuation operations, but it can be used to analyse deployment, movement and logistics in a wide range of operations.

Data collection and interpretation is a significant issue in the use of computer simulations of SSC operations. The data required is often lacking despite the frequency with which these operations are undertaken. It is therefore important to focus the modelling effort on the key aspects of the operation related to the issue being analysed to limit the data collection task. In some cases the outcome of an SSC operation rests on factors that are difficult to assess objectively, such as the response of the local population to the actions of the warring parties and the peacekeepers in a peacekeeping scenario. Modelling of these aspects needs to draw on the latest academic research on human decision making processes and, where there is uncertainty, be accompanied by appropriate sensitivity analysis.

6.2.5 Problem Structuring Methods and 'Soft' OA Methods

Problem structuring methods and 'Soft' OA methods[3] are useful in developing scenarios (Step 1) and in Cost/Effectiveness Testing (Step 4) and may also be useful in developing an understanding of a complex SSC situation as a precursor to a fully quantitative analysis.

Morphological analysis (MA)[4], using morphological fields, is a problem structuring method that is useful for reducing "messy" problem complexes to a manageable and more well-structured problem, using judgmental input from an expert group. Morphological analysis has also been given the name "Field Anomaly Relaxation" (FAR). This name refers to one of the key steps in the method. MA may be used for scenario generation, in step 1b of the process[5].

In assessing the operational capability of a force at the MOPE level there are often many significant factors which are either inherently non-quantitative in nature or in which cause-effect relationship between

[3] Soft OA techniques include: Multi-Criteria Decision Analysis, Problem Structuring Methods, Cognitive Mapping, Influence Diagrams. A general description of several soft OR and problem structuring methods, with application examples, can be found in Rosenhead, J. & Mingers, J. (Eds.), "Rational Analysis for a Problematic World Revisited", 2nd Ed., 2001, John Wiley & Sons. An online source which describes some of these methods, as well as textbook "hard" OR methods is Beasley, J. E., "OR-Notes" (http://mscmga.ms.ic.ac.uk/jeb/or/contents.html). Discussions of both soft OR and hard OR for military applications can be found in Holt, J. & Pickburn, G. "OA Techniques for the Future" (Workshop proceedings), DERA/CDA/SEA/AIR/CR000141, 30 March 2001.

[4] A general description of morphological analysis can be found in Zwicky, F., 1966, "Discovery, Invention, Research Through the Morphological Approach", Macmillan Company, Toronto. Descriptions on morphological analysis using computer support can be found in Ritchey, T., 1998, "Fritz Zwicky, Morphologie and Policy Analysis", 16th Euro Conference on Operational Analysis, Brussels.

[5] An example of morphological analysis for scenario development without computer support can be found in Johansen, I., 1996, "Planning for Future Conflict: A Morphological Approach", in Woodcock, A & Davis, D. (Eds.) "Analytical Approaches to the Study of Future Conflict", Canadian Peacekeeping Press, Clementsport, NS. Scenario generation using morphological analysis is described in Eriksson, T., 2002, "Scenario Development using Computer Aided Morphological Analysis", in Woodcock, A. (Ed.) "Analysis for Compliance and Peace Building", Canadian Peacekeeping Press, Clementsport, NS, as well as Ritchey, T., 1997, "Scenario Development and Risk Management Using Morphological Field Analysis: Research in Progress", Proceedings of the 5th European Conference on Information Systems, Volume III, p.1053-1059.

actions unknown. In these cases it may not be possible to conduct a fully quantitative analysis. If these factors are to be considered in the analysis it will be necessary to use non-quantitative or 'soft' OA methods. Such methods should not be used when quantitative methods could be applied. Where it is necessary in an analysis to combine quantitative and non-quantitative factors this should be done as late as possible in the analysis and in a transparent and auditable manner.

6.2.6 Force Allocation/Concurrency

The adequacy of the total force structure to undertake multiple scenarios concurrently is assessed in Step 5. The model SABRINA is used in the UK and US to undertake this analysis. The model does the unit accounting, comparing scenario requirements to the force structure database to determine what combinations of scenarios can be undertaken, and allows for substitution of units which are unavailable. The model can be used to analyse a static 'snapshot' of concurrent demands or the dynamic evolution of demands over time.

6.2.7 Task Decomposition Methods

Task decomposition methods may be used in defining force packages (Step 3) and for problem structuring and developing MOMs in the analysis of operational capability (Step 4). Task decomposition can be done from scratch or can use a pre-defined task breakdown taxonomy. A number of such taxonomies have been developed to assist operational planning, but may also be used within LTDP. The advantages of using a pre-defined task breakdown taxonomy are that it may be quicker to 'prune' an existing task hierarchy than constructing a new hierarchy from scratch and that the hierarchy acts as a useful checklist to ensure no tasks are omitted. However, task hierarchies developed for operational planning may be structured in a way that makes them unsuitable for some LTDP analysis.

Probably the most well-know task hierarchy is the US Universal Joint Task List (UJTL), which also has its immediate counterpart in the NATO Task List (NTL). UJTL has been developed for the purposes of operational planning and joint training, not primarily for force planning. UJTL was also not developed with SSC applications in mind, but as it is an unclassified, mature and well-spread product, it is well suited to illustrate certain aspects of task hierarchies.

As can be seen from **Figure 6**, UJTL actually consists of four hierarchies, one for each level of war as recognised by the US: strategic national (SN), strategic theatre (ST), operational (OP) and tactical (TA). (These levels roughly correspond to certain US command levels, so it is likely that few other countries see the need to differentiate between the two strategic levels, SN and ST.) At each level of war, six to eight tasks are defined, e.g., at the OP level, top level tasks OP.1 through OP.6) are defined. Those tasks are then broken down two to three levels further (not shown on **Figure 6**).

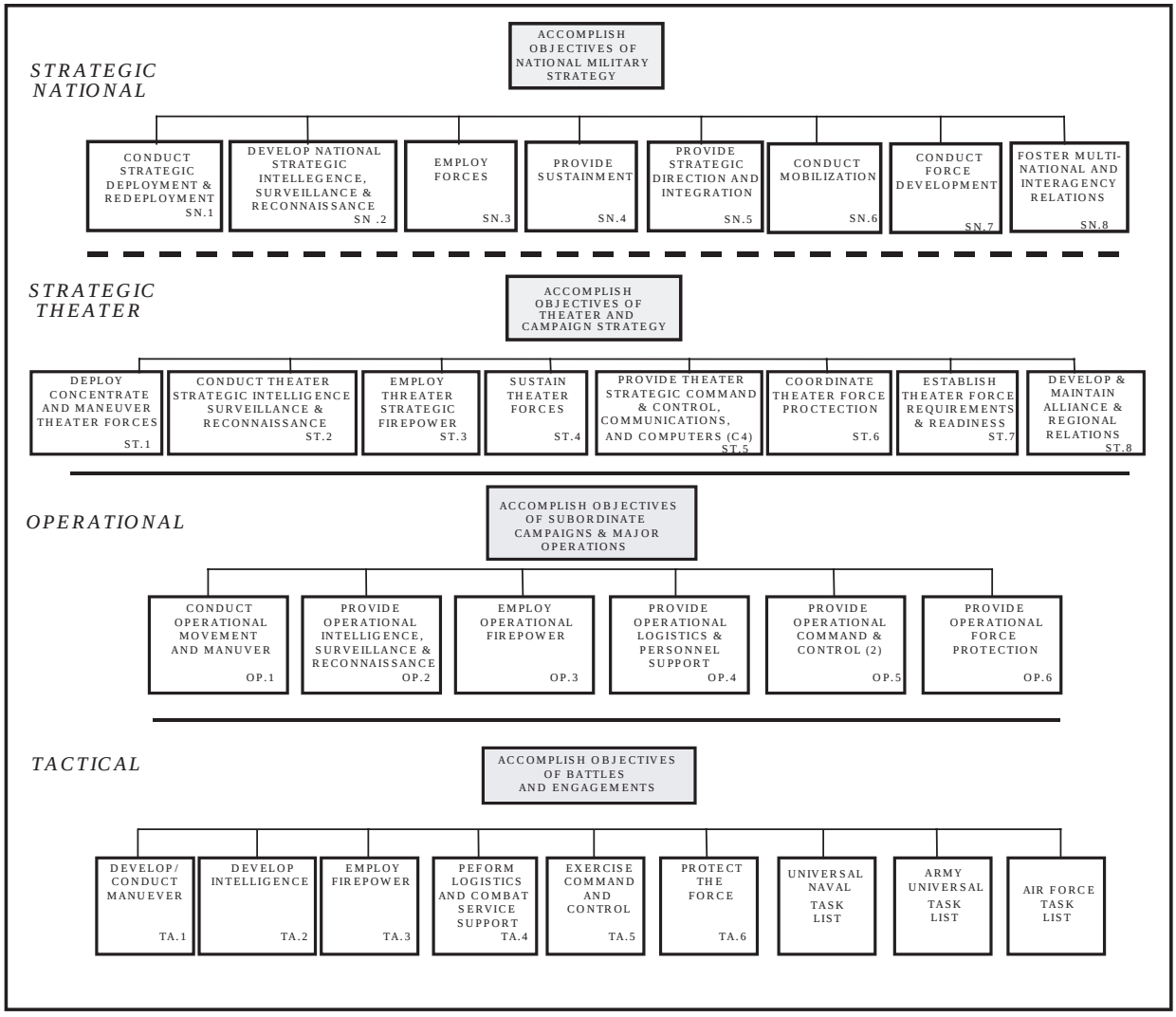

Figure 6: Overview of the Universal Joint Task List (UJTL).

From CJCSM 3500.04B (1 October 1999)

The tasks within UJTL are written in a very general way, however, that the connection between tasks at different levels of war (i.e. in different hierarchies) does not follow from UJTL itself, but will depend on the scenario and the strategy, operational concept or plan in question.

6.2.8 Checklists, Databases, and Handbooks to Support Analysis

There are a number of checklists, databases and handbooks developed to support operational planning that provide useful insights into complex SSC operations. The civilian community has also developed similar tools to guide their efforts. These tools can also be helpful when conducting SSC analysis.

Checklists. Checklists are templates developed from past experience to help formulate rapidly a comprehensive solution to a specific problem, often in a less certain and time sensitive environment. The U.S. Universal Joint Task List[6] (UJTL) discussed above in connection with task decomposition

[6] See: CJCSM 3500.04B Universal Joint Task List Version 4.0, Chairman, Joint Chiefs of Staff, Washington, D.C. 20318-9999, 1 October 1999.

methods is one military example of a checklist designed to enable commanders to identify mission essential tasks and set the conditions and standards for training based on the mission assigned to the force. The generic Political-Military Plan[7] is a template used to identify specific tasks, assign responsibilities, and integrate the efforts of the interagency civilian and military participants during advance planning. The World Food Programme (WFP) has developed and uses the Logistics Capacity Assessment (LCA) checklist[8] when conducting logistics assessments in an affected nation or region.

Databases. Military analysts are generally aware of authoritative national and NATO databases containing organisations and equipment of military forces that can be used to support their efforts. The civilian community also has several authoritative databases that provide useful information for various types of SSC operations. Three examples[9] include the following:

- ReliefWeb, a project of UN Office for the Co-ordination of Humanitarian Affairs, is the world's premier electronic clearinghouse for those needing timely information on humanitarian emergencies and natural disasters. It was designed especially to help the humanitarian community improve its response to emergencies and is updated 24 hours a day from offices located in New York, Kobe and Geneva.
- The International Atomic Energy Agency (IAEA) in Vienna maintains a listing of capabilities (e.g., human resources, special teams, equipment and materials, and specialised facilities) offered by member nations to assist a nation experiencing a nuclear accident.
- The Organisation for the Prohibition of Chemical Weapons (OPCW) has developed and maintains a database identifying the capabilities (e.g., detection equipment, decontamination material, and medical supplies) offered by its members to assist affected nations in the event of the use of or threat of use of chemical weapons.

Handbooks. National and multinational military doctrine, tactics, techniques, and procedures are usually summarised in handbooks. One example is the Coalition Operations Handbook[10] (COH) prepared by the American, British, Canadian, and Australian Armies Program. It provides general information on important topics necessary for conducting coalition operations, and also lists questions that commanders need to ask to improve the effectiveness and efficiency of the coalition to carry out its assigned missions.

The COH covers all levels of war, with a strong and useful emphasis on MOOTW and civil-military operations. Civilian organisations have also produced useful handbooks to guide their field operations. Four examples of civilian handbooks follow:

- The "Guidelines on the Use of Military and Civil Defense Assets in Disaster Relief," known as the "Oslo Guidelines,"[11] establish the basic framework for formalising and improving the effective and efficient use of foreign military and civil defence teams and expertise during international disaster relief operations.
- The Sphere Handbook[12] contains a Humanitarian Charter based on the principles and provisions of international humanitarian, human rights, and refugee law. The handbook sets out for the first

[7] See: IDA Document D-2166 "The United States" Military Role in Smaller-Scale Contingencies", August 1999.

[8] See: Outline Template for Logistics Capacity Assessment, World Food Programme, 00145 Rome, Italy, undated.

[9] See: IDA Document D-2349 "Potential Global Partners for Smaller-Scale Contingencies", August 2000.

[10] See: Coalition Operations Handbook, Washington Standardization Office, American, British, Canadian, and Australian Armies, November 2001.

[11] See: Project DPR 213/3 MCDA "Guidelines on the Use of Military and Civil Defence Assets in Disaster Relief," United Nations Department of Humanitarian Affairs, May 1994.

[12] The Sphere Project "Humanitarian Charter and Minimum Standards in Disaster Response," September 2001.

time what people affected by disasters have a right to expect from humanitarian assistance, particularly as relates to protection and assistance. Minimum standards, in effect a set of Measures of Effectiveness (MOEs), are provided in five core sectors – water supply and sanitation, nutrition, food aid, shelter and site planning, and health services.

- The Handbook of Democracy and Governance Program Indicators[13], developed by the U.S. Agency for International Development, establishes a process to define objectives, establish benchmarks, and assess progress in democracy and governance programs. The handbook contains indicators for (1) strengthening rule of law and respect for human rights, (2) competitive political processes, (3) development of politically active civil society, and (4) accountable and transparent government institutions.
- Good Practice Review 8 – Operational Security Management in Violent Environments[14] establishes the security framework and describes how civilian aid managers should (1) perform situational analysis (including threat and risk assessment), (2) develop security strategies for individuals and property, and (3) think through the decision to seek armed protection. It also describes the UN security management structure.

6.2.9 Historical Analysis

Historical experience is a valuable source of data for SSC analysis, but analysts should be careful of "fighting the last war." Statistical analysis of historical experience, like the frequency, size, and type of operation is a valid use of historical data. Likewise, assessing patterns of participation by other nations is a good use of historical data. Individual scenario operational assessments can be informed by lessons learned from historical operations where models are not available.

Historical data quality is also an issue. Surprisingly, even the recent record is somewhat incomplete. Nations have not typically recorded their participation in SSC operations in a central database or location. Therefore, as noted in the section 'Historical SSC Data', finding historical data is often difficult and time consuming. Even then there are likely holes in the data. Relying on incomplete data for statistical analysis may skew results.

6.2.10 Operational Support Tool

Tools developed for analysis in support of operational planning for smaller-scale contingencies may also be applicable to long term defence planning. Such tools are normally designed to be easy to use, so as to provide analysis results quickly while operational planning is in process. Many of them are fairly simple, such as customised spreadsheets or small databases. This simplicity and ease of use can also be helpful in long term planning applications. However, care is needed to ensure that the tools do not contain built-in assumptions or data which is applicable to the current forces but which will not be valid for the proposed future forces.

These tools are most likely to be useful in developing campaign options for a scenario (Step 2 in the analytical framework), in the construction of force packages (Step 3), and in the operational analysis (Step 4).

[13] See: Handbook of Democracy and Governance Program Indicators, U.S. Agency for International Development, August 1998.

[14] See: Good Practice Review 8 – Operational Security Management in Violent Environments, Overseas Development Institute, August 2000.

6.2.11 The Role of Analytical Methods and Models within the Framework

The applicability of the methods and models from each category in the taxonomy to the steps in the analytical framework is summarised in Table 2. The number in each cell is the corresponding number of entries in the methods and models database.

Table 2: Applicability of Methods and Models from Each Category in the Taxonomy to the Steps in the Analytical Framework

	Step 1 Inputs	Step 2 Campaign Options	Step 3 Force Packages	Step 4 Operational Analysis	Step 5 Concurrency Testing	Step 6 Total Force Structure	Step 7 Costing	Step 8 Risk/Cost Tradeoffs
Strategic Forecasting	5							
Force Generation Models				12	5			
Scenario playout tools		8		11				
Problem Structuring	3	3	3					3
Force allocation / concurrency					1			
Task decomposition methods			1	1				
Checklists & handbooks		37	37	37				
Historical Analysis	1		1	1	1	1	1	
Operational Support tools		35	35	35				

6.3 USE OF CONVENTIONAL COMBAT MODELS

Although combat may occur infrequently in SSC operations conventional combat models may be useful in the analysis of some SSC issues. Nations designed forces for future SSC operations must anticipate the most demanding situations, which may include escalation into a combat setting. How effective forces would be across the anticipated range of escalated settings can be investigated directly using traditional combat models.

Deterrence is major asset to any intervening force in a peace support operations. If peacekeeping forces are perceived by the various opposing factions to be military effective should the situation escalate, then that perception alone can prevent escalating actions from occurring. Deterrence is a function of perceived combat capability, and perceived combat capability is likely to be very highly correlated (but not perfectly correlated) with actual combat capability. Thus, the traditional combat models will give a good assessment of the deterrence capability forces.

The simple ability to play out scenarios over space and time in conventional models also has value. It permits problems and issues forces may face to be investigated, largely in a qualitative rather than quantitative fashion, across a range of assumed operational situations. Conventional computerised war game systems are particularly suited to this.

6.4 INADEQUACIES OF CURRENT METHOD/MODEL INVENTORY

The focus of current national model inventories is on a different set of activities than that needed for SSC analysis. There are more models of tank battles and other large-scale land combat than of manning checkpoints of performing humanitarian demining. This is due in part to the historical legacy of Cold War

planning, but also to the intractability of some of the problems associated with SSC operations. Typically issues not represented include:

- Multiple sides;
- Rules of engagement;
- Collateral damage;
- Non-combat interactions between actors;
- Non-combat activities;
- Human factors in performance modelling (also an issue in MTW).

Many of these issues are now being addressed by the analytical community, however, resolving some of these issues will take time.

Chapter 7 – THE METHOD AND MODEL DATABASE

7.1 THE METHOD AND MODEL DATABASE

A database of national model inventories has been developed to facilitate multinational knowledge exchange on methods and tools. The database was designed in Microsoft Access 97 and populated by all countries[1] participating in SAS-027. The database includes details of both general methods and specific software models applicable to the analysis of SSCs.

The database has been populated once and no formal periodic update is anticipated. The database holds 7 methods, 22 models and 14 combined methods and models. The User Guide to the database is at Annex E. The Models and Methods Database is at Annex F.

[1] UK, Australia, Canada, France, Georgia, Italy, NC3A, Netherlands, Norway, Sweden, Turkey, USA.

Chapter 8 – DATA ISSUES

8.1 HISTORICAL SSC DATA

The planning and design of future forces depends on the nature of operations that nations expect their forces to undertake. Although the future is inherently unknown, we must try to assess likely options. History is arguable the best single indicator of the types, frequencies, and durations of operations a nation might expect in the future. Winston Churchill's quote " The farther backwards you can look, the farther forward you are likely to see" is sage advice.

A database has been developed of SSC operations world-wide covering the recent past[1]. The 12-year period from 1990 to 2001 inclusive was selected as a reasonable time frame, as it reflects the activity levels prevalent since the end of the Cold War yet is not too onerous a production effort.

The database identifies any commitment of a nation's armed forces outside its national borders of a SSC operation. The data elements have been collected on each SSC event and each individual nation's contribution to that event.

8.2 DATA ELEMENTS COLLECTED IN SSC DATABASE

8.2.1 Part A – SSC Event Information

- Controlling organisation (e.g. UN, NATO, …);
- Operation code name assigned by controlling organisation;
- Geographic location;
- Dates of start and finish of each distinct phase of the operation;
- Description of the background to this SSC event (several paragraphs, typically), especially if it is conflict related;
- General classification of the type of mission (e.g. natural disaster, embargo enforcement, peace making, peace keeping, etc. Contractor to develop a suitable classification scheme);
- Statement of the mission of the controlling organisation;
- Overview of the opposing forces (OPFOR), if applicable.

8.2.2 Part B – Force Commitments for Each Participating Nation

- Identity of participating nation;
- National operation code name (if different from controlling organisation's code name);
- Dates of presence, if different from those in Part A;
- Statement of missions or tasks assigned (if more focussed than controlling organisation's overall mission statement in Part A);
- Numbers and type of military units assigned (if more focussed than controlling organisation's overall mission statement in Part A);
- Numbers and type of military units assigned (e.g. 2 frigates, 1 squadron of fighter aircraft, 1 infantry battalion, 2 communications detachments, 1 combat engineer company, 1 field hospital unit);

[1] The database was developed by an established military historian, Dr. Sean Maloney, under contract to the Canadian DND.

- Total numbers of troops present in-theatre over time;
- Numbers of major equipment types deployed, by category, as follows:
  - Battle tanks
  - Armoured combat vehicles
  - Artillery
  - Combat aircraft
  - Combat helicopters
  - Naval vessels
- Rotational information: dates of rotation of forces, identity of new units;
- Regular force / reserve force ratio of deployed troops; and
- Professional soldier / conscript ratio of deployed troops.

8.3 COLLECTION OF HISTORICAL DATA

Despite only covering only 12 years, this represents a considerable data collection effort. Collection of comprehensive historical data requires a wide range of sources to be used and is a demanding research task. Even so there remain a number of fields where the required data could not be collected.

It is anticipated that this SSC historical database will prove valuable to a nation in planning and designing their armed force for future operations.

Other potentially useful sources of data are:

- IGOs, IOs and NGOs which may have useful information on interactions with supporting military organisations.
- National planning checklists. Most nations will utilise checklists in preplanning for tasks/ operations that they might expect to conduct in the future.
- Academia. Institutions such as the Pearson Peacekeeping Centre and George Mason University are valuable sources of research and other information relating to SSC operations. Theses from Military History departments at Universities are sources as well.
- Lessons Learned/Lessons Identified databases held by nations and alliances, including NATO and the UN.
- Data collected during past operations. This includes any details of operations that might have been collected by a nation or alliance during an actual operation, from day-to-day operational logs, to damage assessments, to logistical records.
- Established library sources. This includes the full realm of print media (Jane's, etc.) radio and television sources, and web sites of all types.
- Military Historians.
- Post operation debriefs of participants.
- Official government post-operation enquiries/reviews. Often these will force participants to collectively clarify the details of an operation.
- Reports on past studies. These would include reports on analyses, field trials, and on the outputs from more detailed (i.e. system performance) models.
- Other analysts.

Table 3 summarises the relative utility of these various sources of data for the range of general planning activities that might support SSC operations. The five-point scale ranges from 0 to 4 as follows:

0 Irrelevant
1 Not very applicable
2 Useful
3 Very Useful
4 Highly applicable

Table 3: Relative Utility of Data Sources

DATA SOURCES	FORCE STRUCTURE PLANNING				Doctrine Development	Tactics Development	Equipment Trade Off	Op Plan Development
	Scenario Development	Force Package Development	Concurrency Testing	Costing				
NGOs, IOs …	3	2	1	4	2	2	1	3
National Planning Checklists	0	4	2	1	0	0	4	4
Academia	3	2	1	1	2	2	1	1
Lessons Learned	1	3	2	3	4	4	1	4
Data From Operations	2	2	1	2	3	3	2	3
Libraries, Media, and WWW	2	1	1	1	0	1	1	2
Military Historians	4	2	1	0	2	2	0	2
Post Op Debriefs	3	2	1	0	3	3	1	4
Govt Enquiries	0	1	1	0	1	0	0	1
Past Studies	2	3	2	3	2	2	3	2
Other Analysts	2	2	2	2	1	1	2	1

Chapter 9 – RECOMMENDATIONS AND CONCLUSIONS

9.1 RECOMMENDATIONS

Analysis in support of long term defence planning should be undertaken in accordance with the analytical framework developed by SAS-025, and should be based on a broad portfolio of scenarios including MTW and SSC operations.

In developing the analytical approach particular attention should be paid to the development of appropriate measures of merit for the SSC scenarios. These should be linked to overall measures of policy effectiveness in each scenario through a hierarchical breakdown, although it is not necessary to express the results of the analysis in these terms. As the analysis does not generally need to consider whether the SSC in its totality will succeed or fail, only whether the military component will succeed or cause a mission-critical failure in another component it is legitimate for us to simplify the system to focus solely on these issues. The consequences of another component failing to achieve its own aims can be assessed by running the analysis again with different assumptions.

The analytical method and tools should be chosen following consideration of the appropriate measures of merit, rather than the measures of merit being chosen because they are amenable to assessment in a particular favoured model. The analysis may require a range of tools to be used to assess different scenarios or different aspects of a scenario. Different steps in the framework also require different tools.

9.2 CONCLUSIONS

The term SSC is used to cover a very broad range of operations with very different characteristics. It is important that we consider the full spectrum of operations anticipated in structuring our forces and procuring military equipment.

There is a great deal of concern in the international analysis community about our ability to analyse SSC operations because of a number of intractable issues related to human factors, the duality of the civil-military activity and understanding the motivation of the participants.

But these issues are also important in major theatre war yet they haven't prevented useful analysis from being undertaken. While it may not be possible to determine what will be the outcome of an SSC operation, long term defence planning issues can be addressed provided the analysis is appropriately structured.

Due to the immaturity of the field, data collection represents a significant challenge to the analysis of SSCs, however, unlike MTW, the high frequency with which these operations are conducted provides the opportunity to get the data needed.

Chapter 10 – WIDER RECOMMENDATIONS

Analysis of SSC operations is still in its infancy and a great deal of further work is required. The work of the SAS-027 technical team has identified the following particular issues.

10.1 CO-OPERATION BETWEEN CIVILIAN AND MILITARY ANALYTICAL COMMUNITIES

Finding: SSC operations typically involve both civilian and military resources, but there currently is little understanding or co-operation between the analytical communities.

Discussion: The two communities have had different experiences during the Cold War era. The military analysts focused on defending again military threats while the civilian community focused on humanitarian issues. Both communities now find they must work together in SSC operations, but share little common understanding of the analytical capabilities or planning culture of the other. The military should recognise the international standards and procedures developed by the civilian community and the civilian community should draw upon the analytical and planning skills of the military community to enhance their capacities.

Recommendation: The RTO should facilitate closer co-operation between military and civilian analysts involved with evaluating SSC issues by conducting a series of workshops focused on key topic areas such as security sector reform, substitutability of civilian and military resources for SSC tasks, and communication tools.

10.2 ANALYSIS OF C4A OF CIVILIAN AND MILITARY RESOURCES

Finding: Among the many difficult aspects of analysing SSC operations is the issue of establishing an integrated arrangement that enables the civilian and military partners to achieve unity of effort.

Discussion: Resolution of SSC operations requires the application of multidimensional resources. During some phases of SSC operations, the military force must have freedom to take action to achieve its assigned task. During other phases, the civilian and military partners must work together to achieve unity of effort. The command, control, co-ordination, and collaboration architectures that integrate the vertical military and horizontal civilian arrangements should adapt to these changing requirements.

Recommendation: NC3A should examine alternative command, control, collaboration and co-ordination architectures (C4A) to develop appropriate models and determine under which conditions transitions among the models should take place.

10.3 UN PROCEDURES AND DATABASES

Finding: UN procedures and databases that facilitate substitutability of civilian and military resources during SSC operations currently exist, but are not employed by NATO.

Discussion: The UN Military and Civil Defence Assets (MCDA) procedures and databases developed by the Office for the Co-ordination of Humanitarian Affairs in co-ordination with NATO, identifies the modules that are usually required for disaster relief operations or humanitarian emergencies. A recent initiative is expanding these databases and procedures to encompass complex emergencies.

The Department of Peacekeeping Operations uses a Standby Arrangement System (SAS) to plan and conduct Chapter VI peacekeeping operations. Both of these systems are operational, but are not being used by NATO staff, member of partner nations for planning or conducting these types of operations.

Recommendation: Supreme Headquarters Allied Powers Europe, subordinate commands, and member and partner nations should use the UN Military and Civil Defence Asset (MCDA) and the Standby Arrangement System (SAS) procedures and databases for SSC planning.

10.4 TERMINOLOGY

Finding: Terminology used for SSC operations is not consistent or well defined.

Discussion: Military and civilian communities often use the same term with different meanings, and in other cases, terms are used by both communities without any definition; this leads to misunderstanding and confusion. During this effort, we have attempted to consolidate authoritative definitions or stipulate definitions where gaps have been found. We recognise that this effort is only a start at what must become a more comprehensive effort so that common understanding and communication can take place between the civilian and military communities, and among members of the analytical community.

Recommendation: The Military Agency for Standardisation should develop standard NATO terminology for analysing and conducting SSC operations.

10.5 CO-OPERATION BETWEEN THE CIVILIAN AND MILITARY COMMUNITIES DURING SSC OPERATIONS

Finding: There is a critical need for closer co-operation between the civilian and military communities during SSC operations.

Discussion: The application of multidimensional resources to implement strategies during SSCs necessitates close co-operation between civilian and military organisations. The procedures and mechanisms to facilitate such close working relationships are not well established. Specific guidance for assigning liaison officers in these complex environments would help nations plan for these requirements. In addition, the role of civil-military operations centres (CMOCs) established by military forces, and the co-ordination procedures to be used by military forces with the UN Joint Logistics Centre and Humanitarian Information Co-ordination (HICC) Centre established by the UN should be documented.

Recommendation: The Military Agency for Standardisation should develop guidance for effecting liaison and co-operation mechanisms for facilitating civil-military co-operation during SSCs.

10.6 HISTORICAL DATA

Finding: The usefulness of historical data in the analysis of SSC has been recognised by the team.

Discussions: Collection of data in previous operations is fragmentated. In multinational operations each nation is collecting data on their own forces without any responsibility for the totality. This problem is aggravated when non-NATO forces and civilian components are working together in a coalition. This study provided a template that identifies the type of data that would be useful for analysis of long-term needs. The procedures for collecting of such data should be developed and enforced to provide historical data for NATO led operations.

Recommendation: NC3A should consider using the data template developed for this study, and developed procedures to ensure that NATO collects historical data not only on member forces, but also other allied forces participating in NATO-led SSC operations.

10.7 INFORMATION OPERATIONS

Finding: In many types of SSC Information Operations will be one of the major instruments employed by a commander to achieve his campaign objectives.

Discussion: Information operations cover a broad range of activities from public information and psychological operations to protection of computer systems, and there are no agreed definitions. Analytical techniques in this area are immature.

Recommendations:

- The Military Agency for Standardisation should develop standard NATO terminology for information operations;
- An SAS exploratory team should be established to identify approaches to analysis of information operations.

Annex A – COMPARISON OF NATIONAL DEFINITIONS OF MOOTW TASKS

This Annex has been provided in MS Excel format.

Click here to view Excel file; Close Excel to exit file

Annex B – GLOSSARY OF TERMS RELATED TO SSC OPERATIONS

Administrative Control

Direction of exercise of authority over subordinate or other organizations in respect to administrative matters such as personnel management, supply, services and other matters not included in the operational missions of the subordinate or other organizations. (Source: AAP-6)

Direction of exercise of authority over subordinate or other organizations in respect to administration and support, including organization of Service forces, control of resources equipment, personnel management, unit logistics, individual and unit training, readiness, mobilization, demobilization, discipline and other matters not included in the operational missions of the subordinate or other organizations. (Source: Joint Pub 1-02)

Advance Planning

Interagency planning required to outline necessary multidimensional actions to prevent, mitigate, or respond to a potential complex contingency. (Source: Derived from U.S. NSPD-XX)

Air Tasking Order

A method used to task and disseminate to components, subordinate units, and command and control agencies projected sorties/capabilities/forces to targets and specific missions. (Source: ABCA Coalition Operations Handbook)

Alliance

An alliance is a result of formal agreements (i.e., treaties) between two or more nations for broad, long-term objectives which further the common interest of the members. (Source: Joint Pub 1-02)

Amnesty

The granting of a pardon for past offences – especially political offences – including, for example, human rights violations and war crimes. (Source: University of Colorado Conflict Resolution Center)

Antiterrorism

Defensive measures used to reduce the vulnerability of individuals and property to terrorist acts, to include limited response and containment by local military forces. (Source: Joint-Pub 1-02)

Antiterrorism Awareness

Fundamental knowledge of the terrorist threat and measures to reduce personal vulnerability to terrorism. (Source: Joint Pub 1-02)

Arbitration

Arbitration is a method of resolving a dispute in which the disputants present their case to an impartial third party, who then makes a decision for them which resolves the conflict. This decision is usually binding. Arbitration differs from mediation, in which a third party simply helps the disputants develop a solution on their own. (Source: University of Colorado Conflict Resolution Center)

Area of Operations

An operational area defined by the joint force commander for land or naval forces. Areas of operation do not typically encompass the entire operational area of the joint force commander, but should be large enough for component commanders to accomplish their missions and protect their forces. (Source: Pub 1-02)

Area of Responsibility

The geographical area associated with a combatant command within which a combatant commander has authority to plan and conduct operations. (Source: Joint Pub 1-02)

Arms Control

A concept that connotes: a. any plan, arrangement, or process, resting upon explicit or implicit international agreement, governing any aspect of the following: the numbers, types, and performance characteristics of weapon systems (including the command and control, logistics support arrangements, and any related intelligence-gathering mechanism); and the numeral strength, organization, equipment, deployment, or employment of the Armed Forces retained by the parties (it encompasses disarmament); and, b. on some occasions, those measures taken for the purpose of reducing instability in the military environment. (Source: Joint Pub 1-02)

Assessment

- Damage Assessment – The process of evaluating the damages and losses caused by a disaster.
- Situation Assessment – The process of evaluating the situation caused by a disaster, such as the number killed, injured, and affected.
- Needs Assessment – The process of evaluating the needs of the affected population as a result of the disaster.

(Source: OFDA Field Operations Guide)

Assisting State

A state or organization providing international disaster relief assistance. (Source: UNDHA MCDA Field Manual)

Bilateral Funding

Bilateral transactions are those undertaken by a donor country directly with an aid recipient. (Source: OECD/DAC Statistical Reporting Devices)

Donor nations often use NGOs and contractors to channel relief and development assistance. See also, multilateral funding. (Source: OECD Development web page)

Buffer Zone

A defined area controlled by a peace operations force from which disputing or belligerent forces have been excluded. A buffer zone is formed to create an area of separation between disputing or belligerent forces and reduce the risk of renewed conflict. (Source: NATO Allied Joint Publication 3.4.1. 4th Study Draft)

The neutral space between ceasefire lines. (Source: UK Army Field Manual Volume 5, Part 2)

Cantonment Area

A location for the temporary housing, disarmament, and demilitarisation of the parties' forces (within the framework of a demobilisation operation). (Source: NATO Allied Joint Publication 3.4.1 4th Study Draft)

Capability

In military operations other than war, the civilian or military resources available to perform tasks or subtasks. Resources include personnel and equipment – which may be grouped as packages, modules, or task forces to accomplish specific tasks or subtasks – and materials, services, financial assets, and time. (Source: Stipulated)

Capacity

The human resources and skills, and material resources needed by an organization to achieve its objectives or a nation to sustain its population. (Source: Stipulated)

Centres of Gravity

Those characteristics, capabilities, or localities from which a military force derives its freedom of action, physical strength, or will to fight. (Source: Joint Pub 1-02)

Civil Affairs

The activities of a commander that establish, maintain, influence, or exploit relations between military forces and civil authorities, both governmental and non governmental, and the civilian population in a friendly, neutral, or hostile area of operations in order to facilitate military operations and consolidate operational objectives. Civil affairs may include performance by military forces or activities and functions normally the responsibility of local government. These activities may occur prior to, during, or subsequent to other military actions. They may also occur, if directed, in the absence of military operations. (Source: DoDD 2000.13 and Joint Pub 1-02)

Civil Affairs Capabilities

Civil affairs force and other DoD units and organizations that are capable of planning, conducting, or otherwise assisting in civil affairs activities. (Source: DoDD 2000.13)

Civil Affairs Forces

Military units, detachments, or other military organizations that are designated as 'civil affairs' organizations and are mission-oriented and trained to plan and conduct civil affairs activities. Also includes personnel who are trained and qualified in civil affairs. (Source: DoDD 2000.13)

Civil Affairs Missions

Missions assigned to the DoD Components that are primarily designed to assist the civil sector. (Source: DoDD 2000.13)

Civil Assistance

Activities undertaken by the DoD Components to assist the civilian sector in foreign areas in the united States and its territories. (Source: DoDD 2000.13)

Civil Military Cooperation

The resources and arrangements which support the relationship between commanders and the national authorities, civil and military, and civil populations in an area where military forced are or planned to be employed. Such arrangements include cooperation with non-governmental or international agencies, organizations and authorities. (Source: Joint Pub 1-02)

Civil Police

International civilian police (CIVPOL) monitors operating in a nation under authority granted by the United Nations. CIVPOL are typically unarmed advisors who perform a monitoring function and assist with restructuring the national criminal justice system during contingency operations. (Source: Stipulated)

Coalition

Multinational action outside the bounds of established alliances, usually for single occasions or longer cooperation in a narrow sector of common interest. (Source: Joint Pub 1-02)

Coalition Action

Multinational action outside the bounds of established alliances, usually for single occasions or longer cooperation in a narrow sector of common interest. (Source: Joint Pub-1-02)

Coalition Force

A force composed of military elements of nations that have formed a temporary alliance for some specific purpose. (Source: Joint Pub 1-02)

Coastal See Control

The employment of forces to ensure the unimpeded use of an offshore coastal area by friendly forces and, as appropriate, to deny the use of the area to enemy forces. (Source: Joint Pub 1-02)

Cold Chain

The refrigerated transportation system for vaccines from the manufacturer to the individual. (Source: OFDA Field Operations Guide)

Combatant Command (Command Authority) (COCOM)

Non-transferrable command authority established by title 10 (“Armed Forces”), United States Code, section 164, exercised only by commanders of unified or specified combatant commands unless otherwise directed by the President or the Secretary of Defense. Combatant command (command authority) cannot be delegated and is the authority of a combatant commander to perform those functions of command over assigned forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction over all aspects of military operations, joint training, and logistics necessary to accomplish the missions assigned to the command. Combatant command (command authority) should be exercised through the commanders of subordinate organizations. Normally this authority is exercised though subordinate joint force commanders and Service and/or functional component commanders. Combatant command (command authority) provides full authority to organize and employ command and forces as the combatant commander considers necessary to accomplish

assigned missions. Operational control is inherent in combatant command (command authority). (Source: Joint Pub 1-02)

Combat Search and Rescue

A specific task performed by rescue forces to effect the recovery of distressed personnel during wartime or contingency operations. (Source: Joint Pub 1-02)

Combatting Terrorism

Actions, including antiterrorism (defensive measures taken to reduce vulnerability to terrorist acts) and counterterrorism (offensive measures taken to prevent, deter, and respond to terrorism), take to oppose terrorism throughout the entire threat spectrum. (Source: Joint Pub 1-02)

Combined Joint Task Force

A multinational (combined) and multi-service (joint) task force, task-organized and formed for contingency operations which required multinational and multi-service command and control exercised by the combined joint task force headquarters. (Source: NATO MC-389)

Command

The authority that a commander in the Military Services lawfully exercises over subordinates by virtue or rank or assignment. 2.An order given by a commander; that is, the will of the commander expressed for the purpose of bringing about a particular action. 3.A unit or units, an organization, or an area under the command of one individual. (Joint Pub 1-02)

Command and Control

The exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission. (Joint Pub 1-02)

Commonality

A state achieved when groups of individuals, organizations, or member states, use common doctrine, procedures, or equipment. (Source: Commander's Handbook Peace Operations)

Compatibility

Capability of two or more items or components of equipment or material to exist or function in the same systems or environment without mutual interference. (Source: Commander's Handbook Peace Operations)

Complex Contingency

A contingency involving territorial disputes, armed ethnic conflicts, or civil wars that pose threats to regional or international peace, accompanied by natural or manmade disasters causing massive human suffering, and requiring multi-dimensional operations to resolve effectively. (Source: paraphrased from PDD-56)

Complex Emergency

A humanitarian crisis in a country, region, or society where there is a total or considerable breakdown of authority resulting from internal or external conflict, and which requires an international response that goes beyond the mandate or capacity of any single agency and/or the ongoing UN country program. (Source: UNDHA MCDA Field Manual)

Complex Humanitarian Emergency

A humanitarian crisis which occurs in a country, region, or society where there is total or considerable breakdown of authority resulting from civil conflict and/or foreign aggression; a humanitarian crisis which requires an international response which goes beyond the mandate or capacity of any single agency; a humanitarian crisis where the Inter-Agency Standing Committee (IASC) assesses that it requires intensive and extensive political and management coordination. (Source: Working definition of IASC from UNHCR Airlift Operations Study 10 May 1995)

Conciliation

Conciliation involves efforts by a third party to improve the relationship between two or more disputants. It may be done as a part of mediation, or independently. Generally, the third party will work with the disputants to correct misunderstandings, reduce fear and distrust, and generally improve communication between the parties in a conflict. Sometimes this alone will result in dispute settlement; at other times, it paves the way for a later mediation process. (Source: University of Colorado Conflict Resolution Center) The reconciling effect wrought on opposing parties to a conflict by agreements resulting from successful negotiation and mediation. (Source: UK Army Field Manual Volume 5 Part 2)

Confidence Building Measures

Sometimes referred to as Confidence and Security Building Measures (CSBMs) or as Stabilizing Measures (SMs). They are intended to contribute to the lowering of tension in an area and may represent the first step towards the restoration of law and order and negotiations for a political settlement. Among the forms they may take are: (1) the establishment of an effective liaison and communications network between all parties; (2) mutual and balanced reductions in personnel and equipment; (3) the separation of forces; (4) zonal restrictions on the deployment of weapons and military personnel, including the enforcement of no-fly zones; (5) advanced reporting of military activities or exercises; (6) and joint inspections of disputed areas. (Source: University of Colorado Conflict Resolution Center)

Conflict Prevention

Activities aimed at conflict prevention are normally conducted under Chapter VI of the UN Charter. They range from diplomatic initiatives to preventative deployments of forces intended to prevent disputes from escalating to armed conflicts or from spreading. Conflict prevention can include fact-finding missions, consultations, warnings, inspections and monitoring.

Preventative deployments within the framework of conflict prevention is the deployment of operational forces possessing sufficient deterrence capabilities to prevent an outbreak of hostilities. (Source: MC 327/2)

Activities normally conducted under Chapter VI of the UN Charter, ranging from diplomatic initiatives to preventative deployments of forces intended to prevent disputes from escalating into armed conflicts of from spreading. Conflict prevention can include fact finding missions, consultation, warnings, inspections, and monitoring. (Source: JWP-0-01.1)

Consensus

Consensus decision making requires that everyone agree with a decision; not just a majority as occurs in majority-rule processes. In consensus-based processes, people must work together to develop an agreement that is good enough (though not necessarily perfect) that all of the people at the table are willing to agree to it. (Source: University of Colorado Conflict Resolution Center)

Consent

The promotion of co-operation and consent is fundamental to achieving the political end-state in all Peace Support Operations. Without the active co-operation and consent of the parties and the indigenous population there cannot be a self-sustaining peace. The need to promote co-operation and consent and the long-term demands of peace will constrain the use of all military techniques and not just the use of force. A loss of consent and non-compliance may result in an escalation of violence, sustained opposition to the Peace Support Force and a possible loss of control. In such circumstances, a Peace Support Force may find it necessary to divert its efforts to force protection tasks rather than the accomplishment of the mission. (Source: draft NATO AJP-3.4.1 'Peace Support Operations')

Consequence Management

Actions taken to mitigate the effects of a counterterrorism or weapons of mass destruction incident. (Source: Adapted from Defense Issues Volume 13, Number 33, Domestic Preparedness)

Constabulary

An armed police force organized on military lines which can operate with regular army forces or conduct independent operations. During contingency operations, a constabulary can assist with training local police forces, provide back up to local forces, or assist regular forces with restoring law and order. (Source: Derived from Webster's and stipulated)

Contingency

An emergency involving military forces caused by natural disasters, terrorists, subversives, or by required military operations. Due to the uncertainty of the situation, contingencies require plans, rapid response and special procedures to ensure the safety and readiness of personnel installations, and equipment. (Source: Joint Pub 1-02)

Contingency Contracting

Contracting performed in support of a peacetime contingency in an overseas location pursuant to the policies and procedures of the Federal Acquisition Regulatory System. (Source: Joint-Pub 1-02)

Contingent Owned Equipment (COE)

Any military equipment owned by a member of state brought to the mission area with the prior agreement of the UN secretariat and for which the member state intends to claim reimbursement. (Source: Commander's Handbook Peace Operations)

Contractorization

The process by which military operations, generally in the logistic field, are transferred to a civilian body undertaking the same task under contract. (Source: Commander's Handbook Peace Operations)

Control Zone

In military operations other than war, the mutually agreed areas either side of the buffer zone that establish the forward limits of the ceasefire line. (Source: UK Army Field Manual Volume 5, Part 2)

Coordinating Authority

The authority granted to a commander or member state assigned responsibility for coordinating specific functions or activities involving forces of two or more countries. Such a responsibility gives the authority for consultation between the agencies involved or their representatives, but does not give the authority to compel agreement. In the case of disagreement between the agencies involved, attempts should be made to resolve the issue by negotiation. In the event that this fails, the matter shall be referred to the appropriate higher authority. (Source: Commander's Handbook Peace Operations)

A commander or individual assigned responsibility for coordinating specific functions or activities involving forces of two or more Military Departments or two or more forces of the same Service. The commander or individual has the authority to require consultation between the agencies involved, but does not have the authority to compel agreement. In the event that essential agreement cannot be obtained, the matter shall be referred to the appointing authority. Coordinating authority is a consultation relationship, not an authority through which command may be exercised. Coordinating authority is more applicable to planning and similar activities than to operations. (Source: Joint Pub 1-02)

Counterterrorism

Offensive measures taken to prevent, deter, and respond to terrorism. (Source: Joint Pub 1-02)

Counterdrug

Those active measures taken to detect, monitor, and counter the production, trafficking, and use of illegal drugs. (Source: Joint Pub 1-02)

Counterdrug Non-Operational Support

Support provided to law enforcement agencies/host nations which include loan or lease of equipment without operators, use of facilities (such as buildings, training areas, and ranges), training conducted in formal schools, transfer of excess equipment, or other support provided by the Services from forces not assigned or made available to the combatant commanders. (Source: Joint Pub 1-02)

Counterdrug Operational Support

Support to host nations and drug law enforcement agencies involving military personnel and their associated equipment, and provided by geographic combatant commanders from forces assigned to them or made available to them by the Service for this purpose. Operations support does not include support in the form of equipment alone, nor the conduct of joint law enforcement investigations with cooperating civil law enforcement agencies. (Source: Joint Pub 1-02)

Counterdrug Operations

Civil or military actions taken to reduce or eliminate illicit drug trafficking. (Source: Joint Pub 1-02)

Counter Insurgency

Those military, paramilitary, political, economic, psychological, and civic actions taken to defeat insurgency. (Source: JWP 0-01.1)

Countermining

1) Land mine warfare – Tactics and techniques used to detect, avoid, breach, and/or neutralized enemy mines and the use of available resources to deny the enemy the opportunity to employ mines.

2) Naval mine warfare – The detonation of mines by nearby explosions, either accidental or deliberate.

(Source: Joint Pub 1-02)

Counterterrorism

Offensive measures taken to prevent, deter, and respond to terrorism. (Source: Joint Pub 1-02)

Country Team

The country team is composed of the senior member of each department or agency of the USG that is represented in the Host Nation. The Ambassador as Chief of the U.S. diplomatic mission heads the country team. The country team concept encourages USG agencies to coordinate their efforts. The senior member of each agency on the country team has direct communication with and line of authority from the parent organization. A member may receive home agency instructions that conflict with the consensus of the country team. Important issue conflicts are resolved internally at the U.S. national level. (Source: draft MCRP 3-33B)

Coup de Main

An offensive operation that capitalizes on surprise and simultaneous execution of supporting operations to achieve success in one swift stroke. (Source: Joint Pub 1-02)

Crisis

An incident or situation involving a threat to the United States, its territories, citizens, military forces, possessions, or vital interests that develops rapidly and creates a condition of such diplomatic, economic, political, or military importance that commitment of U.S. military forces and resources is contemplated to achieve national objectives. (Source: Joint Pub 1-02)

Crisis Management

Actions taken in an attempt to resolve a contingency situation that has reached a critical phase. (Source: Adapted Webster's)

Cross-Servicing

That function performed by one member state for another for which the other member state or UN may be charged. (Source: Commander's Handbook Peace Operations)

That function performed by one Military Service in support of another Military Service for which reimbursement is required from the Service receiving the support. (Source: Joint Pub 1-02)

Damage Assessment

The determination of the effect of attacks on targets. (Source: Joint Pub 1-02)

The process of evaluating the damages and losses caused by a disaster. (Source: OFDA Field Operations Guide)

Demilitarization

During military operations other than war, the diplomatic and military actions associated with monitoring and enforcing the removal of military forces, resources, and installations from a designated area. The actions may include temporary encampment of belligerent forces outside of the designated area prior to disarmament and demobilization to facilitate the delivery of humanitarian assistance and the resettlement of civilian population within the designated area. (Source: Stipulated)

Demilitarisation means that military personnel and equipment are withdrawn from their military function. (Source: NATO Allied Joint Publication 3.4.1 4th Study Draft)

Demilitarized Zone

A defined area in which the stationing, or concentrating of military forces, or the retention or establishment of military installations of any description, is prohibited. (Source: Joint Pub 1-02)

A defined area in which the stationing, or concentrating of military forces, or the retention or establishment of military installations of any description, is prohibited. (Source: NATO Allied Joint Publication 3.4.1 4th Study Draft)

Demobilization

The process of transitioning a conflict or wartime military establishment and defense-based civilian economy to a peacetime configuration while maintaining national security and economic vitality. (Source: Joint Pub 1-02)

During military operations other than war, the military and civilian actions necessary to sever the authority of former commanders over combatant personnel and to return the combatant personnel to civilian life. Military tasks usually include encampment of combatant personnel; individual registration and personal data collection; physical and mental health screening, treatment, and counseling; and civic education. Civilian tasks typically include longer term actions such as vocational training, education, and development of small scale entrepreneurial activities or other civilian employment opportunities. (Source: Stipulated).

Demobilisation consists of those activities that are undertaken by a Peace Support Force to reduce the number of factions' forces and their equipment in the area of operations to the levels as agreed in the peace settlement. (Source: NATO Allied Joint Publication 3.4.1 4th Study Draft)

Demonstration

1) An attack or show of force on a front where a decision is not sought, made with the aim of deceiving the enemy.

2) In military deception, a show of force in an area where a decision is not sought, made to deceive an adversary. It is similar to a feint but no actual contact with the adversary is intended. (Source: Joint Pub 1-02)

Denial Measure

An action to hinder or deny the enemy the use of space, personnel, or facilities. It may include destruction, removal, contamination, or erection of obstructions. (Source: Joint Pub 1-02)

Developmental Assistance

US Agency for International Development function chartered under chapter one of the Foreign Assistance Act of 1961, primarily designed to promote economic growth and the equitable distribution of its benefits. (Source: Joint Pub 3-08, approved for inclusion in Joint Pub 1-02)

Direct Action

Short duration strikes and other small-scale offensive actions by special operations forces to seize, destroy, capture, recover, or inflict damage on designated personnel or materiel. In the conduct of these operations, special operations forces may employ raid, ambush, or direct assault tactics; emplace mines and other munitions; conduct standoff attacks by fire from air, ground, or maritime platforms; provide terminal guidance for precision-guided munitions; and conduct independent sabotage. (Source: Joint Pub 1-02)

Directive

1) A military communication in which policy is established ort a specific action is ordered.
2) A plan issued with a view to putting it into effect when so directed, or in the event that a states contingency arises.
3) Broadly speaking, any communication which initiates or governs action, conduct, or procedure.

(Source:(AAP-6)

A written requirement that serves to direct and impel toward an action, attainment, or goal; a pronouncement requiring or prohibiting some action or conduct. USAID directives, according to their content, prescribe USAID policies and essential procedures not just for USAID itself, but for participating agencies, contractors, institutions, grantees, cooperating countries, and others acting on behalf of or in collaboration with USAID. News releases, program announcements, catalogs, price lists, training materials and correspondence are not included. (Source: USAID Automated Directives System)

Direct Liaison Authorized

That authority granted by a commander (any level) to a subordinate to directly consult or coordinate an action with a command or agency within or outside of the granting command. Direct liaison authorized is more applicable to planning that operation and always carries with it the requirement of keeping the commander granting direct liaison authority informed. Direct liaison authorized is a coordination relationship, not an authority through which command may be exercised. (Source: Joint Pub 1-02)

Disarmament

During military operations other than war, the removal, collection, accounting for, and safeguarding and/or disposal of all weapons, ammunition, and explosive devices and material from belligerent forces. (Source: Stipulated)

A sub-process of demilitarisation. It means the (controlled process) of taking weapons away from military forces. Demilitarisation and disarmament usually take place within the framework of demobilisation operations. (Source: NATO Allied Joint Publication 3.4.1 4th Study Draft)

Disaster

The occurrence of a sudden misfortune which disrupts the basic fabric and normal functioning of a society (or community). An event or series of events which gives rise to casualties and/or damage or loss of property, infrastructure, essential services or means of livelihood on a scale which is beyond the normal capacity of the affected communities to cope with unaided. (Source: UNDHA MCDA Field Manual)

The following definitions compiled at the Center for Research on the Epidemiolgy of Disasters (CRED) and are based on the glossary of terms developed at a workshop organized by the United Nations Department of Humanitarian Affairs (UNDHA) in Prague in 1991, as well as on detailed discussions and

documents from the World Health Organization (WHO), the World Meteorological Organization (WMO), and technical staff of UNDHA. The Scientific Technical Committee of the International Decade for Natural Disaster Reduction also has contributed significantly to the formulation of these terms.

- **Sudden Natural Disasters**
  - **Avalanche** – Rapid and sudden sliding and flowing of masses of usually incoherent and unsorted mixtures of snow, ice and/or rock material.
  - **Cold Wave** – Long-lasting period with extremely low surface temperature.
  - **Dam Collapse** – May be caused by a shifting of a dam foundation after an earthquake, nearby oil drilling, or due to faulty construction. Earth dams are more likely to collapse when excessive rainfall fills the reservoir to overflowing. The excess water then pours over the top of the dam, gradually washing it down and cutting deep channels into it. This weakens the entire structure so that it then gives way entirely. The result of a dam collapse is a sudden release of large amounts of water which sweep over low-lying villages, causing many deaths and injuries.
  - **Earth Flow** – A mass movement characterized by slow, down-slope translation of soil and weathered rock within a landslide.
  - **Earthquake** – Sudden break within the upper layers of the earth, sometimes breaking the surface, resulting in the vibration of the ground; when strong enough will cause the collapse of buildings and destruction of life and property. There are two scales for measuring the impact of an earthquake: the Richter scale (0 to 8.9) measures the energy dissipated in the quake and the Mercalli scale of intensity (from 1 to 12) measures the destructive effects at the site where it is measured; a reading of 1 can barely be read by the instruments while a 12 represents almost total destruction.
  - **Aftershock** – A smaller earthquake that follows the main shock and originates close to its focus. Aftershocks generally decrease in number and magnitude over time. Aftershocks that follow the main shock have to be considered as the same event as the main earthquake.
  - **Floods** – Significant rise of water level in a stream, lake, reservoir, or a coastal region. A flood is a harmful inundation of property and land utilized by man and may be of two types:
    - **Slow Flood** – caused by an increase in the volume of water produced by rain in rivers and lakes over a long period, days or weeks, mainly affecting property such as houses and cattle, and displace the inhabitants from the usual dwelling places.
    - **Sudden Flood** – caused by an increase in the volume of water in rivers and lakes, causing death, injuries and violent destruction of property. It may be the result of torrential rain, cyclones, structural failures such as the collapse of walls of a reservoir or the embankment of a river proving insufficiently robust to contain the strong flow of water.
    - **Flash Flood** – A sudden and extreme volume of water that flows rapidly and causes inundation, and, because of its nature, is difficult to forecast.
  - **Heat Wave** – Long-lasting period with extremely high surface temperature.
  - **Insect Infestation or Animal Infestation** – Pervasive influx and development of insects or parasites affecting humans, animals, crops and materials.
  - **Landslide** – Downhill sliding or falling movement of dry soil and rock. Landslides are difficult to estimate as an independent phenomenon. It seems appropriate, therefore, to associate landslides with other hazards such as tropical cyclones, severe local storms and river floods. The term "landslide" is used in its broad sense to include downward and outward movement of slope-forming materials (natural rock and soil). It is caused by heavy rain, soil erosion and earth tremors and may also happen in areas under heavy snow (avalanches).

- **Power Shortage** – Total or partial disruption of electrical power for an extended period causing significant damage to services and normal livelihood.
- **Storm** – Atmospheric disturbance involving perturbations of the prevailing pressure and wind fields, on scale ranging from tornadoes (one km across) to extra tropical cyclone (2,000-3,000 km across).
- **Hail** – Derives from the impact of hailstones, precipitated particles of ice, and is most commonly associated with thunderstorms.
- **High Wind Cyclone** – This storm type includes hurricane and typhoon. Large-scale close circulation system in the atmosphere with low barometric pressure and strong winds that rotate counter clockwise in the northern hemisphere and clockwise in the southern hemisphere. The normal path of these storms curves in the opposite direction to its rotation, i.e., clockwise in the northern hemisphere and counterclockwise in the southern hemisphere. The system is referred to as a cyclone in the Indian Ocean and South Pacific, hurricane in the western Atlantic and eastern Pacific, and typhoon in the western Pacific. Hurricanes and typhoons are the same storm types as tropical cyclones. They are the local names for storms which originate in the Caribbean and China Sea region respectively. Hurricanes are large atmospheric vortices with wind speeds of more than 100 kph; they develop in the doldrums of the tropics and move in an often erratic way towards higher latitudes.
- **Sand Storm** – Dust or sand energetically lifted to great heights by strong and turbulent winds.
- **Storm Surges** – A sudden rise of sea as a result of high winds and low atmosphere pressure; sometimes called a storm tide, storm wave, or tidal wave (this name indicates waves caused by the tidal action of the moon and the sun in the same way as regular ocean tides. It is often erroneously given to tsunamis, see below). Generally affects only coastal areas but may intrude some distance inland.
- **Thunderstorm** – A large cumulus cloud on which localized centers of electrical charge have developed.
- **Tornado** – Localized and violently destructive windstorm occurring over land. Characterized by a long funnel-shaped cloud composed of condensation and debris extending to the ground and marking a path of greatest destruction.
- **Tropical Storm** – Formed over open seas and characterized by extreme wind damage, intense downpours of rain, wave storms at sea, severe coastal wave action, marine flooding, riverine flooding, lightning, and thunderstorms.
- **Tsunami and Tidal Wave** – Series of large sea waves generated by sudden displacement of seawater (caused by earthquake, volcanic eruption or submarine landslide); capable of propagation over large distance.
- **Volcanic Eruption** – Discharge of fragmentary ejecta, lava and gases from a volcanic vent. The most common consequences are displacement of population, temporary food shortage and volcanic ash landslides called lahar.
- **Glowing Avalanches** – Hot pyroclastic flows formed from freshly erupted magma, with temperatures of up to 1,200 degrees. The pyroclastic flow is formed from rock fragments derived from a volcanic explosion which, when suspended in a flow of rapidly expanding gas and dust, surges down the flanks of the volcano at speeds of up to several hundred kilometers per hour, to distances often up to 40 km from the event. This is the most dangerous type of volcanic eruption.

- **Long-Term Natural Disasters**
  - **Drought** – Period of deficiency of moisture in the soil such that there is inadequate water required for plants, animals, and human beings. A drought causes malnutrition, epidemics and displacement of populations from one area to another.
  - **Desertification** – The processes by which an already arid area becomes even more barren, less capable of retaining vegetation, and progresses towards becoming a desert. This is often a cause of long-term disasters. This type of disaster will normally be entered as a consequence.
  - **Epidemic** – An unusual increase in the number of cases of an infectious disease which already exists in the region or population concerned. The appearance of a significant number of cases of an infectious disease introduced in a region or population that is usually free from that disease. Epidemics may be the consequence of disasters of another kind, such as tropical storms, floods, earthquakes, droughts, etc. Epidemics may also attack animals, causing local economic disasters.
  - **Famine** – Catastrophic food shortage affecting large numbers of people due to climatic, environmental and socio-economic reasons. The cause of the famine may produce great migrations to less-affected regions.
  - **Food Shortage or Crop Failure** – Abnormal reduction in crop yield such that it is insufficient to meet the nutritional or economic needs of the community. This type of disaster is always a consequence of another disaster type and will therefore be classified under the major cause.
- **Sudden Man-Made Disasters**
  - **Structural Collapse** – The disaster type "structural collapse" is used when the structure collapse results independently, without any outside force. If the collapse is due to an outside force such as an earthquake, tornado, or explosion, then it is classified under the initial causal factor.
  - **Building Collapse** – Entails the sudden falling apart of a building in the absence of any outside force.
  - **Mine Collapse or a Mine Cave-In**. Takes place in an excavation below the earth's surface. In a cave-in, parts of the overlying rocks fall down and tunnels are blocked.
  - **Transport Accidents**
  - **Air Transport Accidents** – Involve violent impacts of aircraft which transport passengers or freight.
  - **Land Transport Accidents** – Include collisions or derailments of freight or passenger trains or vehicles in towns and in the country.
  - **Sea Transport Accidents** – Involve ships. Ships may sink in a storm, explode, burn, crash into each other, crash into an iceberg or rock, capsize, or vanish without explanation. Note: sea disasters caused by conflict are classified under Conflict. Those which result in oil slicks are classified under Industrial/technological accident (pollution).
  - **Industrial or Technological Accident** – Accidental release occurring during the production, transportation or handling of hazardous chemical substances.
  - **Explosions** – Disasters will only be classified as explosions when the explosion is the actual disaster. If the explosion is the cause of another disaster, the event will be classified as the resulting disaster.
  - **Chemical Explosions** – Result in violent destruction caused by the explosion of combustible material, nearly always of chemical origin.
  - **Mine Explosions** – Occur when natural gas or coal dust reacts with an oxidant.

- **Nuclear or Thermonuclear Contamination** – Accidental release of radiation occurring in civil or military nuclear facilities, exceeding the internationally established safety levels.
- **Pollution** – Degradation of one or more elements or aspects in the environment by noxious industrial, chemical or biological wastes, from debris or man-made products or from mismanagement-management of natural and environmental resources.
- **Acid rain** – A washout of an excessive concentration of acidic compounds in the atmosphere, resulting from chemical pollutants such as sulfur and nitrogen compounds. When deposited these increase the acidity of the soil and water causing agricultural and ecological damage.
- **Atmosphere pollution** – Contamination of the atmosphere by large quantities of gases, solids and radiation produced by the burning of natural and artificial fuels, chemicals and other industrial processes and nuclear explosions.
- **Chemical pollution** – A sudden pollution of water or air near industrial areas, leading to internal body disorders that may be fatal, or to external disorders with permanent damage of the skin.
- **Chlorofluoro-carbons (CFC)** – A group of chemical compounds used in industry and in the house-hold, of which the excessive and universal use is believed to be one of the causes of ozone depletion, with resulting environmental damage.
- **Oil pollution** – Pollution of oceans, lakes, or rivers. This results from the discharge of hydrocarbons (often petroleum or crude oil) from tanks, tankers or pipelines during transportation or storage. Oil spills are accidental discharge often resulting from storms or collisions. Oil pumping is intentional discharge from flushing the holds of tankers. Oil slicks are generally small discharges on the water's surface. Black tides are substantial deposits on tidelands from oil spills or dumping.
- **Fires** – Usually caused by man but may occasionally occur through natural causes, for example, forest fires can be caused by lightning in thunderstorms. Note: when a fire is a result of a natural cause, it will be classified under the natural cause.
- **Forest or Grassland Fires** – Fires in forest or bush grasslands that cover extensive areas and usually do damage. They may start by natural causes such as volcanic eruptions or lightning, or they may be caused by arsonists or careless smokers, by those burning wood or by clearing a forest area.

- **Long-Term Man-Made Disasters**
  - **National (Civil Strife, Civil War) Conflict** – Warlike encounters between armed groups from the same country which take place within the borders. This may pose large-scale medical problems such as epidemics, lack of water, accumulation of rubbish, displaced persons, refugees, food shortage, hunger, etc.
  - **International Conflict** – Warlike encounters between two or more armies from different countries. These may cause large-scale mass movements of refugees and displaced persons.

Disaster Alert

The period from the issuing of a public warning of an imminent disaster threat to its actual impact. The period during which pre-impact precautionary or disaster containment measures are taken. (Source: UNDHA MCDA Field Manual)

Disaster Control

Measures taken before, during, or after hostile action or natural or manmade disasters to reduce the probability of damage, minimize its effects, and initiate recovery. (Source: Joint Pub 1-02)

Disaster Management

A collective term encompassing all aspects of planning for and responding to disasters, including both pre-end post- disaster activities. It refers to the management of both the risks and the consequences of disasters. (Source: UNDHA MCDA Field Manual)

Disaster Mitigation

A collective term used to encompass all activities undertaken in anticipation of the occurrence of a potentially disastrous event, including preparedness and long-term risk reduction measures. (Source: UNDHA MCDA Field Manual)

Disaster Preparedness

Measures that ensure the readiness and ability of a society to forecast and take precautionary measures in advance of an imminent threat and respond to and cope with the effects of a disaster by organizing and delivering timely and effective rescue, relief, and other appropriate post-disaster assistance. (Source: UNDHA MCDA Field Manual)

Distribution Point

A point at which supplies and/or ammunition, obtained from supporting supply points by a division or other unit, are broken down for distribution to subordinate units. Distribution points usually carry no stocks; items drawn are issued completely as soon as possible. (Source: Joint Pub 1-02)

Distribution System

That complex of facilities, installations, methods, and procedures designed to receive, store, maintain, distribute, and control the flow of military materiel between the point of receipt into the military system and the point of issue to using activities and units. (Source: Joint Pub 1-02)

DoD Support to Counterdrug Operations

Support provided by the Department of Defense to law enforcement agencies to detect, monitor, and counter the production, trafficking, and use of illegal drugs. (Source: Joint Pub 1-02)

Embargo

A prohibition on the entry or egress of shipping into a port. Nowadays frequently used for prohibitions of certain categories of cargo such as munitions. (Source: JWP 0-01.1)

Emergency Support Function (ESF)

A functional area of response activity established to facilitate the delivery of Federal assistance required during the immediate response phase of a disaster to save lives, protect property and public health, and to maintain public safety.

ESFs represent those types of Federal assistance which the State will most likely need because of the overwhelming impact of a catastrophic or significant disaster on its own resources and response capabilities, or because of the specialized or unique nature of the assistance required. ESF missions are designed to supplement State and local response efforts. (Source: The Federal Response Plan)

End State

What the National Command Authorities want the situation to be when operations conclude – both military operations, as well as those where the military is in support of other instruments of national power. (Source: Joint Pub 1-02)

Ensuring Freedom of Navigation

Operations conducted to demonstrate US or international rights to navigate air or sea routes. (Source: Joint Pub 1-02

Evacuee Assembly Area (EAA)

A location at which evacuees normally first assemble prior to onward movement to the evacuee handling centre. (Source: ADFP 43 Evacuation Operations)

Evacuee Handling Centre (EHC)

A location where evacuees are processed and held prior to onward movement to the evacuation point. (Source: ADFP 43 Evacuation Operations)

Exclusion Zone

A zone established by a sanctioning body to prohibit specific activities in a specific geographic area. The purpose may be to persuade nations or groups to modify their behavior to meet the desires of the sanctioning body or face continued imposition of sanctions, or use or threat of force. (Source: Joint Pub 1-02)

Geographical area within which a government states its intention to enforce the exclusion of all military units of a designated nation or nations or other grouping, using force if necessary. (Source: JWP 0-01.1)

Executive Agent

A term used in the Department of Defense and Service regulations to indicate a delegation of authority by a superior to a subordinate to act on behalf of the superior. An agreement between equals does not create an executive agent. For example, a Service cannot become a Department of Defense Executive Agent for a particular matter with simply the agreement of the other Services; such authority must be delegated by the Secretary of Defense. Delegation as executive agent, in and of itself, confers no authority. The exact nature and scope of the authority delegated must be stated in the document designating the executive agent. An executive agent may be limited to providing only administration and support or coordinating common functions, or it may be delegated authority, direction, and control over specified resources for specific purposes. (Source: Joint Pub 1-02)

Executive Authority

In relation to law enforcement, Executive Authority provides a law enforcement agency the right to enforce local laws. Executive Authority allows police to respond to local crimes, detain suspects, and use deadly force when there is a risk of death or serious bodily harm.

In general, Executive Authority remains with the local law enforcement, but in some instances international police assume the responsibility for law enforcement. (Source: PDD-71)

Facilitation

Facilitation is done by a third party who assists in running consensus-building meetings. The facilitator typically helps the parties set ground rules and agencies, enforces both, and helps keep the participants on track and working toward their mutual goals. While similar to a mediator, a facilitator usually plays a less active role in the deliberations and often does not see resolution; as a goal of his or her works, as mediators usually do. (Source: University of Colorado Conflict Resolution Center)

Food Basket

The particular selection of food commodities that are handled by the assistance operation and included in the rations distributed to the target beneficiaries. (Source: OFDA Field Operations Guide)

Food for Work

Disaster relief intervention designed to use capabilities of the affected population to improve systems within the community by paying workers with food. (Source: OFDA Field Operations Guide)

Food Security

The term used to describe a population's access to basic food requirements. Food security is generally measured at the household level and takes into account market access, demographics, health, household income, income sources, agricultural production, socio-cultural constraints, and security. The assessment process makes use of quantitative data and qualitative information to establish relative risk and prioritization for all types of humanitarian assistance. (Source: Stipulated)

Force Protection

Security program designed to protect soldiers, civilian employees, family members, facilities, and equipment, in all locations and situations, accomplished through planned and integrated application of combating terrorism, physical security, operations security, personal protective services, and supported by intelligence, counterintelligence, and other security programs. (Source: Joint Pub 1-02)

Foreign Assistance

Assistance ranging from the sale of military equipment to donations of food and medical supplies to aid survivors of natural or man-made disasters; United States assistance takes three forms – development assistance, humanitarian assistance, and security assistance. (Source: Joint Pub 3-08, approved for inclusion in Joint Pub 1-02)

Foreign Disaster

An act of nature (such as a flood, drought, fire, hurricane, earthquake, volcanic eruption, or epidemic), or an act of man (such as a riot, violence, civil strife, explosion, fire, or epidemic), which is or threatens to be of sufficient severity and magnitude to warrant United States foreign disaster relief to a foreign country, foreign persons, or to an international; organization. (Source: Joint Pub 3-08, approved for inclusion in Joint Pub 1-02)

Foreign Disaster Relief

Prompt aid which can be used to alleviate the suffering of foreign disaster victims. Normally it includes humanitarian services and transportation; the provision of food, clothing, medicine, beds and bedding;

temporary shelter and housing; the furnishing of medical materiel, medical and technical personnel; and making repairs to essential services. (Source: Joint Pub 3-08, approved for inclusion in Joint Pub 1-02)

Foreign Internal Defense

Participation by civilian and military agencies of a government in any of the action programs taken by another government to free and protect its society from subversion, lawlessness, and insurgency. (Source: Joint Pub 1-02)

Foreign Emergency Support Team

In consequence management (CM) scenarios involving intentional/malevolent use of WMD or CBRN material contamination, Department of State's Office of Counter Terrorism deploys a Foreign Emergency Support Team (FEST). It provides the Ambassador with robust communication and other capabilities and allows the Ambassador to operate a 24 hour Command Center. It is made up of FBI, DOD, Department of Health and Human Services (DHHS), DOE, DOJ, DOS and scientific assets that help differentiate CM from similar man-made disasters and helps preserve evidence. (Source: draft MCRP 3-33B, 17 March 2000)

Foreign Humanitarian Assistance

Operations conducted to relieve or reduce the results of disaster brought on by either natural (flood, drought, fire, hurricane) or manmade (civil violence, nuclear, biological or chemical accident) causes, or other endemic conditions such as human pain, disease, hunger or privation in countries or regions outside the United States. It is generally limited in scope and duration: it is intended to supplement or complement efforts of the host nation civil authorities or agencies with primary responsibility for providing assistance. (Source: Draft MCRP 3-33B, 17 March 2000**)**

Forward Presence

Strategic choice to maintain forces deployed at distance from the home base or stationed overseas to demonstrate national resolve, strengthen alliances, dissuade potential adversaries, and enhance the ability to respond quickly to contingencies. (Source: JWP 0-01.1)

Framework Nation

A nation within an alliance or coalition that agrees to provide the key military command and control elements and other essential combat support and service support capabilities needed to form an effective multinational force for a contingency operation. Other alliance or coalition participants contribute national force elements that operate under the operational or tactical control of the framework nation's commander while planning and executing missions assigned to the multinational force during the contingency. (Source: Stipulated)

Freedom of Navigation and Operation

Operations of naval diplomacy designed to challenge an attempt to restrict free use of seas by the passage of combat force. Freedom of navigation operations may be symbolic or coercive. (JWP 0-01.1)

Functional Area

A subdivision of a sector into finite actions and resources with relatively homogeneous characteristics that can be subjected to assessment and coordinated corrective actions by appropriate authorities. Currently,

there are twenty-one functional areas used by the U.S. Government. (Source: Adapted from draft Interagency Assessment Checklist)

General Agreement

Basic agreements normally conducted at government to UN level. They are sometimes known as an umbrella agreement or as a Memorandum of Understanding. (Source: Commander's Handbook Peace Operations)

Guarantee and Denial of Movement

Those operations mandated to guarantee or deny movement by air, land, or sea in particular areas and over certain routes. (Source: JWP 3-50)

Host Nation Support

Civil and/or military assistance rendered by a nation to foreign forces within its territory during peacetime, crisis or emergencies, or war based on agreements mutually concluded between nations. (Source: Joint Pub 1-02)

Humanitarian and Civic Assistance

Assistance to the local populace provided by predominantly US forces in conjunction with military operations and exercises. This assistance is specifically authorized by Title 10, United States Code, section 401, and funded under separate authorities. Assistance provided under these provisions is limited to (1) medical, dental, and veterinary care provided in rural areas of a country; (2) construction of rudimentary surface transportation systems; (3) well drilling and construction of basic sanitation facilities; and (4) rudimentary construction and repair of public facilities. Assistance must fulfill unit training requirements that incidentally create humanitarian benefit to the local populace. (Source: Joint Pub 1-02)

Humanitarian Assistance

Programs conducted to relieve or reduce the results of natural or manmade disasters or other endemic conditions such as human pain, disease, hunger, or privation that might present a serious threat to life or that can result in great damage to or loss of property. Humanitarian assistance provided by US forces is limited in scope and duration. The assistance provided is designed to supplement or complement the efforts of the host nation civil authorities or agencies that may have the primary responsibility for providing humanitarian assistance. (Source: Joint Pub 1-02)

Humanitarian Coordinator

The senior United Nations official appointed by the Inter-Agency Standing Committee (IASC) and the Office for the Coordination of Humanitarian Affairs (OCHA) to oversee the coordination of all aspects of humanitarian affairs for the emergency. The humanitarian coordinator is responsible for defining the strategy, policy, and goals of the humanitarian assistance program. The coordinator also oversees information collection, analysis, dissemination; conducts humanitarian diplomacy; plans the transition from relief to development; coordinates operational security of humanitarian relief efforts; and serves as the principal link between the humanitarian community and the political and military sectors of the operation. While the coordinator advises the United Nations Special Representative (UNSR), the coordinator maintains a direct reporting responsibility to OCHA. (Source: Stipulated)

Humanitarian Demining Activities

Reduce or eliminate the threat to non-combatants and friendly military forces posed by mines and other explosive devices by training host nation personnel in their recognition, identification, marking, and safe destruction. Provide instruction in program management, medical, and mine awareness activities. (Source: Special Operations Command Posture Statement 1998)

Humanitarian Operations

In the military context, humanitarian operations are conducted to relieve human suffering, especially in circumstances where responsible authorities in the area are unable, or possibly unwilling, to provide adequate service support to the population. Humanitarian missions may be conducted in the context of a PSO and either preceded or accompany humanitarian activities provided by specialized civil organisations. (Source: MC 327/2)

Operations conducted to relieve human suffering. Military humanitarian activities may accompany, or be in support of humanitarian operations conducted by specialized civilian organisations. (Source: JWP 0-01.1)

Humanitarian Relief

Activities conducted to alleviate human suffering. Humanitarian relief may precede or accompany humanitarian activities provided by specialised civilian organisations. (Source: NATO Allied Joint Publication 3.4.1 4th Study Draft)

Immediate Response

Immediate response is any form of immediate action taken by a DoD component or military commander under the authority of DoDD 3025.1 and any supplemental guidance prescribed by the head of a Department of Defense component, to assist civil authorities or the public to save lives, prevent human suffering, or mitigate great property damage under imminently serious conditions occurring where there has not been any declaration of catastrophic or major disaster or emergency by the president or attack. A military commander at the scene of a foreign humanitarian disaster may undertake prompt relief operations when time is of the essence and when humanitarian considerations make it advisable to do so. The commander should report at once the action taken and request guidance. Reimbursement of funds expended under these circumstances is not assured. Responding elements must track costs incurred by maintaining detailed records of expenditures, and provide detailed billing information to support their reimbursement for supplies an/or services provided in support of foreign disaster relief. (Source: draft MCRP 3-33B, 17 March 2000)

Impartiality

This refers to the attitude of the third party. An impartial third party will not prefer one side or one side's position to another's, but will approach them both as equally valid. In principle, this objective can be hard to achieve, although a third party can make an active effort to treat each side the same, even if her or she tends to prefer one party or one party's argument over the other. (Source: University of Colorado Conflict Resolution Center)

Implementing Agreement

Agreement between UNHCR and a partner which defines the conditions governing the implementation of a project. (Source: UNHCR Emergency Operations Handbook)

In Extremis

A situation of such exceptional urgency that immediate action must be taken to minimize imminent loss of life or catastrophic degradation of the political or military situation. (Source: Joint Pub 1-02)

Information

Facts, data, or instructions in any medium or form. (Source: Joint Pub 1-02)

Information Operations

Actions taken to affect adversary information and information systems while defending one's own information and information systems. (Source: Joint Pub 1-02)

Intelligence

1) The product resulting from the collection, processing, integration, analysis, evaluation, and interpretation of available information concerning foreign countries or areas.
2) Information and knowledge about an adversary obtained through observation, investigation, analysis, or understanding.

(Source: Joint Pub 1-02)

Interagency Coordination

The process that enables the various organizations of the U.S. government to work together during planning and execution of contingency operations to achieve unity of purpose and effort and to work with other United Nations, international, regional, or non-governmental organizations or allied nations to achieve similar objectives. (Source: Stipulated)

Inter-Entity Boundary Line

The line established within a nation that delineates the separation between territories controlled by warring factions. The inter-entity boundary line is a temporary control measure used by the peacekeeping or peace enforcement force to separate the factions until they can be united under the control of a national government. (Source: Stipulated)

Internally Displaced Person (see People Classifications)

Internal Defense and Development

The full range of measures taken by a nation to promote its growth and protect itself from subversion, lawlessness, and insurgency. It focuses on building viable institutions (political, economic, social, and military) that respond to the needs of society. (Source: Joint Pub 1-02)

Internal Security

Any military role that involves primarily the maintenance or restoration of law and order and essential services in the face of civil disturbances and disobedience, using minimum force.

It covers actions dealing with minor civil disorders, with no political undertones, as well as riots savouring of revolts and even the early stages of rebellion. (Source: JWP 0-01.1)

International Disaster Relief Assistance

Material, personnel, and services provided to a Receiving State to meet the needs of those affected by a disaster. It includes all actions necessary to grant and facilitate movement over the territory, including the territorial waters and the airspace, of a Transit State. It is exclusively humanitarian and impartial in character. It is based on the respect of the principle of the sovereignty of States and is executed without discrimination of any kind based on race, color, sex, language, or political or religious convictions. It shall be provided free of charge to the Receiving State, unless otherwise agreed between the Assisting and Receiving States beforehand. (Source: UNDHA MCDA Field Manual)

International Logistics

The negotiating, planning, and implementation of supporting logistics arrangements between the nations, their forces, and agencies. It includes furnishing logistic support (major end items, materiel, and/or services) to, or receiving logistic support from, one or more friendly foreign governments, international organizations, or military forces, with or without reimbursement. It also includes planning and actions related to the intermeshing of a significant element, activity, or component of the military logistic systems or procedures of the United States with of one or more foreign governments, international organizations, or military forces on a temporary or permanent basis. It includes planning and actions related to the utilization of United States logistics policies, systems, and/or procedures to meet requirements of one or more foreign governments, international organizations, or forces. (Source: Joint Pub 1-02)

International Police Task Force

A United Nations organization of international civilian police created to support contingency operations by rebuilding local capacity to maintain law and order. (Source: Stipulated)

Interposition

These operations take place in areas of recent or potential, rather than actual, conflict, either between states or within a state where tension is rising between parties. Though there would be consent to the operation, at least from the Host State, a peace plan or formal cease-fire may not have been agreed and the situation may be characterized by sporadic outbreaks of violence. Interposition operations will generally take the form of the establishment of a buffer zone (see also Zone of Separation). (Source: draft NATO AJP-4.3.1. Peace Support Operations)

Interoperability

The ability of systems, units, or forces to provide services to and accept services from other systems, units, or forces and to use the services so exchanged to enable them to operate effectively together. (Source: Joint Pub 1-02)

Joint

Connotes activities, operations, organizations, etc., in which elements of two or more Military Departments participate. (Joint Pub 1-02)

Joint Force Commander

A general term applied to a combatant commander, sub-unified commander, or joint task force commander authorized to exercise combatant command (command authority) or operational control over a joint force. (Source: Joint Pub 1-02)

Lead Agency

Designated among U.S. Government agencies to coordinate the interagency oversight of the day-to-day conduct of an ongoing operation. The lead agency is to chair the interagency working group established to coordinate policy related to a particular operation. The lead agency determines the agenda, ensures cohesion among the agencies and is responsible for implementing decisions. (Source: Joint Pub 3-08, approved for inclusion in Joint Pub 1-02)

Lead Nation

A nation within an alliance or coalition that agrees to assume operational responsibility for providing support (e.g., operation of an aerial or sea port of debarkation and embarkation) to other participating forces during a contingency operation. The support is usually required by the lead nation forces and allied requirements are incorporated into the overall plan and executed on a gratis basis. (Source: Stipulated)

Legitimacy

Legitimacy refers to the perceived fairness of a dispute resolution process. For example, fair elections or litigation based on socially-accepted laws are generally considered legitimate, as are the decisions that result from such processes. On the other hand, elections where voters are harassed or forced to vote a particular way are usually considered illegitimate, as are court decisions handed down by biased courts. Legitimacy of decision making procedures is important, because illegitimate procedures almost always escalate conflicts, making their ultimate resolution more difficult. (Source: University of Colorado Conflict Resolution Center)

Lesson Learned

The conclusions extracted from reviewing a development program or activity by participants, managers, customers or evaluators with implications for effectively addressing similar issues/problems in another setting.. (Source: USAID Automated Directives System)

Letter of Assist

A contractual document issued by the UN to a government authorizing it to provide goods or services to a peacekeeping operation; the UN agrees either to purchase the goods or services or authorizes the government to supply them subject to reimbursement by the UN. (Source: Joint Pub 3-08, approved for inclusion in Joint Pub 1-02)

Liaison

That contact or intercommunication maintained among elements of military forces and between military and civilian organizations to ensure mutual understanding and unity of purpose and action. (Source: Adapted from Joint Pub 1-02)

Life Support

The provision of food, water, shelter, and emergency medical treatment to military or civilian personnel. (Source: Stipulated)

Low Density/High Demand Asset

Force elements consisting of major platforms, weapons systems, units, and/or personnel that possess unique mission capabilities and are in continual high demand to support worldwide joint military operations. (Source: CJCS Message 231301Z JUL 96, Subject: Global Military Force Policy)

Low Intensity Conflict

Political-military confrontation between contending states or groups below conventional war and above the routine, peaceful competition among states. It frequently involves protracted struggles of competing principles and ideologies. Low intensity conflict ranges from subversion to the use of armed force. It is waged by a combination of means employing political, economic, informational, and military instruments. Low intensity conflicts are often localized, generally in the Third World, but contain regional and global security implications. (Source: Joint Pub 1-02)

Low Visibility Operations

Sensitive operations wherein the political-military restrictions inherent in covert and clandestine operations are either not necessary or not feasible; actions are taken as required to limit exposure of those involved and/or their activities. Execution of these operations is undertaken with the knowledge that the action and/or sponsorship of the operation may preclude plausible denial by the initiating power. (Source: Joint Pub 1-02)

Major Theater War

A state of open, armed, active, and often prolonged conflict carried on between nations. The conflict is typically confined to a region, but the effects may well impact beyond that area. These conflicts usually include large-scale cross-border aggression employing conventional forces, but may include the use or threaten use of nuclear, biological, and chemical weapons, information warfare, terrorism, or other asymmetric means. (Source: Derived from Webster's Dictionary, the Quadrennial Defense Review, December 1997, and Defense Science Board reports)

Measures of Effectiveness

Measures of Effectiveness (MOE) provide an underlying basis for quantifying progress. MOEs should be based on task-related, measurable criteria. They can be used as an interagency tool to achieve common understanding. MOE are a means of determining information requirements and can provide a common language for resource allocation and phase transition. Examples of MOE include morbidity/mortality rate reduction and tons of relief supplies delivered. (Source: Stipulated)

Although it is possible for some measurable criteria to be subjective – normally based on expert judgment of an assessor – most MOE should be objective. While it must be recognized that the success of the mission cannot be measured by numbers and percentages alone, quantitative MOE are one of the indicators of an operation's progress. (Source: draft MCRP 3-33B, 17 March 2000)

Mediation

Mediation is a method of conflict resolution that is carried out by an intermediary who works with the disputing parties to help them improve their communication and their analysis of the conflict situation, so that the parties can themselves identify and choose an option for resolving the conflict that meets the interests or needs of all the disputants. Unlike arbitration, where the intermediary listens to the arguments of both sides and makes a decision for the disputants, a mediator will help the disputants design a solution for themselves. (Source: University of Colorado Conflict Resolution Center)

The activities of a go-between connecting parties to a dispute. The mediator has no position of his own and he acts as the means whereby opposing parties communicate with each other and he encourages them to identify and reach mutually agreed solutions. (Source: UK Army Field Manual Volume 5 Part 2)

Military Aid to Civil Authorities (MACA)

A collective term given to the three types of operations which may take place in a civilian environment. (Source: JWP 0-01.1)

- **Military Aid to the Civil Community (MACC)** – The use of unarmed Servicemen to provide help in natural disasters and emergencies and to provide more routine assistance in the creation and development of local community projects, and of individual assistance by volunteers in the social service field. (Source: JWP 0-01.1)
- **Military Aid to the Civil Ministries (MACM)** – The use of unarmed Servicemen on urgent work of national importance, to maintain essential services and supplies, most usually (but not uniquely) when they are disrupted by industrial dispute. The Servicemen act under military orders and any protection needed is provided by the civil police. (Source: JWP 0-01.1)
- **Military Aid to the Civil Power (MACP)** – The use of troops in formed bodies, often armed, to assist the civil power in maintenance of law and order. (Source: JWP 0-01.1)

Military Assistance

All forms of assistance rendered by a PSO force to a civil authority (i.e., a national or local government). (Source: JWP 3-50)

Military Capability

The ability to achieve a specified wartime objective (win a war or battle, destroy a target set). It includes four major components: force structure, modernization, readiness, and sustainability.

a) force structure – Numbers, size, and composition of the units that comprise our Defense forces; e.g., divisions, ships, air wings.

b) modernization – Technical sophistication of forces, units, weapon systems, and equipment.

c) unit readiness – The ability to provide capabilities required by the combatant commanders to execute their assigned missions. This is derived from the ability each unit to deliver the outputs for which it was designed.

d) sustainability – The ability to maintain the necessary level and duration of operational activity to achieve military objectives. Sustainability is a function of providing for and maintaining those levels of ready forces, materiel, and consumables necessary to support military effort.

(Source: Joint Pub 1-02)

Military Civic Action

The use of preponderantly indigenous military forces on projects useful to the local population at all levels in such fields as education, training, public works, agriculture, transportation, communications, health, sanitation, and others contributing to economic and social development, which would also serve top improve the standing of the military forces with the population. (US forces may at times advise or engage in military civic actions in overseas areas.) (Source: Joint Pub 1-02)

Military and Civil Defense Assets

Relief personnel, equipment, supplies, and services provided by foreign military and civil defense organizations for international disaster relief assistance. These assets include any organization that, under the control of a Government, performs the functions enumerated in paragraph 61 of Additional Protocol I to the Geneva Conventions of 1949. (Source: UNDHA MCDA Field Manual)

Military Operations Other Than War (MOOTW)

A wide range of activities where military capabilities are used for purposes other than large-scale combat operations usually associated with war. (Source: AAP-06)

Operations that encompass the use of military capabilities across the range of military operations short of war. These military actions can be applied to complement any combination of the other instruments of national power and occur before, during, and after war. (Source: Joint Pub 1-02)

Military Support to Civil Authorities (MSCA)

Those activities and measures taken by the Department of Defense to foster mutual assistance and support between the Department of Defense and any civil government agency in planning or preparedness for, or in the application of resources for response to, the consequences of civil emergencies or attacks, including national security emergencies. (Source: Joint Pub 1-02)

Minimum Necessary Force

The measured and proportionate application of violence or coercion, sufficient only to achieve a specific objective and confined in effect to the legitimate target intended. (Source: draft NATO AJP-3.4.1 Peace Support Operations)

Mission

In military operations other than war, the action to be taken and the purpose for U.S. intervention. (Source: Adapted from Joint Pub 1-02)

Movement Control

1) The planning, routing, scheduling, and control of personnel and cargo movements over lines of communication.
2) An organization responsible for the planning, routing, scheduling, and control of personnel and cargo over lines of communications.

(Source: Joint Pub 1-02)

Multilateral Funding

Method of funding in which donor nations contribute to a UN, regional, or International Financial Institution. These organizations then use the funds for programs in developing countries. Examples: UNDP, UNHCR, The World Bank, The European Community Humanitarian Office (ECHO) received financing from donor nations to provide relief and development in affected nations. (Source: OECD Development Committee web page). (See also, bilateral funding).

Multilateral Peace Operations

Actions taken by the United Nations under the authority of Chapter VI or Chapter VII of the United Nations Charter, by regional arrangements pursuant to Chapter VII of the UN Charter, or by *ad hoc* coalitions pursuant to a UN Security Council resolution under the authority of Chapter VI or VII of the UN Charter or consistent with Chapter VI of the UN Charter, in order to preserve, maintain, or restore the peace. (Source: PDD 25)

Multinational Operation

A collective term to describe military actions conducted by forces of two or more nations, typically organized within the structure of a coalition or alliance. (Source: Joint Pub 1-02)

Multinational Force Commander

A general term applied to a commander who exercises command authority over a military force composed of elements from two or more nations. The extent of the MNFC's command authority is determined by the participating nations. (Source: Joint Pub 1-02)

Nation Assistance

Civil and/or military assistance rendered to a nation by foreign forces within that nation's territory during peacetime, crises or emergencies, or war based on agreements mutually concluded between nations. Nation assistance programs include, but are not limited to, security assistance, foreign internal defense, other US Code title 10 (DOD) programs, and activities performed on a reimbursable basis by Federal agencies or international organizations. (Source: Joint Pub 1-02)

Naval Coastal Warfare

Coastal sea control, harbor defense, and port security, executed both in coastal areas outside the United States in support of national policy and in the United States as part of this Nation's defense. (Source: Joint Pub 1-02)

Negotiation

Negotiation is bargaining – it is the process of discussion and give-and-take between two or more disputants who seek to find a solution to a common problem. It can be relatively cooperative, as it is when both sides seek a solution that is mutually beneficial (commonly called win-win or cooperative bargaining), or it can confrontational (commonly called win-lose or adversarial) bargaining, when each side seeks to prevail over the other. (Source: University of Colorado Conflict Resolution Center) Direct dialogue between parties in which the negotiator plays an active role to gain particular ends while protecting his own interests. (Source: UK Army Field Manual Volume 5 Part 2)

Non-Combatant Evacuation Operations

An operation conducted to relocate (to a place of safety) non-combatants threatened in a foreign country. (Source: JWP 0-01.1 and AAP-6)

Operations conducted to relocate threatened non-combatants from locations in a foreign country. These operations normally involve US citizens whose lives are in danger, and may also include selected foreign nationals. (Source: Joint Pub 1-02)

Non-Governmental Organizations (NGOs)

An NGO is an independent, non-profit-making organization formed from a variety of religious and humanitarian motives. (Source: UN Charter – Article 71)

A private voluntary agency created to perform beneficial activities according to its statutes or constitution. (Source: UNHCR Emergency Operation Handbook)

NGO is an organization that works nationally or internationally and is constituted separately from the government of the country in which it is founded. (Source: The International Red Cross and Red Crescent Movement-Code of Conduct)

In general, any association of individuals, other than a government agency pursuing a common purpose. Usually, an organization, based in the United States, in the host country, or in a third country, engaged in voluntary charitable or development assistance operations including, but not limited to, services of relief,

rehabilitation, disaster assistance, development assistance, welfare, training, or coordination of such services in the fields of health, nutrition, agriculture, industry, environment, ecology, refugee services, emigration, resettlement, and development of capabilities of indigenous institutions to meet basic human needs. The term NGOs is generally synonymous with Private Voluntary Organizations (PVOs), with the latter more commonly used to refer to U.S.-based NGOs. (Source: Adapted from USAID Registration Guidelines)

Transnational organizations of private citizens that maintain a consultative status with the Economic and Social Council of the United Nations. Nongovernmental organizations may be professional associations, foundations, multinational businesses or simply groups with a common interest in humanitarian assistance activities (development and relief). "Nongovernmental organizations" is a term normally used by non-United States organizations. (Source: Joint Pub 1-02).

Objective

The agreed aim, goal, or end state to be achieved within a sector or functional area during a complex contingency. (Source: Stipulated)

Observation

In military operations other than war, the gathering of information to monitor, verify, and report adherence to agreements of any kind to deter and provide evidence of breaches. (Source: UK Army Field Manual Volume 5, Part 2)

Operating Tempo Metrics

- **Steady State** – The maximum level of peacetime operations that can be reasonable sustained indefinitely – which does not adversely affect normal training, exercise support, or scheduled maintenance cycles – and does not violate Service personnel tempo goals.
- **Surge** – The additional level of operations during crisis or contingency response that can be sustained for up to (a minimal) 60 days with some decline in readiness and possibly exceeding Service personnel tempo goals. This level may adversely impact training, exercises support, and/or maintenance, requiring an appropriate follow-on recovery period at or below steady-state operational tempo.
- **Total Capability** – This level is used only in time of war and represents the maximum capability with all available assets committed. There is a significant and immediate operating and personnel tempo impact during the time this level of operations is sustained.

(Source: CJCS Message 231301Z JUL 96, Subject: Global Military Force Policy)

Operational Command

The authority granted to a commander to assign missions or tasks to subordinate commanders to deploy units, to reassign forces, and to retain or delegate operational and tactical control; it is the highest level of operational authority which can be given to an appointed commander who is acting outside of his own chain of command, and is seldom authorized by Member States. (Source: UN Glossary)

The authority granted to a commander to assign missions or tasks to subordinate commanders, to deploy units, to reassign forces, and to retain or delegate operational and/or tactical control as may be deemed necessary. It does not of itself include responsibility for administration or logistics. May also be used to denote the forces assigned to a commander. (Source: AAP-6)

Operational Control (OPCON)

Transferable command authority that may be exercised by commanders at any echelon at or below the level of combatant command. Operational control is inherent in combatant command (command authority). Operational control may be delegated and is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction over all aspects of military operations and joint training necessary to accomplish missions assigned to the command. Operational control should be exercised through commanders of subordinate organizations. Normally this authority is exercised though subordinate joint force commanders and Service and/or functional component commanders. Operational control normally provided full authority to organize commands and forces and to employ those forces as the commander in operational control considers necessary to accomplish assigned missions., Operational control does not, in and of itself, include authoritative direction for logistics or matters of administration, discipline, internal organization, or unit training. (Source: Joint Pub 1-02)

Operational Partner

Governmental, inter-governmental and non-governmental organizations and UN agencies that work in partnership with UNHCR to protect and assist refugees, leading to the achievement of durable solutions. (Source: UNHCR Emergency Operations Handbook)

Operations Other than War

Those military operations which are conducted in situations of conflict other than war. Such operations, in which military activities are likely to be firmly subordinated to the political throughout, will be designed to prevent conflict, restore peace by resolving or terminating conflict before escalation to war, or assist with the rebuilding of peace after conflict or war. (Source: JWP 0-01.1)

Operations Security

The process that gives a military operation or exercise appropriate security, using passive or active means, to deny the enemy knowledge of the dispositions, capabilities, and intentions of friendly forces. (Source: ABCA Coalitions Operations Handbook/NATO)

Order of Battle

The identification, strength, command structure, and disposition of the personnel, units, and equipment of any military force. (Source: ABCA Coalition Operations Handbook/NATO)

Partner

An organization or customer representative with which/whom USAID works cooperatively to achieve mutually agreed upon objectives and intermediate results, and to secure customer participation. Partners include: private voluntary organizations, indigenous and other international non-government organizations, universities, other USG agencies, UN and other multilateral organizations, professional and business associations, private businesses, and host country governments at all levels. (Source: USAID Automated Directives System)

Peace Building

Action to identify and support structures which will tend to strengthen and solidify peace in order to avoid a relapse into conflict. (Source: UN Report: “An Agenda for Peace”)

Peace building covers actions which support political, economic, social and military measures and structures aiming to strengthen and solidify political settlements in order to redress the causes of conflict. This includes mechanisms to identify and support structures that tend to consolidate peace, advance a sense of confidence and well-being and support economic reconstruction. (Source: JWP 0-01.1)

Post-conflict actions, predominately diplomatic and economic, that strengthen and rebuild governmental infrastructure and institutions in order to avoid a relapse into conflict. (Source: Joint Pub 1-02)

Peace building is the process of restoring normal relations between people. It requires the reconciliation of differences, apology and forgiveness of past harm, and the establishment of a cooperative relationship between groups, replacing the adversarial or competitive relationship that used to exist. (Source: University of Colorado Conflict Resolution Center)

Peace Enforcement

Peace enforcement authorization is prescribed under Chapter VII of the UN Charter and includes the use of armed force to maintain or restore international peace and security in situations in which the Security Council has determined the existence of a threat to the peace, breach of the peace, or an act of aggregation. (Source: UN Guidelines for Peacekeeping)

Peace Enforcement operations are coercive in nature and undertaken under Chapter VII of the UN Charter when consent of any of he major parties to the conflict is uncertain. They are designed to maintain and re-establish peace or enforce the terms specified in the mandate. (Source: AAP-6 and JWP 0-01.1)

Coercive operations carried out to restore or maintain peace in situations of chaos, or between parties who may not all consent to intervention and who may be engaged in combat activities, in order to help create the conditions for diplomatic and humanitarian activities to support political goals. (Source: Sweden's PSO)

Application of military force, or the threat of its use, normally pursuant to international authorization, to compel compliance with resolutions or sanctions designed to maintain or restore peace and order. (Source: Joint Pub 1-02)

Peacekeeping

A UN presence in the field (normally involving military and civilian personnel), with the consent of the conflicting parties to implement or monitor the implementation of arrangements relating to the control of conflicts (cease-fires, separation of forces, etc.) and their resolution (partial or comprehensive settlement) or to ensure the safe delivery of humanitarian relief. (Source: UN Guidelines for Peacekeeping)

Operations undertaken under Chapter VI of the UN Charter, with the consent of all the major parties to a conflict, to monitor and facilitate the implementation of a peace agreement. (Source: AAP-6 and JWP 0-01.1)

Operations carried out with the general consent of the disputing parties, as part of a peace process agreed by these parties, and in support of efforts to promote security and confidence, in order to achieve a long-term peace settlement. (Source: Sweden's PSO)

Military operations undertaken with the consent of all major parties to a dispute, designed to monitor and facilitate implementation of an agreement (ceasefire, truce, or other such agreement) and support diplomatic efforts to reach a long-term political settlement. (Source: Joint Pub 1-02)

Peacemaking

Diplomatic action to bring hostile parties to a negotiated agreement, through such peaceful means as those foreseen in Chapter VI of the UN Charter. (Source: UN Guidelines for Peacekeeping)

The diplomatic activities conducted after the commencement of a conflict aimed at establishing a cease-fire or a rapid peaceful settlement. They can include the provision of good offices, mediation, conciliation and such actions as diplomatic pressure, isolation or sanctions. (Source: JWP 0-01.1)

The process of diplomacy, mediation, negotiation, or other forms of peaceful settlements that arranges an end to a dispute, and resolves issues that led to conflict. (Source: Joint Pub 1-02)

Peace Operations

A broad term that encompasses peacekeeping operations and peace enforcement operations conducted in support of diplomatic efforts to establish and maintain peace. (Source: Joint Pub 1-02)

Peace Support Operations (PSO)

Peace Support Operations are multi-functional operations involving military forces and diplomatic and humanitarian agencies. They are designed to achieve humanitarian goals or a long-term peace settlement and are conducted impartially in support of UN or OSCE mandate. These include peacekeeping, peace enforcement, conflict prevention, peace making, peace building, and humanitarian operations. (Source: MC 327/2)

Multi-functional operations involving military forces and diplomatic and humanitarian agencies. They are designed to achieve humanitarian goals or a long-term political settlement and are conducted impartially in support of an appropriate mandate. These include peacekeeping, peace enforcement, conflict prevention, peacemaking, peace building and humanitarian operations. (Source: JWP 0-01.1)

PSO is the military term used to cover both peacekeeping and peace-enforcement operations. PSO differ from war in that they are complex operations that do not have a designated enemy, but are designed as part of a composite approach involving diplomatic and generally humanitarian agencies to achieve a long-term peace settlement. (Source: Sweden's PSO)

Peacetime Engagement Activities

A series of political-military actions that implement the U.S. National Strategy to enhance international stability and confidence, and that reduce the potential for crises or conflicts. These actions typically include maintaining a steadfast and credible forward military presence, ensuring strong bilateral and multilateral relationships, and participating in dialogues and exercises with other nations and organizations. Other actions include supporting responsible military forces, developing and nurturing close relationships with political and military leaders and their subordinates, and effecting interagency coordination within the U.S. Government, with international, regional, and non-governmental organizations, and other elements of society to achieve the desired outcome. (Source: Derived from the Quadrennial Defense Review, December 1997, Defense Science Board reports, and selected mission statements of combatant commands)

People Classifications

(Source: Center for Research on the Epidemiolgy of Disasters (CRED) for the UNDHA unless otherwise indicated)

- **Asylum Seeker** – An individual whose refugee status has not yet been determined. (Source: UNHCR Emergency Operation Handbook)
- **Children** – All persons under the age of 18 (as defined in the Convention on the Rights of the Child). (Source: UNHCR Emergency Operations Handbook)

- **Convention Refugee** – Persons determined to be refugees by the authorities of States that have acceded to the Convention and/or Protocol. As such, they are entitled to claim the rights and benefits which those States have undertaken to accord to refugees. (Source: UNHCR Emergency Operations Handbook)
- **Dead** – Persons confirmed dead and persons missing and presumed dead (official figures when available). Comments: The number of missing is usually not included in the "dead" figure if the source used gives preliminary figures. The figure has accordingly to be updated as missing persons are determined to be dead. The figure is expected to be exclusive.
- **Displaced Person** – People who have been displaced but remain within the territory of their own country.
- **Displaced Persons** – A civilian who is involuntarily outside the national boundaries of his or her country. (Source: Joint Pub 1-02)
- **Dislocated Civilian** – A broad term that includes a displaced person, an evacuee, an expellee, or a refugee. (Source: Joint Pub 1-02)
- **Evacuee** – A civilian removed from a place of residence by military direction for reasons of personal security or the requirements of the military situation. (Source: Joint Pub 1-02)
- **Expellee** – A civilian outside the boundaries of the country of his or her nationality or ethnic origin who is being forcibly repatriated to that country or to a third country for political or other purposes. (Source: Joint Pub 1-02)
- **Homeless** – People needing immediate assistance with shelter. Comments: The definition applies also to displaced populations/refugees to which shelter has to be provided. This figure is necessary for operational purposes. Homeless people are always part of the primary affected population.
- **Injured** – People with physical injuries/trauma/illness requiring medical treatment (therapeutic feeding included) as a direct result of a disaster. Comments: This category will include the severely malnourished as well as victims of radiation exposure and chemical intoxication. The injured are always part of the primary affected population.
- **Internally Displaced Persons** – Persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized state border. (Source: UN Guiding Principles on Internal Displacement)
- **Mandate Refugee** – Persons considered by UNHCR to be refugees according to the Statute and other relevant General Assembly resolutions. This determination is not dependent upon the state of asylum being party to the 1951 Convention or 1967 Protocol. Mandate refugees can benefit from the High commissioner's action. They do not, however, benefit from the rights accorded to Convention refugees, unless they are also recognized as refugees by a State party to the Convention. (Source: UNHCR Emergency Operation Handbook)
- **Refugees** – Persons having a well-founded fear of persecution for reasons of race, religion, nationality, membership of a particular social group or political opinion mostly outside the country of nationality and unable to return or avail themselves of the protection of that country. Includes mass exodus of peoples for reasons of conflict and natural disasters moving outside their country of origin.
- **Refugee** – A civilian who, by reason of real or imagined danger, has left home to seek safety elsewhere. (Source: Joint Pub 1-02)
- **Repatriate** – A person who returns to his or her country or citizenship, having left his or her native country, either against his or her will, or as one of a group who left for reasons of politics, religion, or other pertinent reasons. (Source: Joint Pub 1-02)

Planning

- **Advanced Planning** – The interagency planning conducted prior to employing resources of the United States Government in a contingency. Advanced planning produces the specific Political-Military Implementation Plan for the contingency called for in Presidential Decision Directive 56. In situations where a rapid response is essential, advanced planning and crisis action planning may be accomplished in parallel, but the assumptions used for parallel planning must be shared. (Source: Derived from PDD-56)
- **Crisis Action Planning** – (1) The Joint Operation Planning and Execution System process involving time-sensitive development of joint operation plans and orders in response to an imminent crisis. Crisis action planning follows prescribed crisis action procedures to formulate and implement an effective response within the time frame permitted by the crisis. (2) The time-sensitive planning for the deployment, employment, and sustainment of assigned and allocated forces and resources that occurs in response to a situation that may result in actual military operations. Crisis action planners base their plan on circumstances that exist at the time planning occurs. (Source: Joint Pub 1-02)
- **Deliberate Planning** – (1) The Joint Operation Planning and Execution System process involving the development of joint operation plans for contingencies identified in strategic planning documents. Conducted principally in peacetime, deliberate planning is accomplished in prescribed cycles that complement other Department of Defense planning cycles in accordance with the formally established Joint Strategic Planning System. (2) A planning process for the deployment and employment of apportioned forces and resources that occurs in response to a hypothetical situation. Deliberate planners rely heavily on assumptions regarding the circumstances that will exist when the plan is executed. (Source: Joint Pub 1-02)

Population Classifications

(Source: Center for Research on the Epidemiolgy of Disasters (CRED) for the UNDHA)

- **Displaced Population** – Persons who for different reasons or circumstances have been compelled to leave their homes. They may or may not reside in their country of origin, but are not legally regarded as refugees. They may be forced out by natural disasters, industrial disasters, international conflicts or strife. There are three sorts of mass movements: exodus, expulsion, and returnees. The displaced populations are listed under the country which received the displaced persons. This type of disaster is always a consequence of another disaster type. The classification will be made by the original cause.
- **Exposed Population** – The total population potentially susceptible to the effects of a hazard.
- **Population at Risk** – Population whose life, property and livelihood are directly threatened by a hazard.
- **Primary Affected Population** – People requiring immediate assistance during an emergency situation. Comments: Immediate assistance means meeting basic “life-line” needs, such as food, water, shelter, sanitation and immediate medical assistance. This information has to be available as soon as possible for the launching of appeals. For epidemics, all persons who have contracted the disease and fallen ill but have not died from it will be considered as primary affected.

  It is important to distinguish “primary affected” populations from the following categories of populations concerned by the disaster.
- **Secondary Affected Population** – People who at a certain point will require long-term social and economic assistance as a direct consequence of a disaster situation. Comments: The assistance could include agricultural support (e.g., seeds and tools), housing and infrastructure rehabilitation, environmental clean-up and medical rehabilitation. The category of “secondary affected” population includes the “primary affected” population.

- **Target Population** – The group of people to whom relief services and supplies are provided.

Port Security

The safeguarding of vessels, harbors, ports, waterfront facilities and cargo from internal threats such as: destruction, loss, or injury from sabotage or other subversive acts; accidents; thefts; or other causes of similar nature. (Source: Joint Pub 1-02)

Preparedness

Activities that aim to limit the impact of a disaster by structuring the response and providing quick, effective actions after the disaster. Addresses actions in both the pre-disaster and post-disaster phases. Also includes early warning systems. (Source: OFDA Field Operations Guide)

Prevention

Activities taken to prevent a natural phenomenon or potential hazard from having harmful effects on either persons or economic assets. Includes channeling the direction of debris flow away from population centers, construction of dams or dikes to eliminate flooding, and safe destruction of outdated hazardous materials. (Source: OFDA Field Operations Guide)

Preventive Deployment

The deployment of military forces to deter violence at the interface or zone of potential conflict where tension is rising among parties. Forces may be employed in such a way that they are indistinguishable from a peacekeeping force in terms of equipment, force posture, and activities. (Source: Joint Pub 1-02)

Preventive Diplomacy

Action to prevent disputes arising between parties, to prevent existing disputes from escalating into conflicts and to limit the spread of the latter when they occur. (Source: UN Report: "An agenda for Peace," MC 327/2, and JWP 0-01.1)

Diplomatic actions taken in advance of a predictable crisis to prevent or limit violence. (Source: Joint Pub 1-02)

Primary Agency

The Federal department or agency assigned primary responsibility to manage and coordinate a specific Emergency Support Function (ESF). Primary agencies are designated on the basis of their having the most authorities, resources, capabilities, or expertise relative to accomplishment of the specific ESF support. Primary agencies are responsible for overall planning and coordination of the delivery of ESF-related Federal assistance to their State counterparts, in conjunction with their support agencies. (Source: The Federal Response Plan)

Private Voluntary Organizations (PVOs)

Private, non-profit humanitarian assistance organizations involved in development and relief activities. Private voluntary organizations are normally United States-based. "Private voluntary organization" is often used synonymously with the term "nongovernmental organization." (Source: Joint Pub 1-02)

Proactive Measures

In antiterrorism, measures taken in the preventive stage of antiterrorism designed to harden targets and detect actions before they occur. (Source: Joint Pub 1-02)

Protection of Shipping

The use of proportionate force by United States warships, military aircraft, and other forces, when necessary for the protection of United States flag vessels and aircraft, United States citizens (whether embarked in United States or foreign vessels), and their property against unlawful violence. This protection may be extended (consistent with international law) to foreign flag vessels, aircraft, and persons. (Source: Joint Pub 1-02)

Protected Area

A region where, ultimately, the civil administration works, and where the civil community is able to go about its business and live freely without fear. (Source: JWP 3-50)

Psychological Consolidation Activities

Planned psychological activities in peace and war directed at the civilian population located in areas under friendly control in order to achieve a desired behavior which supports the military objectives and the operational freedom of the supported commanders. (Source: Joint Pub 1-02)

Psychological Operations

Planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately the behavior of foreign governments, organizations, groups, and individuals. The purpose of psychological operations is to induce or reinforce foreign attitudes and behavior favorable to the originator's objectives. (Source: Joint Pub 1-02)

Public

Concept that includes all audiences, both internal and external. (Source: Joint Pub 1-02)

Public Affairs

Those public information and community relations activities directed toward the general public by various elements of the Department of Defense. (Source: Joint Pub 1-02)

Public Diplomacy

The coordinated use of information by the interagency participants in a contingency operation to shape perceptions at the outset of a crisis and to maintain support during the crisis. (Source: Stipulated)

Public Information

Information of military nature, the dissemination of which through public news media is not inconsistent with security, and the release of which is considered desirable or non-objectionable to the responsible releasing agency. (Source: Joint Pub 1-02)

Quick Impact Project

A project intended to fill the gap between individual relief activities and longer term development through re-establishing the livelihoods of returnee communities. Normally rapid and locally implemented small-scale community-wide rehabilitation projects, they are established on the principle of non-discrimination between returnees, internally displaced persons, and receiving populations. (Source: UNHCR Paper: Reintegration in the Transition from War to Peace)

Raid

An operation, usually small scale, involving a swift penetration of hostile territory to secure information, confuse the enemy, or to destroy installations. It ends with a planned withdrawal upon completion of the assigned mission. (Source: AAP-6, JWP 0-01.1, and Joint Pub 1-02)

Rapid Onset Disasters

Disasters which develop suddenly. Examples are earthquakes, hurricanes, volcanic eruptions, floods, and tsunamis. (Source: OFDA Field Operations Guide)

Rationalization

Any action that increases the effectiveness of allied forces through more efficient or effective use of defense resources committed to the alliance. Rationalization includes consolidation, reassignment of national priorities to higher alliance needs, standardization, specialization, mutual support or improved interoperability, and greater cooperation. Rationalization applies to both weapons/materiel resources and non-weapons. (Source: Joint Pub 1-02)

Receiving State

A state which has requested or concurred with the offer of international disaster relief assistance. (Source: UNDHA MCDA Field Manual)

Recovery

Activities traditionally associated with providing Federal supplemental disaster recovery assistance under a Presidential major disaster declaration. These activities usually begin within days after the event and continue after the response activities cease. Recovery includes individual and public assistance programs which provide temporary housing assistance, grants and loans to eligible individuals and government entities to recover from the effects of a disaster. (Source: The Federal Response Plan)

In operations, contacting, protecting and extracting personnel, small groups or units, or materiel. (Source: JWP 0-01.1)

Recovery Operations

Operations conducted to search for, locate, identify, rescue, and return personnel, sensitive equipment, or items critical to national security. (Source: Joint Pub 1-02)

Refugee (see People Classifications)

Reintegration

The long term process of restoring affected populations to productive roles in a civil society and economy. Target populations vary with each contingency but typically include ex-combatants, displaced persons, refugees, the handicapped, single mothers, etc. (Source: Stipulated)

Relief Personnel

Those individuals, groups of individuals, teams, and constituted units executing international disaster relief assistance. (Source: UNDHA MCDA Field Manual)

Relief Supplies

Goods, such as survival items, temporary shelter, foodstuffs, medical supplies, clothing, and other materiel required for international disaster relief assistance. (Source: UNDHA MCDA Field Manual)

Relief Services

Capabilities, arrangements, and systems required to support and facilitate international disaster relief assistance. They include *inter-alia*, logistics, telecommunications, and air-traffic control. (Source: UNDHA MCDA Field Manual)

Repatriation

The procedure whereby American citizens and their families are officially processed back into the United States subsequent to an evacuation. (Source: Joint Pub 1-02)

- **Refoulement** – Expulsion or return of a refugee to a place where his life or freedom would be threatened. Refoulement is prohibited by Article 33 of the Refugee Convention. (Source: adapted from "Refugee Repatriation, Return, and Refoulement During Conflict," USAID Conference Promoting Democracy, Human Rights, and Reintegration in Post-Conflict Societies, October 1997.)
- **Voluntary Repatriation** – The refugee voluntarily returns to his home country and there is a restoration of the bond between citizen and fatherland. (Source: adapted from "Refugee Repatriation, Return, and Refoulement During Conflict," USAID Conference Promoting Democracy, Human Rights, and Reintegration in Post-Conflict Societies, October 1997.)

Resident Coordinator

The senior United Nations official in a country during peacetime who is responsible for coordinating the programs of the various United Nations agencies operating in the country. The resident coordinator, traditionally a representative of the United Nations Development Program (UNDP), is now selected from other agencies based on recent reforms instituted by the United Nations. The resident coordinator serves as the chair of the United Nations Country Team. (Source: Stipulated)

Response

Activities to address the immediate and short-term effects of an emergency or disaster. Response includes immediate actions to save lives, protect property, and meet basic human needs. Based on the requirements of the situation, response assistance will be provided to an affected State under the Federal Response Plan using a partial activation of selected Emergency Support Functions (ESFs) or the full activation of all ESFs to meet the needs of the situation. (Source: The Federal Response Plan)

Ripeness

A conflict is said to be "ripe" for settlement or negotiation when it has reach a stalemate, or when all of the parties have determined that their alternatives to negotiation will not get them what they want or need. In this case, they are likely to be ready to negotiate a settlement which will attain at least part of their interests – more than they are getting otherwise or stand to get if they pursue their force-based options further. (Source: University of Colorado Conflict Resolution Center)

Role Specialist Nation

A nation within an alliance or coalition that agrees to provide a specific functional service (e.g., fuel support, food, etc.) for all members of the alliance or coalition while participating in the contingency operation. The role specialist nation assumes full responsibility for management of the functional service. The functional service is usually provided on a reimbursable basis negotiated by the role specialist nation with other participants. (Source: Stipulated)

Rules of Contact

Directives issued by competent civil authority which delineate the circumstances and limitations under which police forces will conduct law enforcement operations and interact with the civilian population they are established to protect. (Source: Stipulated)

Rules of Engagement

Directives issued by competent military authority which delineate the circumstances and limitations under which United States forces will initiate and/or continue combat engagements with other forces encountered. (Source: Joint Pub 1-02)

Directives issued by competent military authority which specify the circumstances and limitations under which forces will initiate and/or continue combat engagement with other forces encountered. (Source: NATO Allied Joint Publication 3.4.1 4th Study Draft)

Resources Support Services Agreement (RSSA)

An agreement between USAID and another U.S. agency or department that authorizes work. (Source: OFDA Field Operations Guide)

Sanction Enforcement/Maritime Intercept Operations

Operations which employ coercive measures to interdict the movement of certain types of designated items into or out of a nation or specified area. (Source: Joint Pub 1-02)

Search and Rescue (SAR)

The use of aircraft, surface craft, submarines, and specialized rescue teams and equipment to search for and rescue personnel in distress on land or at sea. (Source: AAP-6 and Joint Pub 1-02)

Sector

A sector is one of eight generic subdivisions of actions that typically occur during a complex contingency. They are established to facilitate assignment of interagency responsibilities, to allocate resources effectively and efficiently, and to effect interagency coordination of United States Government actions with the affected nation and allied or coalition authorities and organizations involved with resolving the conditions that created the crisis. Collectively, sectors encompass all of the nation's or region's political, economic, social, cultural, and military institutions and resources. The eight sectors are: (1) diplomacy, (2) military, (3) humanitarian assistance, (4) internal politics, (5) civil law and order and public security, (6) public information and education, (7) infrastructure and economic restoration, and (8) human rights and social development. (Source: Stipulated as paraphrased from PDD-56 and the generic political-military implementation plan.)

Security Assistance (SA)

Group of programs authorized by the Foreign Assistance Act of 1961, as amended, and the Arms Export Control Act of 1976, as amended, or other related statues by which the United States provided defense articles, military training, and other defense-related services, by grant, loan, credit, or cash sales in furtherance of national policies and objectives. (Source: Joint Pub 1-02)

Selective Feeding

A collective term used for all feeding/food distribution programs in which food is provided to specifically selected beneficiaries. It typically includes both supplementary and therapeutic feeding. (Source: OFDA Field Operations Guide)

Services Assisted Evacuation (SAE)

An evacuation operation conducted with assistance from the Australian Defence Force on occasions where host-nation authorities or other significant groups do not oppose the operation and local security forces retain adequate control of law and order to permit the operation to proceed. (Source: ADFP 43 Evacuation Operations)

Services Protected Evacuation (SPE)

An evacuation operation conducted by the Australian Defence Force on occasions where host-nation authorities or other significant groups oppose the operation, and/or local security forces are unable to retain adequate control of law and order to allow the safe conduct of an SAE. (Source: ADFP 43 Evacuation Operations)

Note: the NATO term Non-combatant Evacuation Operation (NEO) covers both SAE and SPE.

Show of Force

An operation, designed to demonstrate US resolve, which involves increased visibility of United States deployed forces in an attempt to defuse a specific situation, that if allowed to continue, may be detrimental to United States interests or national objectives. (Source: Joint Pub 1-02)

Situation Assessment

The process of evaluating the situation caused by a disaster, such as the number killed, injured, and affected. (Source: OFDA Field Operations Guide)

Slow Onset Disasters

Disasters which develop over a period of time. Examples are famine, civil strife, and insect infestations. (Source: OFDA Field Operations Guide)

Smaller-Scale Contingency

A contingency involving civilian and military organizations of the U.S. Government, and possibly other organizations from the international community. These interventions are to prevent and contain localized conflicts and crises before they require a military response. If, however, such efforts do not succeed, swift intervention by military forces may be the best way to contain, resolve, or mitigate the consequences of the conflict that could otherwise become far more costly and deadly. These operations encompass the full range of joint military operations other than war that fall between peacetime engagement activities and major theater warfare. (Source: Paraphrased from the Quadrennial Defense Review, December 1997)

Special Reconnaissance

Reconnaissance and surveillance actions conducted by special operations forces to obtain or verify, by visual observation or other collection methods, information concerning capabilities, intentions, and activities of an actual or potential enemy or to secure data concerning the meteorological, hydrographic, or geographic characteristics of a particular area. It includes target acquisition, area assessments, and post-strike reconnaissance. (Source: Joint Pub 1-02)

Special Recovery Operations (SRO)

Operations undertaken by special forces to rescue personnel or equipment from hostile territory, and return them to safe areas. (Source: ADFP 43 Evacuation Operations)

Stakeholders

Stakeholders are the parties who will be affected by a conflict or the resolution of that conflict. This includes both the current disputants and parties that might become involved because they are likely in the future to be affected by the conflict or its outcome. (Source: University of Colorado Conflict Resolution Center)

Standardization

The process by which the Department of Defense achieves the closet practicable cooperation among the Services and Defense agencies for the most efficient use of research, development, and production resources, and agrees to adopt on the broadest possible basis the use of: a. common or compatible technical procedures; b. common or compatible technical procedures and criteria; c. common, compatible, or interchangeable supplies, components, weapons, or equipment; and d. common or compatible tactical doctrine with corresponding organizational compatibility. (Source: Joint Pub 1-02)

State Classifications

(Source: UNHCR Paper Reintegration in the Transition from War to Peace and stipulated)

- **Failed State** – A state lacking centralized authority and a situation of general anarchy, such that there is no authority to provide effective national protection.
- **Failed State** – A country or geographic region in which the central government is no longer capable of providing for the security and welfare of its citizens. Specifically, the institutions of the central government – political, military, justice, economic, public diplomacy, and human rights – lack the capacity to enforce civil law and order, public security, or freedom from persecution. The breakdown of central authority may lead to internal conflict among factions, widespread public health and welfare problems, economic instability and increasing criminal activity, and large numbers of internally displaced persons and refugees. (Source: Stipulated)
- **Weak State** – A state that has a semblance of authority, but is unable to exercise effective power over all of its territory. Authority may be limited geographically, or in terms of the ability to carry out state functions (e.g., provision of services, or maintenance of law and order).
- **Conflicted or Contested State** – A state that is not necessarily weak, but in which there is a conflict between groups for control of the state or specific geographic areas within the state. The state may be willing to extend national protection only to persons from particular groups or regions.
- **Repressive State** – A state which exercises authority but does not extend protection to all of its citizens. Repressive states command strong central authority, and are able to crush potential rebellions and outbreaks of violent conflict.

- **Rogue State** – A state that does not adhere to the established norms for arms control, especially weapons of mass destruction, and poses a threat to its neighbors or other states. (Source: Stipulated)
- **Drug Producing State** – A state that allows the domestic production and distribution of illegal drugs across its borders and poses a threat to its neighbors and other states. (Source: Stipulated)
- **UN Transitional Authority** – A state or territory placed temporarily under control of UN authorities by the Security Council while self-governing capacity is restored or established, or its final status is determined. (Source: Stipulated)

Status-of-Forces Agreement

An agreement which defines the legal position of a visiting military force deployed in the territory of a friendly state. Agreements delineating the status of visiting military forces may be bilateral or multilateral. Provisions pertaining to the status of visiting forces may be set forth in a separate agreement, or they may form a part of a more comprehensive agreement. These provisions describe how the authorities of a visiting force may control members of that force and the amenability of the force or its members to local law or to the authority of local officials. To the extent that agreements delineate matters affecting the relations between a military force and civilian authorities and populations, they may be considered as civil affairs agreements. (Source: Joint Pub 1-02) [NB: The assumption that the state is friendly is unwarranted. For example, the Military Technical Agreement with Yugoslavia requires the negotiation of a SOFA. Also, the fact that a SOFA or similar agreement needs to be negotiated with transit states should be understood. The UN will normally negotiate a Status of Mission Agreement (SOMA) covering its civilian personnel.]

Strike

An attack that is intended to inflict damage on, seize, or destroy an objective. (Source: AAP-6, JWP 0-01.1 and Joint Pub 1-02)

Subtasks

A subdivision of a task that requires one or more capabilities to accomplish. (Source: Stipulated)

Supplementary Feeding Program (SFP)

Feeding program offering extra calories for vulnerable populations of displaced persons. (Source: OFDA Field Operations Guide)

Supply Control

The process by which an item of supply is controlled within the supply system, including requisitioning, receipt, storage, stock control, shipment, disposition, identification, and accounting. (Source: Joint Pub 1-02)

Supply Point

Any point where supplies are issued in detail. (Source: Joint Pub 1-02)

Support Agency

A Federal department or agency designated to assist a specific primary agency with available resources, capabilities, or expertise in support of Emergency Support Function response operations, under coordination of the primary agency. (Source: The Federal Response Plan)

Support to Counterinsurgency

Support provided to a government in the military, paramilitary, political, economic, psychological, and civic actions it undertakes to defeat insurgency. (Source: Joint Pub 1-02)

Support to Insurgency

Support provided to an organized movement aimed at the overthrow of a constituted government through use of subversion and armed conflict. (Source: Joint Pub 1-02)

Sustainable Development

Continued economic and social progress that rests on four key principles: improved quality of life for both current and future generations; responsible stewardship of the natural resource base; broad-based participation in political and economic life; and effective institutions which are transparent, accountable, responsive and capable of managing change without relying on continued external support. The ultimate measure of success of sustainable development programs is to reach a point where improvements in the quality of life and environment are such that external assistance is no longer necessary and can be replaced with new forms of diplomacy, cooperation and commerce, (Source: USAID Automated Directives System)

Tactical Control (TACON)

Command authority over assigned or attached forces or commands, or military capability or forces made available for tasking, that is limited to the detailed and, usually, local direction and control of movements or maneuvers necessary to accomplish missions or tasks assigned. Tactical control is inherent in operational control. Tactical control may be delegated to, and exercised at any level at or below the level of combatant command. (Source: Joint Pub 1-02)

Tasks

During military operations other than war, the work to be accomplished through coordinated application of resources to achieve a sector or functional area objective. (Source: Stipulated)

Team

A group of individuals coming together through consensus to achieve agreed-upon objectives or results. Teams may be comprised of employees of USAID and/or other federal agencies, partners, customers, and contractors. A team may or may not exist as an official organizational unit. Ideally, a team is a self-directed group of people who are responsible and accountable for accomplishing a set of results or a work process. Members of a ‘virtual team’ are not collocated and therefore participate primarily through telecommunications. (Source: USAID Automated Directives System)

Technical Agreement

The document negotiated and agreed to by the host nation and the military force that specifies the details necessary to implement a status of force agreement. (Source: Stipulated)

Technological Hazard

A range of hazards emanating from the manufacture, transportation, and use of such substances as radioactive materials, chemicals, explosives, flammables, agricultural pesticides, herbicides and disease

agents; oil spills on land, coastal waters or inland water systems; and debris from space. (Source: The Federal Response Plan)

Terrorism

The unlawful use or threatened use of force or violence against individuals or property in an attempt to coerce or intimidate governments or societies to achieve political, religious or ideological objectives. (Source: AAP-6 and JWP 0-01.1)

Therapeutic Feeding Program (TFP)

Intensive feeding program offering total calories for severely malnourished infants and small children in a health care setting (sometime referred to as "nutritional rehabilitation"). (Source: OFDA Field Operations Guide)

Track Two Diplomacy

Track Two diplomacy involves unofficial dialogue, discussion, or even negotiation among ordinary citizens about topics that are usually reserved for diplomats – for instance about arms control agreements, or negotiations to end long-standing international conflicts. It is differentiated from Track One diplomacy which involves formal discussions between official diplomats. (Source: University of Colorado Conflict Resolution Center)

Transit Agreement

Formal agreement by a sovereign nation to allow passage of military forces – units, personnel, equipment, sustaining materiel, and contracted support – through its territory, including the procedures with which the transiting forces must comply while en route. (Source: Stipulated)

Transit State

Any state whose territory, including its airspace and/or territorial waters, are traversed for the delivery of international disaster relief assistance. (Source: UNDHA MCDA Field Manual)

Unconventional Warfare

A broad spectrum of military and paramilitary operations, normally of long duration, predominantly conducted by indigenous or surrogate forces who are organized, trained, equipped, supported, and directed in varying degrees by an external source. It includes guerilla warfare and other direct offensive, low visibility, covert, or clandestine operations, as well as the indirect activities of subversion, sabotage, intelligence activities, and evasion and escape. (Source: Joint Pub 1-02)

United Nations Special Representative

A notional title that may include specific titles such as Special Representative of the Secretary General (SRSG), Special Envoy of the Secretary General (SESG), Representative of the Secretary General (RSG), etc. The incumbent serves as the highest ranking United Nations official in a country and carries the rank of ambassador. The individual is most often accredited to a single country and his authority may not extend to neighboring countries in a region. When the international organization upon whose authority an operation is being conducted is other than the UN, this individual is normally referred to as a Head of Mission (HoM) or Chief of Mission (CoM). (Source: Stipulated)

Volunteers In Technical Assistance (VITA)

An information clearinghouse called the Disaster Information Center located in Rosslyn, Virginia, which is designed to track private sector donations and offers of volunteer technical assistance for use by OFDA and NGOs responding to foreign disasters. Also provides a computer bulletin board system, VITANet, which enables NGOs easy access to offers of private sector disaster assistance that are collected by VITA. (Source: OFDA Field Operations Guide)

Weapon Holding Area/Site

A location for the temporary or (semi-) permanent storage of weapons and/or other military equipment of the parties' forces (within the framework of a demobilisation operation). (Source: NATO Allied Joint Publication 3.4.1 4th Study Draft)

WHO Emergency Kit

Standard list of drugs and medical supplies the World Health Organization has identified and can make available as needed for an emergency. The kit is configured to be used by 10,000 people for 3 months. (Source: OFDA Field Operations Guide)

Wider Peacekeeping

The wider aspects of peacekeeping operations carried out with the consent of the belligerent parties but in an environment that may be highly volatile. (Source: JWP 0-01.1)

Zone of Separation

The specified area delineating neutral territory established between warring factions within a nation or between warring parties from two or more nations. All activity in the zone and transit through the zone is controlled by the peacekeeping or peace enforcement force. (Source: Stipulated)

Annex C – SSC OPERATIONS BIBLIOGRAPHY

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Annex D – SIMPLE EXAMPLE OF THE DEVELOPMENT OF MEASURES OF MERIT

D.1 SITUATION

This annex demonstrates how the methodology identified for developing MOMs is applied in a hypothetical force structure planning environment.

The example considers and analysis in support of the procurement of a new transport helicopter from a number of competing options. The analysis need to consider the capability of each option in a range of scenarios including a SSC scenario.

The methodology comprises two phases:

- Decomposition of tasks from the overall mission of the forces to the lowest scenario specific level.
- Aggregating weapon system dimensional parameters into MOP to a point that a link can be established to specific scenario MOE.

D.2 SCENARIO

The SSC scenario considers a country 'Alpha' torn by civil strife to a point where an intervention is to take place. Alpha is a relatively undeveloped country and a good portion of it has rugged terrain and poor lines of communication. During the last few years, many of the population have been displaced, moving to refugee camps on the border or hiding in the rugged interior terrain. Continued ethnic violence and the destruction in their home towns prevent most of these displaced people from returning home and during the winter food is scarce. The overall mandate of the proposed operation is to "restore peace and political stability to Alpha."

D.3 TASK BREAKDOWN

In order to achieve the overall mandate, a number of tasks must be performed by military, diplomatic, political, economic and other means. In this example, these actions may include peace enforcement operations, humanitarian assistance operations, economic assistance, political integration and establishing a government.

While all of these tasks could be decomposed, the analysis will focus on the humanitarian branch of the problem. This is not a purely military aspect of the scenario, civilian organisations also play a part, however, it is the task on which the transport helicopter will be engaged.

In order to accomplish the humanitarian effort, a number of tasks must be performed:

- Groups of refugees (and internally displaced persons) must be found and provided with immediate assistance;
- Refugee camps must be set up to provide the basic necessities to large concentrations of refugees;
- Isolated groups of refugees must be moved or directed to move to established refugee camps.

Transport helicopters could be used in support of all of these tasks, however, within the scenario it may be assumed that the setting up of refugee camps is the task of non-military organisations. The transport

helicopter therefore has two roles: to find where the refugees are and, where there are small isolated groups, to move them to refugee camps. The tasks may themselves be further subdivided in the analysis. These tasks therefore consider different capabilities of the helicopter options in terms of their sensor suite and endurance (to find the refugees) and their lift capability (to move isolated groups).

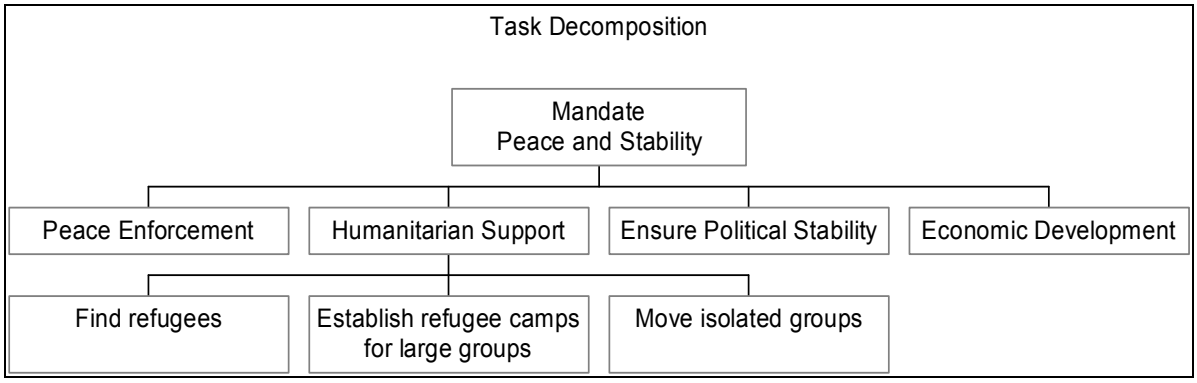

Figure 1: Task Decomposition.

D.4 IDENTIFYING MOMs

In order to assess the capability of each helicopter option it is necessary to construct a hierarchy of MOMs using the task breakdown.

For the task of finding the refugees important DPs would include range, sortie rate, sensor range, sensor field of view. From these, together with an understanding of how helicopters perform search operations, could be calculated the average area a helicopter could search per day, which is a MOP. This, together with scenario parameters such as the distribution of groups of refugees, would allow calculation of the average number of refugees found per day by the fleet of helicopters, a MOE. In turn the speed with which large concentrations of refugees can be identified will affect the speed with which non-military agencies can begin to deliver aid and set up refugee camps.

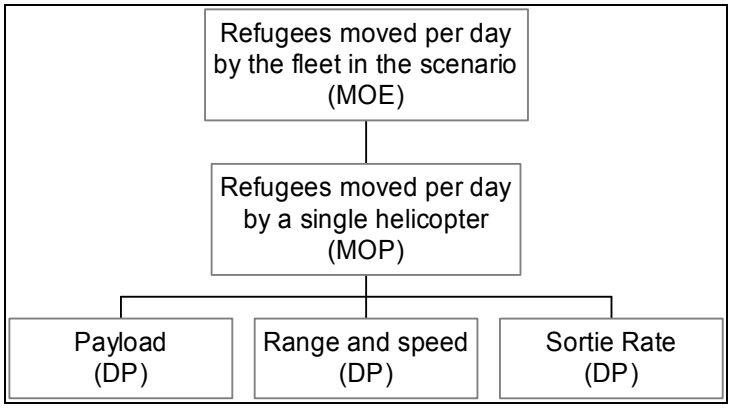

Figure 2: DPs to MOE.

To fully assess the capability of alternative helicopter options in the scenario it is necessary to combine the MOEs for finding refugees and for moving refugees into an overall MOFE for humanitarian support. An appropriate MOFE might be the number of refugees who die during the duration of the intervention

operation. A full analysis would therefore require an understanding of how death rates among refugees are affected by the provision of aid (food, water, medical support, shelter), together with many scenario assumptions about the initial state of the refugees, the capability of the aid agencies to undertake their tasks etc. Since this is a planning scenario the assumptions about the initial situation need to be realistic but there will be no 'right' answer. However, the sensitivity of the results of the analysis to variations in these values should be undertaken.

If a full analysis is not feasible the MOE for finding refugees and for moving refugees will need to be combined in another way:

- Judgement could be used to rank the importance of the tasks.
- The number of helicopters required to provide a defined level of capability in each task could be identified. The total number of helicopters required may then be identified by consideration of the sequencing of the tasks (e.g. by addition if they are simultaneous).

If the transport helicopter also contributed to other tasks, such as peace enforcement, a synthesis of the MOFEs for peace enforcement and humanitarian assistance would be required.

Annex E – METHOD AND MODEL DATABASE USER GUIDE

E.1 INTRODUCTION

The initial database window (Figure 1) allows the user to produce reports on the models and methods in the database, either all models and methods or those having specific features, and to edit the entries in the database.

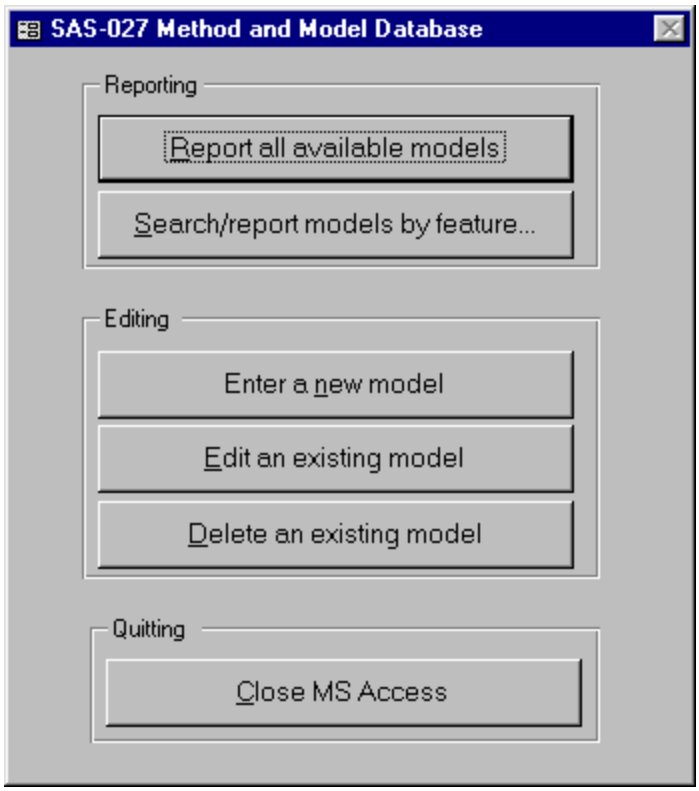

Figure 1: Initial Database Window.

E.2 DATA ELEMENTS COLLECTED IN METHOD AND MODEL DATABASE

E.2.1 General Information

The General Information window (Figure 2) displays general information on each model and method:

- Name and description.
- Indication whether it concerns a method, a model or both. A method is considered a general description of an approach that does not use significant, especially for that purpose developed software tools. A method may, however, use standard tools like spreadsheets, word processors or standard LP solvers. A tool is considered a software item specifically developed for that purpose. Sometimes a tool is part of an extensively described method, in which case the item is both a tool and a method.
- Indication to what extent the item is OOTW specific (ranging from specifically developed for OOTW up to not specifically developed for OOTW and of little use for that purpose).

- Status (conceptual, under development, in operation for a specified number of years or obsolete).
- Model Type such as '(war)-game', 'force structure balancing' or 'probability theory'.

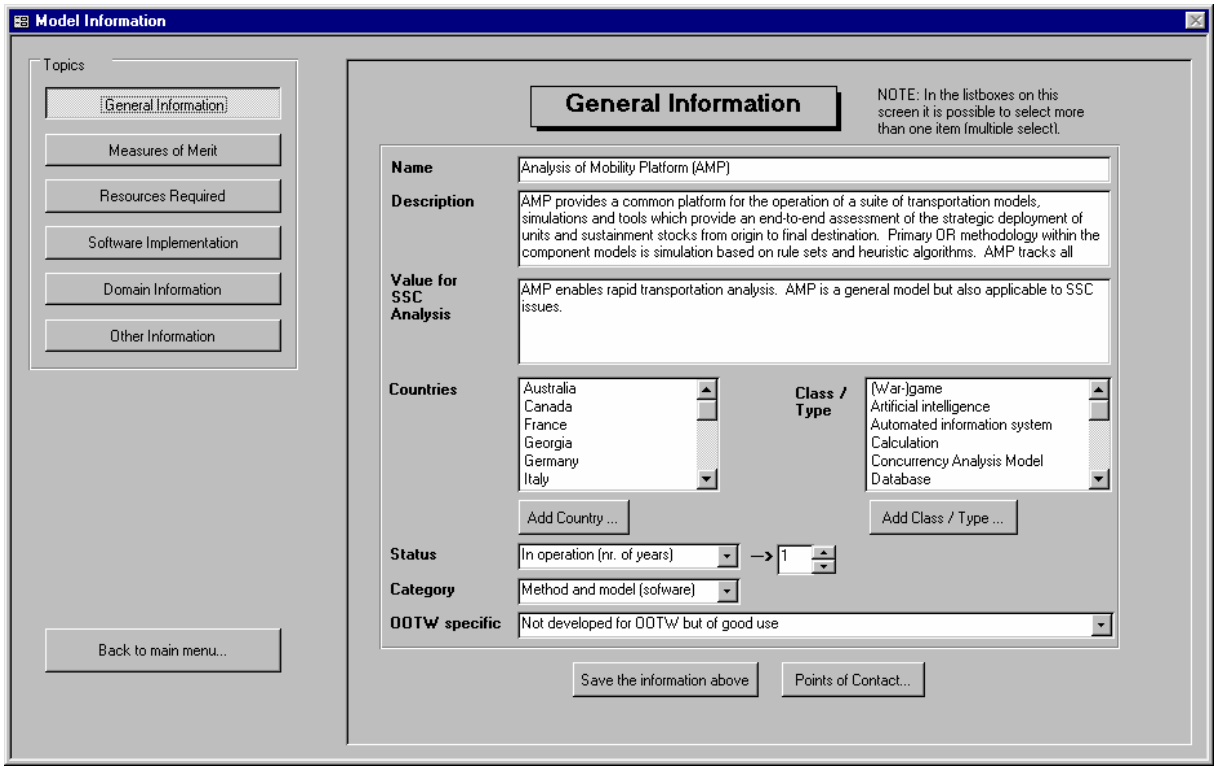

Figure 2: General Information Window.

E.2.2 Measures of Merit

The Measures of Merit window (Figure 3) displays information on the Measures of Merit considered in each model and method:

- Available Measures of Policy Effectiveness (MoPEs)
- Available Measures of Force Effectiveness (MoFEs)
- Available Measures of Effectiveness (MoEs)
- Available Measures of Performance (MoPs)
- Available Dimensional Parameters (DPs)

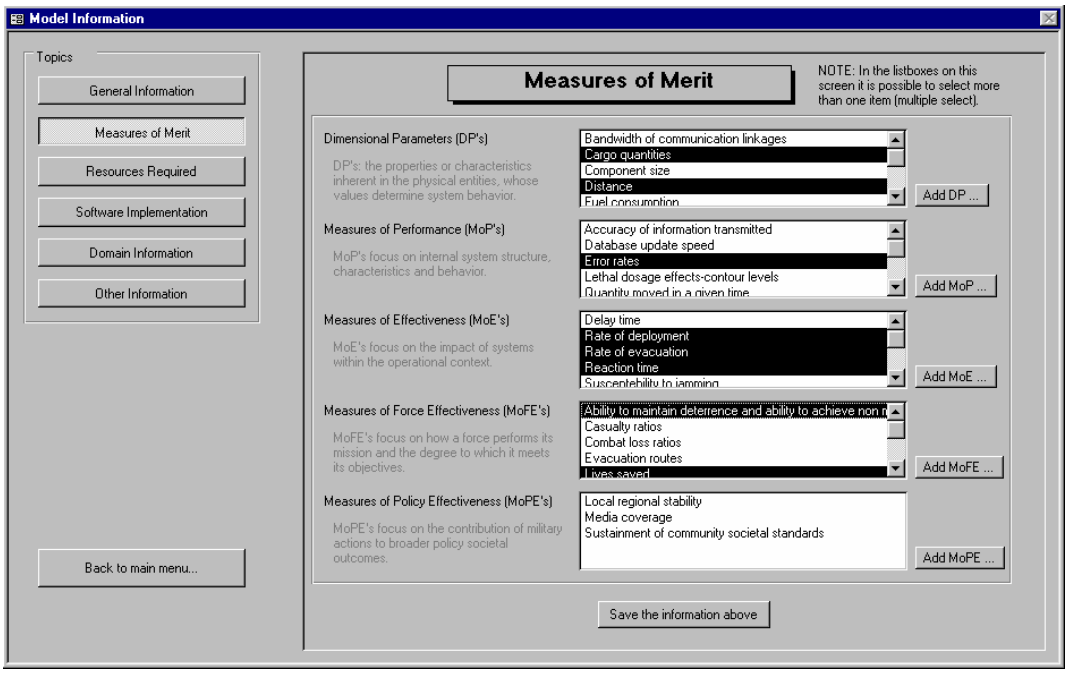

Figure 3: Measures of Merit Window.

E.2.3 Resources

The Resources window displays information on the resources required to use each model and method:

- Manpower to maintain expertise
- Manpower for a typical application
- Special facilities required to practice the method or model

E.2.4 Software Application

The Software Application window displays information on the software environment and hardware requirements for each model:

- Programming language
- Operating system
- Hardware requirements

Obviously, this part is only relevant for a model or for a combined method and model, as a pure method has no specific software implementation related to it.

E.2.5 Domain Information

The Domain Information window displays information on types of problem to which each model and method is fitted:

- Operational phases for which the item is applicable, such as ‘planning’, ‘preparation’ or ‘initial deployment’
- Problem types for which the item is applicable, such as ‘operational planning’ or ‘mission rehearsal’

- Levels of aggregation covered, such as ‘individual systems’, ‘battle group’ or ‘theatre’
- Tasks covered, such as ‘combat engineers’, ‘evacuation’ or ‘protection’
- Parties covered, such as ‘armed forces’, ‘refugees’ or ‘domestic government’

E.2.6 Other Information

The Other Information window displays:

- Strengths
- Weaknesses
- SSC track record
- Documentation references
- Points of contact for further information
- Freely describable additional information

E.3 SEARCHING THE DATABASE

The database can be searched to find methods or models meeting specific criteria. Figure 4 shows the search criteria input window. The database search generates a report on all models and methods meeting the search criteria. Figure 5 is an example of a report generated on a single model.

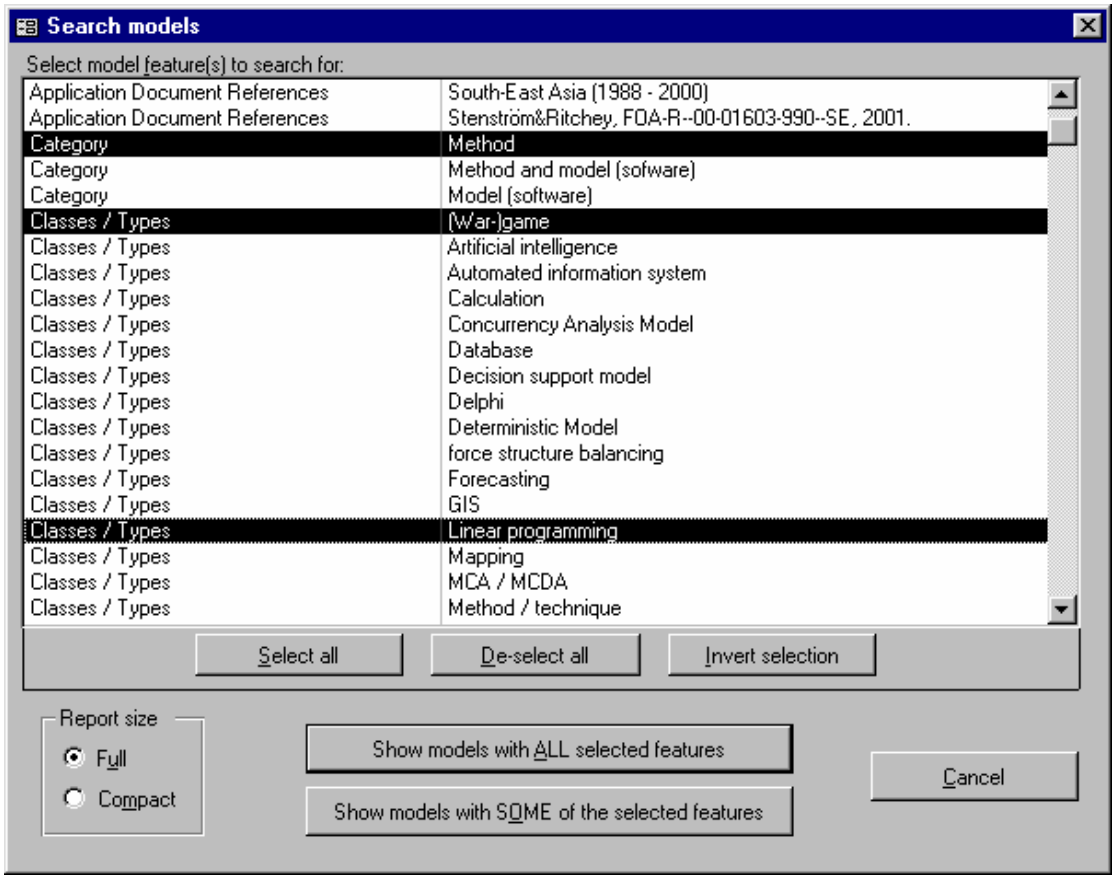

Figure 4: Search Criteria Window.

Figure 5: Search Report Window.

Annex F – METHODS AND MODELS DATABASE

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Annex G – DATABASE OF HISTORICAL SSC OPERATIONS

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Annex H – INVITED PAPERS PRESENTED AT THE SAS-037 SPECIALISTS' MEETING

Click on the Paper title to view the document in PDF

Symposium Paper 1 – Mission Task Analysis for the NATO Defence Requirements Review
by S. Armstrong

Symposium Paper 2 – The SAS-027 Historical SSC Database with Application to an Analysis of Past Canadian Operations
by D.W. Mason

Symposium Paper 3 – Scenario Development and Force Requirements using Morphological Analysis
by T. Eriksson and T. Ritchey

Symposium Paper 4 – Quick Strategic Force Closure Estimates for Roughly Defined Force Requirements
by J.M. Mahan and W.H. Key II

Symposium Paper 5 – Quick Strategic Force Closure Sensitivity for Multiple Scenarios
by J.M. Mahan, W.H. Key II and R.T. Brigantic

Symposium Paper 6 – The Theatre Evacuation, Movement and Peace Operations (TEMPO) Model
by S. Bocquet

Symposium Paper 7 – Large-Scale Military Humanitarian Assistance
by A.M. Lidy and J. Kunder

Symposium Paper 8 – The DIAMOND Model of Peace Support Operations
by P. Bailey

Symposium Paper 9 – Cost Modeling of Defence Components for Smaller Scale Contingencies
by F. Brundtland Steder

Symposium Paper 10 – SAS-044 'Decision Support to CJTF and Component Commanders' and other SAS Initiatives of Relevance
by G. Rose

Annex I – PROCEEDINGS OF THE SAS-037 SPECIALISTS' MEETING

Click on the title to view the presentation in PowerPoint

Agenda

Chairman's Introduction

Keynote Speech 1 – Linking Analysis to the SSC Planning Process
by V. Roske

SAS-027 COBP Presentation 1 – What is Unique about the Analysis of Small Scale Contingencies?
by A. Caldwell

SAS-027 COBP Presentation 2 – An Analytical Framework for Long Term Planning
by R. Cockram

SAS-027 COBP Presentation 3 – Historical SSC Database
by D.W. Mason

SAS-027 COBP Presentation 4 – Measures of Merit for Defense Resource Planning of Small-Scale Contingencies
by A. Gangsaas

SAS-027 COBP Presentation 5 – Examples of Measures of Merit and their Use in Analysis of Small Scale Contingency Operations
by A. Shoolbread

SAS-027 COBP Presentation 6 – SSC Analysis: Methods and Models Database
by S. van Merriënboer

Chairman's Endnote

Annex J – SAS-027 PRESENTATION FOR WIDER AUDIENCES

This Annex has been provided in PowerPoint format.

Click here to view PowerPoint presentation; Press Esc to exit

by S. van Merriënboer

Focus Paper 1 – WHAT IS UNIQUE ABOUT SMALL SCALE CONTINGENCY (SSC) ANALYSIS?

A paper for NATO SAS panel 027
by Andrew Caldwell, CDA, DERA.
This paper draws in part on work
for the UK MOD. However, the
views expressed are those of the
author and do not represent a formal
position of either DERA or the UK
MOD.

Defence Evaluation and Research
Agency UK

1.0 INTRODUCTION

This paper has been commissioned by the NATO SAS-027 group that was recently established to examine the analysis of Small Scale Contingencies (SSC). The aim of the paper is to identify the differences between SSC analysis and existing operational research activities.

For reference SSC are characterised as low density, low (military) casualty operations involving 100,000 personnel or less. Peacekeeping, peace enforcement, humanitarian aid, counter-insurgency, military aid to civil authorities and national evacuation operations are examples of SSC.

For the basis of this paper SSC analysis is compared directly with the analysis of Major Theatre War (MTW). MTW are characterised as high density, high intensity war-fighting operations involving 100,000 or more personnel with the potential to generate significant casualties. It is also important to note that SSC may be considerably more protracted than MTW operations.

The paper is split into the following topics:

1) Foundations
2) Stakeholders
3) Measures of effectiveness
4) Scenarios
5) Techniques
6) Data
7) The future of SSC analysis

2.0 FOUNDATIONS

There are significant differences in our capabilities to analyse MTW and SSC. For MTW we have conducted analysis for over 60 years and have developed a wide range of validated tools and techniques.

In contrast for SSC we have only seriously attempted to analyse this area for 10 years and the majority of our tools and techniques are still in development.

Because the foundations for SSC analysis are relatively under-developed (at least compared to our MTW foundations) we still have a long way to go. For example, in MTW the relationship between direct fire assets and indirect fire assets is understood, as are the roles of engineers, signallers and logisticians in contributing to campaign success. This allows us to examine the effectiveness and contribution of individual elements or to examine the synergy of the whole force. Analysis and practical experience have shown us that these elements, when working together, will lead to success on the battlefield.

For SSC, however, we are still in the process of cataloguing the elements required for successful completion of an operation as well as examining how they combine to provide that success. A force 'optimised' for SSC should contain a military-civil balance, possibly including judges, lawyers, economists, police, civil servants and health workers. These elements immediately fall outside the system boundaries that we have developed for MTW and there is therefore currently very little understanding within our community of how they operate, or of how we should combine them with military forces to produce campaign success. Furthermore, for the elements we do model in MTW we often find ourselves using them out of role in SSC.

Without a developed understanding of the civil-military balance in SSC it becomes difficult to examine the full scope of an operation. It many ways it is the equivalent of analysing MTW with only a partial understanding of how artillery or air power operates. It is of course possible to examine some aspects of SSC without this knowledge but the understanding of campaign success is dependent upon the synergy of all the elements. Therefore, it may take some time to answer with confidence the big question, "how do we 'win' in SSC?".

Despite the difficulties that we face in examining SSC it is interesting (and important) to note that the answering of SSC questions is placed firmly at the feet of military analysts. It could equally be handed to other government departments as several of them are also stakeholders in the success of SSC operations.

It is probable that we have ownership of the problem because the military can conduct activities in SSC that civilian agencies (normally) cannot. The military can respond quickly, they can deploy overseas, they can be self-sustaining, they can deploy in sufficient numbers to influence the situation and they have the capability to use lethal force to protect themselves and others against violence. They have many other characteristics that also make them suitable, such as flexibility and an effective command system. We must also not forget that owning military forces involves accepting a sunk cost and that in the absence of the threat of MTW the military should be available to take on additional tasks[1]. Finally, the deployment of a significant percentage of the military overseas will not disrupt government services, in contrast to other government departments, which are often fully committed in their home country.

As long as SSC questions remain the responsibility of defence ministries and departments it suggests that there is an implicit assumption at the highest levels of government that the military is vital, possibly the most important and certainly the most suitable component to tackle SSC operations. Although the skills of the military do not encompass all the requirements for making SSC succeed they can often improvise with the resources at their disposal. Additionally, they are a vital and important part of the solution, bringing with them capabilities not available from other government departments or international organisations. Given the importance of the military in SSC it is probably inevitable that answering SSC questions will remain our responsibility for the foreseeable future.

[1] This is a simplification, as it can be argued that by using our conventional forces for SSC we weaken our response time and training opportunities for MTW, incurring a risk that we may not be able to deal promptly with unforeseen MTW threats.

3.0 STAKEHOLDERS

Already we have established there is a greater number of stakeholders involved in SSC than in MTW. Identifying them, and the influence they have on the analytical process is, however, problematic. For analysis of MTW there is an implicit assumption that the success of the military campaign is either the most important part of the operation or takes precedence over other considerations. Under circumstances where a nation state is directly threatened with MTW, humanitarian and social issues become (at least historically) secondary for the duration of that threat. So in MTW there are still humanitarian, social, political and economic issues but the influence of the stakeholders who deal with these issues is diminished or directly tied into the success of the military campaign.

In SSC there are always alternatives to the application of military force. In fact, although military forces are deployed, the direct application of those forces in an offensive combat role should be avoided, if at all possible. In SSC the drivers may be humanitarian or social and it is the application of force that becomes secondary. Stakeholders with alternate viewpoints, strategies and priorities have a voice at the highest levels of government for SSC whereas they have had little influence in MTW. It is at this point that our analysis of SSC may fail in the most significant way. The majority of our analysis is delivered eventually, in one form or another, to the most senior decision-maker in the defence ministry/department. To make our analysis meaningful and useful we ensure all the stakeholders below the senior decision-member are comfortable with and accept the validity of our results. This informing and smoothing process is an integral part of good analysis. Not only do we have to ensure the analysis informs the customer, but that it also informs all the stakeholders who may influence the customer.

But in SSC some decisions are made one or two levels above the senior decision-maker in the defence ministry/department, typically at the senior political level[2] as SSC are inherently political in nature. Because this decision encompasses the stakeholders from other government departments any analysis conducted within the defence ministry/department is unlikely to have been exposed to the other stakeholders (and vice versa). This can handicap our direct customer, the senior decision-maker in defence ministry/department, as they may find themselves using analysis that none of the other stakeholders are aware of or have bought into. Furthermore, analysis conducted without due regard for the other stakeholders is also unlikely, given the scope of SSC operations, to cover the measures of effectiveness (MOE) that they are interested in. MOE regarding military effectiveness and casualties may not be sufficient to judge the political cost of an operation in terms of votes, the financial burden of the operation or the implications for foreign policy. For the analysis to be meaningful and useful it must recognise that the final customer is the government and not just the senior decision-maker within the defence ministry. For us to deliver our analysis at a higher level we must broaden the scope of the work to inform all the stakeholders who can influence the final decision.

4.0 MEASURES OF EFFECTIVENESS

In MTW there is a very definite distinction between success and failure, with only a small grey area of uncertainty. The clarity of our definitions for victory or defeat depends very much on the Measures of Effectiveness (MOE) that we apply to MTW analysis. Aims, MOE and end-states are intrinsically linked and not only are MOE well understood for war-fighting but so too is the linkage between aims, MOE and outcome.

In SSC the aims can, on occasion, be uncertain. Even where the aims are known there can still be competing issues, none of which is dominant enough to simplify the system boundaries to allow us to examine only a few MOE. For example, is the aim of an operation to provide long or short-term assistance? Will the permanent commitment of troops to the SSC be acceptable? Where these aims are

[2] Cabinet office for the UK.

vague we are forced to consider a large selection of MOE to ensure we can target our analysis at a range of end states.

An added complication is that there are often political and geo-strategic aims associated with SSC. This affects the acceptable end-state and causes almost identical situations to receive vastly different responses, ranging from full-scale deployments to no action at all. Also, the publicly stated aims of an SSC may not be the only MOE by which the stakeholders judge the success of the operation. These supplementary MOE need to be identified and analysed in a manner that informs the stakeholders but does not expose them to undue public (or private) criticism. These sensitivities may delay the development of SSC analysis as we may not yet be answering the right questions because some stakeholders are over cautious or unable at this juncture to declare all their interests in SSC operations.

The haziness of aims and end states is further complicated by the types of MOE we can apply and the thresholds at which they are assumed to have been met. MOE in MTW are measurable because they are based on physical processes that are supported by hard sciences such physics, chemistry and mathematics. The derivation of MOE in SSC is however much softer, relying on human issues more than physical processes. Psychology and sociology can provide some foundation but our understanding of, for example, coercion falls significantly short of our understanding of combat. For combat we can rely on physics and chemistry to give us, for example, the effective penetration of an anti-tank round against armour (given a working knowledge of a few parameters such as range, armour composition and thickness). But in SSC the factors that drive coercive MOE are less well understood and cannot always be quantified with hard OA. More often than not we are dealing with intangibles. This leads to subjective rather than objective MOE, and can adversely affect the confidence the customer is willing to place in our analysis.

Complicating further the application of MOE in SSC is our lack of understanding of the thresholds at which those MOE deliver acceptable end states. For example, in MTW historical research and operational experience has given us a good understanding of what casualties a unit can suffer before it loses its operational capability. These ‘defeat levels’ are a good example of a threshold at which MOE can inform the analyst that they have reached an end state. But in SSC the end state thresholds, even where they could be measured, have not being identified. For example, what are acceptable thresholds for the provision of humanitarian aid? Half the current death rate for the region? A death rate as low as a developed country or no civilian deaths at all?

Although the identification, quantification and linkage of MOE to aims and end states is a complicated area it is important to state that the main problem we face as analysts is that we do not yet understand how to simplify the system. This is fundamentally more important than trying to understand and model every aspect of SSC (which the complicated SSC environment drives us to attempt). We can analyse MTW because we make many apparently justifiable assumptions about the nature of MTW that simplify or ignore many real world processes. As we discussed earlier the military campaign dominates the political-military processes in MTW. We also know how to aggregate low-level analysis into high level systems. Because of these factors we can simplify the system boundaries for analysis and this is the precursor to modelling any real-world environment economically and quickly. Unfortunately, we do not know enough about SSC at the moment to determine which processes are important and which can be ignored or simplified.

However, recent history has begun to indicate that these types of assumptions may no longer be valid even for MTW. Fear of NATO casualties significantly altered the options open to the allies in the Operation Allied Force. We are still engaged in the Gulf, 10 years after the formal cessation of hostilities. Human factors such as coercion and morale, played a large part in the success of the coalition’s operation to liberate Kuwait. Collateral damage inflicted on a civilian-occupied bunker in Iraq during 1991 permanently affected the target list for the rest of the campaign.

In light of this we have to ask 'does this matter'? Historically the answer was no, because the analysis was robust enough to answer the question of the day. In the future though it may make a difference and we may have to begin removing many of the convenient assumptions we have used for six decades about MTW. The advantage with MTW is that at least there is a firm foundation on which to build further understanding. If at the same time we are trying to simplify the system boundaries of SSC analysis there should come a point where the two tool sets will meet.

This leaves another option for the development of MOE in SSC. By building some of our understanding from the bottom up, based on MTW analysis techniques and MOE, we should eventually reach a state where we can incorporate this work into the SSC tool-set. As an example, coercion in MTW may be no different, fundamentally, to coercion in SSC. If this is the case we should endeavour to make sure we do not expend scarce resources on doing the job twice and that we should identify whether such analysis should begin in SSC or MTW, in the knowledge that it will eventually inform the other group.

5.0 SCENARIOS

Most MTW analysis is conducted within the context of a scenario. The term scenario covers a wide range of examples that can, for instance be generic, specific, theatre wide or simple vignettes. Even if the analytical process does not rely directly on the scenario the final results are presented within the context of at least one scenario. For example, calculating the optimum range and fuel capacity of a next generation helicopter may not require any specific scenario inputs. But for the conclusions of that analysis to be meaningful the stakeholder must understand how the analysis compares with the likely scenarios or operations in which the helicopter will be used.

There are fundamental differences between scenarios developed for SSC and MTW and most defence ministries/departments have recognised this problem by developing SSC-specific scenarios. As scenarios are often a tangible expression of policy they are likely to be conservative (rather than radical) in nature. Because of this scenario development often relies on historical operations for context, and in this respect the development process for SSC scenarios should be easier than in MTW, as there is a wealth of SSC operations in recent history on which to build.

The first area of concern is if those SSC scenarios developed solely within the defence ministry/department. Typically, where this is the case, they are used for testing the capabilities of military equipment, doctrine and tactics. The prescribed end states associated with the scenarios are concerned with the performance of the military elements. This is understandable and indeed desirable as there is little incentive to conduct analysis on part of an SSC that does not directly inform a procurement process or an internal defence policy issue.

However, where this limits our analysis is that the results are unlikely to be applicable to the wider stakeholder group. Conversely, other government departments may have their own scenarios that deal solely with their processes and ignore the military contribution. When the stakeholders meet they have each developed their own understanding of how an SSC should be tackled with a departmentally centric view. Each set of analysis (if there is any at all) is unlikely to show the appropriate interactions between the military and other actors involved in SSC. For example, the military analysis may suggest that the purchase of additional resources is required to enhance their capability to support future SSC operations. If another government department's analysis suggests that those resources can be hired in theatre and need not be procured in advance then there is a conflict of interest between the stakeholders on which department should have responsibility and funding to cover that aspect of SSC. Such conflicts of interest should be addressed in the analysis stage and not at the final executive decision making stage.

Examining the military parts of SSC scenarios, when compared to MTW scenarios, reveals several fundamental differences in their composition. One important one is that there may be a less predictable

range of threats to the SSC force. There are two aspects to this. First, there may be multiple actors involved in SSC whose relationship with the SSC force is unknown. This leads to uncertainty of who the adversaries may be. Secondly, even for those actors that are known to be potentially hostile there may be no accurate way to calculate the threat. This is because in MTW we assess the numbers and capabilities of equipments in the knowledge that any potential opponent has the will to use all those equipments to their full potential. In SSC, although we can still assess the numbers and capabilities of equipments that our potential adversaries may possess, we cannot assume they have the will or motivation to bring the full potential of that force to bear. Often this is because we are not their principal opponent and that there is at least one other faction in the theatre that they are more concerned with. Therefore, for the analyst it is often hard to quantify a realistic threat level to any SSC force. This can lead to an over-estimation of the force protection required in relatively benign environments. Immediately that constrains our analytical results to advice on what may be a robust force (with considerable redundancy) as opposed to what is an optimal force.

Another difference in SSC scenarios is that there are additional constraints on the use of military force that need to be incorporated into the analysis. Some examples are Rules of Engagement (ROE), limits on collateral damage and our own and others' casualty levels. In respect of casualties the thresholds that are considered acceptable for SSC are presumed to be significantly lower than MTW and a single incident may be sufficient to push casualty levels over that threshold (e.g. Somalia). In war we can aggregate many separate incidents into high level analysis because statistically casualties will average out, from incident to incident over the course of the battle. In SSC there are fewer incidents and their frequency is reduced. This makes it harder to justify the averaging out of casualties (per incident) in SSC and drives us to model each incident in detail. This significantly increases the factors we need to consider in SSC and reduces our scope for simplifying the system boundaries.

Finally, in SSC military elements within the theatre of operations itself are more dispersed than in MTW. There is no front line or rear area and often there are only pockets of our forces, intermingled with allies and potential opponents alike. As the majority of our tools and techniques for MTW are based upon doctrine that assumes (in its coarsest sense) front lines and rear areas it immediately renders a large proportion of our MTW tool-set inappropriate and unsuitable. A new tool-set, incorporating SSC specific doctrine, environments, tools and techniques is therefore required.

6.0 TECHNIQUES

Having talked at length about scenarios it is necessary to talk briefly about the analysis techniques themselves. We have already mentioned some of the factors that hinder the analysis of SSC. In summary:

- We do not have a good enough understanding of human factors such as perception. Simple 'force on force' scaling is not appropriate.
- We do not have a full understanding of aims, end-states, MOE or the thresholds that differentiate success from failure.
- The system is complex because critical MOE (such as casualties) can only be modelled effectively at low level but other MOE (such as whether the region has been stabilised or not) must encompass an examination of the whole theatre of operations at the Grand Strategic level.
- The requirement to include new stakeholders further increases the size of the analytical task.

In addition to those factors we can now add some additional complications. The command and control system in MTW can be simplified into one network. It is not yet known if this approach is valid for SSC. In SSC quite often we will be looking to measure a null effect. For example, if a convoy is under escort there are two potential MOE: the first is whether the escort can defend the convoy against an attack;

and the second is whether it deters an attack in the first place. The first is easy to measure, the second is not because it relies on an understanding of human factors such as fear, hatred and perception. Unfortunately, the thresholds for other MOE, such as casualties, mean that the second measure is the more important one, as successful deterrence produces less casualties than a successful defence. Finally, in MTW analysis the use of only a few scenarios if often sufficient to test every element of the force pool. In SSC, some scenarios call for only a limited deployment and a large variety of scenarios need to be employed to fully test each element of the force pool. This is not complicated but does place an additional financial burden on producing an all-encompassing SSC analysis programme.

There are however some potential benefits in the analysis of SSC that are not open to us in the analysis of MTW. Stockpile analysis for a wide variety of war-fighting materials is unlikely to be required. Although specialist, low density, high utility components (such as UAVs) may still need to be examined, the draw down on logistics is more likely to be confined to fuel, water and food at constant rates. Detailed weapon analysis may not be required as the threat is unlikely to be more sophisticated than our potential adversaries in MTW, from which detailed weapon system parameters, capabilities and performances will have already being calculated. Modelling of air to air combat or surface naval engagements may also be unnecessary, simply because there may be no significant threat in these domains and some analysis areas, such as ASW, may not be required at all because of the lack of any applicable threat. Finally, some techniques, such as decision tree analysis, may be particularly powerful for examining SSC operations due to the smaller number of incidents in SSC than in MTW. Although decision tree analysis cannot guarantee an optimum solution it can provide insights on how to avoid some of the more unpalatable outcomes from engaging in SSC operations.

7.0 DATA

To support the techniques we have available (or that we will develop) for SSC we need data. We have collected and analysed data for MTW for over 60 years, focusing on specific requirements. Our SSC data collection and analysis is probably only 10 years old and at present not focused on specific data types but on a wide coverage of many different types of data for the operations we are or have been involved in.

There are two advantages we have in collecting data for SSC as opposed to MTW. The first is that we almost always have forces committed to SSC, so at any given moment there is likely to be a live operation from which to collect data. The second advantage is that there is more time for the forces (or analysts) in theatre to collect the information. MTW can be a chaotic and fast moving environment, where there is often inadequate time to collect data during the operation or to preserve them before they are destroyed for operational security. The slower pace of SSC operations gives us a greater window of opportunity to have direct access to real-world data.

There are of course disadvantages. First of all, we have not identified which data are important and which are not. Unfortunately we need to collect a lot of data before we can identify which items are important. This requires manpower to conduct data mining but until significantly greater funds are set aside for SSC analysis this activity will have to wait. Secondly, we do not yet know how to model the impact, role and affects of other organisations such as the World Bank, the UN, NGOs or the belligerent factions in SSC operations. As stated earlier SSC require a civil-military balance as social, humanitarian and long-term stability issues affect the end states of an operation. Without a more developed knowledge (within our community) of how these organisations function and exert influence we cannot be certain that we have access to or have collected the correct types of data to model them effectively. Thirdly, some data may be politically and/or operationally sensitive while we are dealing with live operations. It may not be possible to gain access to this information or to share it with our allies for some time. This in itself will not stop the development of SSC analysis techniques but it may hinder the rate at which we can develop. Finally, a larger amount of data is required to adequately address the large number of variables in SSC. This again carries with it a cost burden.

There are other considerations for data collection. It is likely that a greater proportion of the data that we will need to collect will deal with human issues (e.g. coercion). Such data are more subjective, often represented by surrogate indicators and are therefore hard to quantify with confidence. Learning how to incorporate and make sense of this type of data may be a significant undertaking in itself. This type of data is also less likely to be recorded and recent historical analysis suggests that anecdotal SSC data is less reliable than anecdotal MTW data, further hindering accurate collection. There is also the likelihood that some factors will be ethnographic or cultural. This may render the data case specific, which again increases the volume we have to collect to support our analytical processes while depriving us of a generic data-set for the examination of human issues.

All these factors constrain us on what it is possible to achieve but it is not impossible. There is a wealth of data out there (including the colonial histories of some European countries which in many ways mirror aspects of SSC) but the barriers to effective data collection and application require a significant change in the way SSC analysis is funded. There is insufficient effort, NATO wide, to draw out the key data for SSC analysis within a reasonable time frame.

8.0 THE FUTURE OF SSC ANALYSIS

It is possible, but by no means certain, that concurrent SSC may eventually become the principal force structure driver for several NATO members. Canada is a good example where this conceptual change is already occurring. Even if only a few NATO members move in this direction it should follow that the analysis of SSC should gain in importance, not just among those members but amongst the community as a whole. We must after all understand how to operate as a coherent alliance in SSC operations and doctrinal, tactical and equipment changes implemented by one nation must be understood by all. Without that understanding there would be strong implications for role-sharing and compatibility between NATO members, not just in SSC but in MTW as well.

The main constraint we face is financial. Our MTW analysis is based upon 60 years of effort with a firm financial and scientific foundation. In comparison we have conducted SSC analysis for only 10 years and we have yet to build satisfactory foundations from which to tackle the issues highlighted in this paper.

The main areas where we need to concentrate our resources are:

1) Identify the stakeholders and their priorities in SSC and include them, where appropriate, in the analytical process.
2) Simplify the SSC system boundaries to make the problem manageable, even if in the early stages that analysis has to be heavily caveated.
3) Identify common areas in SSC and MTW that will need to be developed in the near future (e.g. collateral damage). Once identified we should decide for each area of development whether it should be tackled from firm MTW foundations or from a simplified SSC system.
4) Increase our understanding of SSC aims, MOE and end states, their linkages to one another and the thresholds that separate success from failure.
5) Increase our understanding of human factors in SSC and the techniques we can use to analyse them.
6) Continue to develop our understanding of SSC scenarios, tools and techniques and identify whether existing MTW techniques can be used for SSC. From this position a basic SSC tool-set (which may require new tools) can be identified.
7) Identify, collect and process the key data items required to support a basic SSC tool-set.

In the final analysis it could be argued that MTW is a simplified sub-set of SSC, where judicious use of assumptions has removed the major barriers to analysis. As policy makers become increasingly concerned with the humanitarian, political, social and the long-term impacts of MTW, understanding the barriers may become as important as delivering the analysis. Given that SSC is a much more complicated problem it reasonable to suggest that we cannot expect to become experts in this field overnight. However, we must not forget that providing SSC analysis is likely to remain the responsibility of our community and that given the right circumstances we can succeed.

Focus Paper 2 – ACHIEVING UNITY OF EFFORT DURING COMPLEX CONTINGENCIES

1.0 ABSTRACT

This paper summarizes the results of ongoing research conducted in response to tasking from the Director of Program Analysis and Evaluation, Office of the U.S. Secretary of Defense. The research is intended to assist the sponsor with establishing an analytical framework that will provide better estimates of U.S. military force requirements and the specific force structure needed to carry out future smaller-scale contingencies (SSCs) while retaining the capability to fight and win the nation's wars. The paper is organized to address four important topics that form the basis for coalition interoperability: (1) the operational environment, (2) the U.S. Government's assignment of responsibilities to interagency participants (civilian and military) in complex contingencies, (3) the potential global partners (civilian and military) that might participate in these operations, and (4) the challenges to military forces in achieving unity of effort within *ad hoc* coalitions.

2.0 FOCUS PAPER: ACHIEVING UNITY OF EFFORT DURING COMPLEX CONTINGENCIES

The principal mission of U.S. military forces is to fight the nation's wars and to bring them to successful termination. The forces have been structured, equipped, and trained to accomplish these tasks with or without allied military assistance. The military has a dominant role in Major Theater Wars (MTWs), and the hierarchical structure of the forces has been organized and staffed to conduct armed conflict in an environment where the role of civilian agencies is minimal until the war has been won.

Throughout our nation's history, however, the same forces have often been tasked to conduct Military Operations Other Than War (MOOTW) during Small-Scale Contingencies (SSCs). These operations involve responses and resource expenditures that fall between peacetime engagement activities and MTWs. Typically, they involve the civilian agencies of the U.S. Government (USG) as well as a number of other organizations. During SSCs the roles are reversed because civilian agencies play the dominant role and military capabilities are limited in focus and are used to augment or complement the capabilities of civilian agencies.

Since the end of the Cold War, the international environment has changed and military forces have increasingly been employed to assist in the resolution of SSCs. The current National Security Strategy[1]

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[1] This paper was initially prepared before the Bush Administration took office. Although it is based on guidance documents from the Clinton Administration, many of the processes dealing with managing SSCs remain in effect and have been included in a draft National Security Presidential Directive (NSPD-XX) currently undergoing vetting within the interagency of the USG.

recognizes this requirement and points out that these operations will likely pose the most frequent challenge for U.S. forces and cumulatively require significant commitments over time.

A major factor in the changed environment is the way nations interact. The term often used to describe this new operating environment is "complex." The most prominent aspects of this environment include challenges to the sovereignty of the state, the transnational character of many problems, and the increasing importance and role of information. The new operating environment is not only defined by the complexity of the issues to be resolved, but also by the requirement for all institutions engaged in their resolution – both state and non-state actors – to act and interact cooperatively in support of peace and security, but often with different national interests. These aspects of complexity – typically including the need for immediate conflict resolution and humanitarian assistance as well as longer-term development of institutions and economic capacity – have had a far-reaching impact on how governmental and non-governmental actors respond during these contingencies.

Although the new environment can include conflict among warring factions within a state, the challenges typically occur below the threshold of armed conflict between nations, and they are handled as SSCs rather than as MTWs. The SSC operations generally require multi-dimensional outside intervention within the affected state by both civilian and military resources to achieve successful resolution. In these contingencies, the military forces conduct MOOTW under direction of civilian authorities, and must coordinate their efforts and collaborate with the large number of other organizations to achieve unity of effort.

The group of organizations providing resources to support contingency operations will likely include a number of other non-Department of Defense (DoD) agencies of the USG. In most cases it will also include elements from the United Nations (UN) Secretariat and its operating agencies. Inter-Governmental Organizations (IGOs), International Organizations (IOs), Non-Governmental Organizations (NGOs), and other nations are also potential coalition partners that can and often do provide resources needed to resolve these contingencies. These operations place a premium on the ability of the U.S. military to work closely and effectively with other USG agencies, the diverse set of coalition participants, and the available institutions and factions within the host nation.

This paper is divided into four sections. The first section briefly describes the post-Cold War operational environment. The second section addresses the USG organizing framework employed for complex contingencies. The third section provides a summary description of the potential global partners. The final section identifies areas where further research and modest investment will be needed to enable U.S. military forces to be more effective and efficient when conducting SSC operations with their potential global partners.

2.1 The Post-Cold War Operational Environment

Today's security environment is no longer shaped by concerns over global war between two superpowers, but instead is based on the potential for less likely MTWs or more frequent and wide ranging SSCs.[2] Because the operational environment in which SSCs are conducted is somewhat different than the one to which military forces became accustomed during the Cold War, it is important to highlight these differences.

[2] Small Scale Contingencies are civilian-led interventions that may or may not employ military resources. When military resources are used during a Small Scale Contingency, the forces conduct military operations other than war (MOOTW). Joint Pub 3-07 identifies the following types of MOOTW when the application of military resources is required: arms control, combating terrorism, support to counter-drug operations, enforcement of sanctions, maritime intercept operations, enforcing exclusion zones, ensuring freedom of navigation and overflight, humanitarian assistance, military support to civil authorities, nation assistance, support to counterinsurgency, non-combatant evacuation operations, peace operations (including peacekeeping, peace enforcement, preventative diplomacy, peace making, and peace building), protection of shipping, recovery operations, show of force, strikes and raids, and support to insurgency.

The global security environment is still dominated by the system of sovereign nation states, but the number of states has grown from 54 when the UN Charter was signed in 1945 to 190 today. Some of these new states were former colonies, others were formed to address ethnic divisions, and many have limited economic capacity or stable institutions of governance. In the past half century, the operating environment was relatively stable on the surface because it was dominated by the two superpowers and their allies. Turbulence and periodic crises generally occurred in countries where the superpowers competed for influence. Below that threshold, however, many nations dealt with internal political and economic challenges caused by local political crises, civil or regional wars, and man-made or natural disasters. These less visible situations were frequently handled by neutral members of the international community or by surrogates of the superpowers.

In today's environment, the direct competition between superpowers has essentially disappeared, and these regional or local situations termed complex contingencies – situations involving both conflict and humanitarian components – have become more visible to the entire international community. These contingencies typically occur in weakened or failed states[3] and cause chaotic situations that require intervention in the affected state by the international community. In the past, the code of international conduct, first established by the Treaty of Westphalia in 1648, applied. This code recognized the sovereignty of the nation state within its borders, and states usually did not interfere in the internal affairs of another state. If an intervention was carried out, it was usually accompanied by a declaration of war. Interventions today are not based on declarations of war, but rather on UN Security Council resolutions. They typically occur when the internal conflict of a nation threatens regional stability or when abuses of human rights become so widespread that fleeing refugees or internally displaced persons create large-scale, man-made humanitarian disasters affecting an entire region.

Another difference is the increasing transnational scope of the problems faced by these nations. Economic and social development traditionally has been funded on a country-by-country basis, but in today's environment many problems, such as countering drugs, terrorists, or international crime, require regional or international solutions.

The increasing role of the media and access to global information has also had an impact on the operational environment. Crises are seen simultaneously on television screens by both the public and the decision-makers who must take action. This instant visibility and media-determined focus increases the importance of public diplomacy, both to shape the perceptions at the outset of the crisis and to maintain support for actions during the crisis.

There are no internationally agreed criteria for determining when an intervention is necessary. The specific factors leading to intervention vary from situation to situation, but always require multidimensional application of resources to restore the affected nation to peer status. One template that is used to plan and conduct these types of operations is shown in Figure 1. The template establishes a generic political-military plan that identifies a list of possible tasks in eight sectors. Each sector and task has a designated lead government agency and supporting agencies. Although the military leads in only one sector, it is likely to have supporting roles in most of the other sectors. The generic template is used during a formal interagency process to guide those formulating the unique plan tailored to address a specific complex contingency.

[3] For definition of these terms, see United Nations High Commissioner for Refugees (UNHCR) Paper: "Reintegration in the Transition from War to Peace," 19 September 1997.

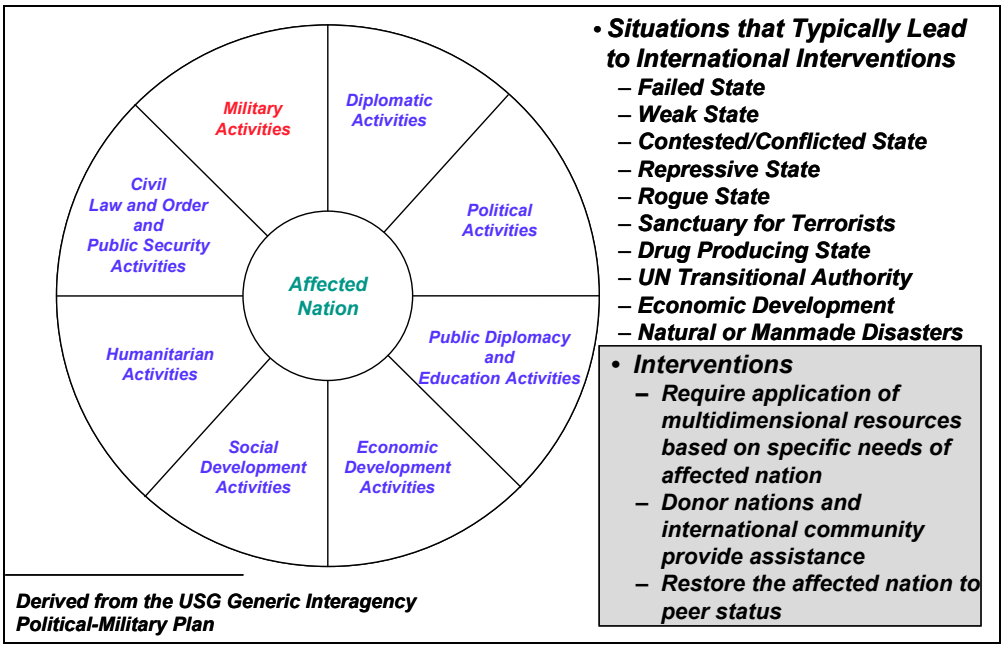

Figure 1: Multidimensional Sectors of National Power.

Because there is no central authority for a multinational contingency operation, but rather a collection of essentially sovereign authorities with differing objectives, it is more difficult to achieve unity of effort during planning or execution of these operations. Civilian agencies operate through a process of collaboration, cooperation, and consultation rather than the traditional military command and control process. Information and intelligence are two sides of the same coin because both support decision-making. Both civilian and military organizations must share information in this environment if common understanding and unity of effort are to be achieved.

Security is another characteristic that is different. Many of today's contingencies require the application of military force to establish military security in the region. Military security may often be accomplished quickly by a superior military force that is capable of separating the factions and demobilizing their military capabilities. Public security and civil law and order, on the other hand, are more difficult to establish because the institutions upon which they are based – police, judiciary, and penal institutions – often must be rebuilt. Unless both components of security are in place, stability and progress towards restoring the affected nation to peer status will be elusive and continued military presence will be required.

Capacity is another concept that must be understood in this environment. Few organizations or governments can devote the financial resources to maintain robust standby capabilities to respond to these situations; the capabilities they do have are usually already committed to ongoing contingencies. Some materials commonly required for emergency situations are stockpiled, but most large civilian organizations rely on in-place procedures to expand their capabilities when necessary. This system works when the contingency grows slowly, but when the requirement is to respond to a rapid onset disaster such as a large earthquake or tropical storm or a man-made complex contingency, the capabilities of the standing military forces often become the only robust option immediately available to national leaders.

Underlying any contingency response is funding, because without financial resources very little can be done. Funding is largely provided by donor nations through special assessments for UN Security Council resolutions, Official Development Assistance, or national emergency response procedures. Some UN agencies have authority to provide small amounts to affected nations to cover immediate emergency response activities, and IOs and NGOs have access to private donors. The more affluent donor nations

play a major role in shaping this environment, but are influenced by different national interests and objectives.

The SSC environment is significantly different from that for which U.S. military forces have been trained, especially the senior leaders. The majority of training and doctrine has been aimed at warfighting on the modern battlefield, but initiatives are underway within the DoD to increase awareness of the SSC operating environment. Progress is slow, and with normal personnel rotations experience is rapidly lost. Most SSCs occur in remote locations under difficult conditions and the military is often one of the last organizations to arrive. When forces are committed, it is typically to a desperate situation with ill-defined objectives, and with little real understanding of the actual situation on the ground and the role of other participants. In such an environment, both the military and civilian participants must learn to work together. To do so, they must understand and gain confidence in each other before a contingency so that when *ad hoc* coalitions are formed in a crisis, they can work together and achieve unity of effort. Joint, combined, and interagency exercises provide the opportunity for such cooperative learning and information sharing.

2.2 U.S. Government Organizing Framework for Complex Contingencies

The U.S. interagency is not a formal structure, but rather an established process for coordinating executive branch decisions that involve multiple agencies. Because most SSCs involve more than one agency, this process is usually invoked to bring together the appropriate agencies with the capabilities needed to resolve the specific contingency.

When the nature of the problem is an enduring one, the organizational arrangements, responsibilities, and procedures of the interagency participants are formally documented in what are termed National Security Presidential Decisions[4] (NSPDs) or a federal response plan. When the contingency is a unique event that has security implications, the National Security Council (NSC) and its organizational framework will be convened. Created in 1947 to respond to the national strategy of containment employed during the Cold War, the NSC has been faced with a growing number of unique SSCs. As currently configured, however, it is not well suited to execute today's strategy based on shaping through engagement and responding when necessary to the large number of contingencies it is called upon to address.

Two PDDs[5] established the framework for how the USG would respond to complex contingencies. PDD-25 required a determination and set the criteria that must be met before an intervention was conducted. When the determination led to an intervention, PDD-56 assigned agency responsibilities in eight sectors[6] and required the development and rehearsal of a Political-Military Implementation Plan (PMIP) before intervention. A generic PMIP identified more than 100 tasks for civilian agencies or military forces.

Building on the PDD-56 sectors and tasks in the PMIP, further research has identified and compiled additional tasks from other guidance documents, doctrinal publications, and reports from recent contingency operations. Duplicate tasks were eliminated and the residual set was ordered and arranged in a hierarchy of tasks and subtasks to develop a more robust checklist of possible SSC tasks. Lead and

[4] The Bush Administration documents its guidance as National Security Presidential Decision, (NSPDs) (formerly known as Presidential Decision Directives (PDDs)).

[5] See: (1) White Paper: The Clinton Administration's Policy on Reforming Multilateral Peace Operations, White House, Washington, DC, 14 May 1994; and (2) White Paper: The Clinton Administration's Policy on Managing Complex Contingency Operations: Presidential Decision Directive 56, White House, Washington, DC, May 1997.

[6] The eight sectors include: (1) diplomacy, (2) military activities, (3) humanitarian assistance, (4) internal politics, (5) civil law and order and public security, (6) public diplomacy and education, (7) infrastructure and economic restoration, and (8) human rights and social development. The Department of State is the lead agency for all sectors except military activities, for which the Department of Defense is the lead agency. Other agencies also have lead roles for many tasks and subtasks in these sectors.

supporting USG agencies were identified and, where appropriate, UN agencies with similar responsibilities were also identified for each task and subtask.[7]

Two groups of tasks were identified: common sector tasks and mission specific tasks. Common sector tasks are those that must be done for every operation once the decision to intervene has been made. They include establishing the sector interagency cooperation structure, conducting a sector needs assessment (mission analysis), and developing the sector implementation and transition plans supported by appropriate intelligence collection and information management. The mission specific tasks represent the checklist to be used when developing the mandate for each unique contingency. A total of 158 potential SSC tasks and 363 subtasks were identified in this process.

Military tasks from the Universal Joint Task List and Service task lists were then mapped into the SSC task structure to determine where military capabilities would be required either in a lead or supporting role. More than 1,100 military tasks were identified in this process, with nearly 400 supporting activities other than strictly military tasks. This task arrangement establishes where the military and civilian agencies have lead and supporting responsibilities across all sectors.

2.3 Potential Global Partners

The environment is further complicated by the plethora of players typically found in SSC operations. In the past, if the political situation became intractable and war was declared, the role of the military was dominant. In today's environment, the role of the military is generally one of support to civilian authorities. Political leaders retain control and apply military resources along with civilian resources to achieve their objectives. To carry out its assigned tasks, the military must coordinate and collaborate with a large number of civilian organizations from the donor nations, the United Nations (UN) and other Inter-Governmental, International, and Non-Governmental Organizations (IGOs, IOs, or NGOs), as well as with firms from the private sector hired to perform selected tasks. Each of these participants brings unique capabilities and resources to the operation, and all efforts must be coordinated to achieve unity of effort. Figure 2 overlays these organizations on the affected nation, but places them in their respective quadrant: Governmental or Non-Governmental, and Civilian or Military.

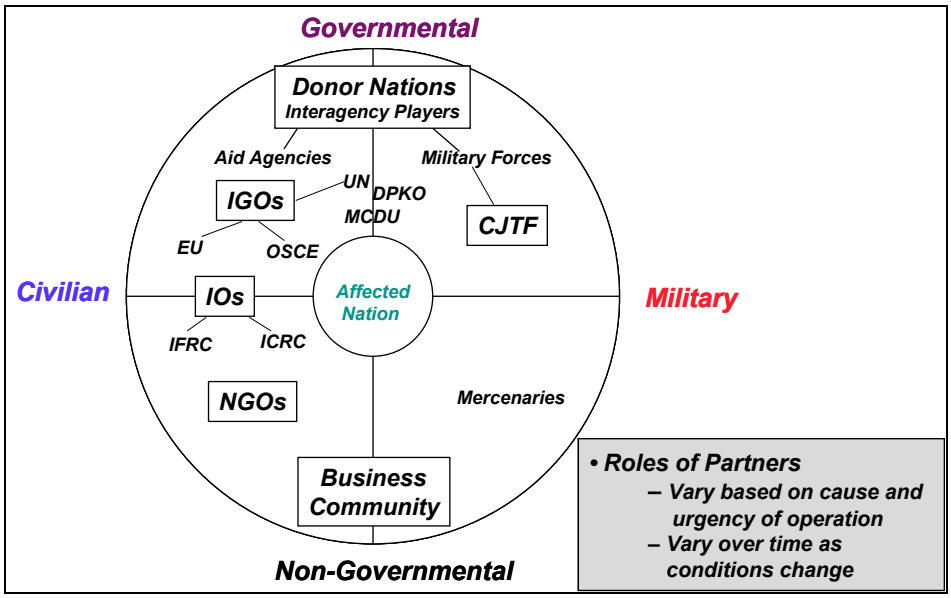

Figure 2: Potential Global Partners during International Interventions.

[7] See: D-2166 The United States' Military Role in Smaller Scale Contingencies, Institute for Defense Analyses, Alexandria, VA, August 1999.

The authority, mandates, and responsibilities of the many partners also vary. Authority forms the legal basis for all organizations operating in the environment, and along with the mandate has an impact on what, how, where, and why an organization does something. Organizations are also responsible or accountable to some authority for the actions they take. Governments are responsible to their legislatures and public. The IGOs and IOs are responsible to their member states or donors, respectively. NGOs are responsible to their boards of directors and their donors, whether private, governmental agencies, or IGOs. Potential global partners other than sovereign nations have been divided into four categories: IGOs, IOs, NGOs, and commercial businesses.

The characteristics of each partner are summarized in Table 1. All organizations are formed for a specific purpose, but IGOs are consultative bodies formed by national governments. They are governed by representatives of member governments. Many organizations use "international" in their title, but true IOs are unique because they are formed under international law or custom, are governed by private citizens but are recognized as sovereign entities by nations, issue their own passports, hold observer status with the UN General Assembly, and are non-profit. NGOs are also non-profit and governed by private citizens, but do not have the other status held by IOs. Commercial businesses are governed by private citizens with a goal of making a profit. These characteristics give the partners different interests and motivations.

Table 1: Key Characteristics of Potential Global Partners

Characteristics	IGO	IO	NGO	Business
Formed for a specific purpose	X	X	X	X
Consultative body of National Governments	X			
Formed under international humanitarian law or custom and recognized as a sovereign entity		X		
Directed by representatives of National Governments	X			
Directed by private citizens		X	X	X
Funded by National Governments	X	X	X	X
Funded by private institutions or individuals		X	X	X
Not-for-profit entity	X	X	X	
For-profit entity				X

It is important to note that organizations falling in the Governmental portion of Figure 2 (top half of circle), both civilian and military, are the entities with responsibility and authority for carrying out mandates from the UN Security Council. The organizations in the Non-Governmental portion may support governmental entities through contracts or grants, but otherwise typically have no formal authority or responsibility from the UN Security Council, and usually operate independently in accordance with the directions of their private boards of directors. These mixed relationships often make unity of effort difficult.

2.3.1 The United Nations Organization and System

The UN, created in June 1945, is the largest and most complex IGO, currently encompassing 190 member nations. The UN Organization (UNO) is the arrangement established by the UN Charter. The UN System

(UNS) includes the UNO but adds the programs, funds, and other bodies that have been created over the years by the member nations to carry out the work of the UN.

The six principal organs of the UNO are the General Assembly, the Security Council, the Economic and Social Council (ECOSOC), the International Court of Justice, the Trusteeship Council, and the Secretariat. The Secretary General is an administrator who supports the deliberative processes of the principal organs. The Secretary General heads the UN Secretariat with its thirteen separate elements, such as the Department of Peace Keeping Operations (DPKO) and the Office for the Coordination of Humanitarian Affairs (OCHA). Member nations fund the budget of the Secretariat proportionally through regular contributions based on the wealth of the particular member. The operations authorized by the Security Council impose mandatory contributions on members, over and above the normal budget.

The programs, funds, and specialized agencies that are included in the UNS are not under the control of the Secretary General, but instead are governed by boards of directors formed from participating member nations. There are thirty-nine UN Programs such as the UN Commissioner for Refugees (UNHCR), the UN Development Program (UNDP), and the World Food Program (WFP). In addition, there are eighteen UN Specialized Agencies such as the World Health Organization (WHO), the International Bank for Reconstruction and Development (IBRD), and the World Meteorological Organization (WMO). Two additional organizations are independent and autonomous, but operate under the aegis of the UNS: the International Atomic Energy Agency (IAEA) and the World Trade Organization (WTO). All of these programs, funds, and specialized agencies – essentially autonomous IGOs – are funded by member nations through separate budgets.

Coordination among the member states and the UN agencies is achieved through a number of committees and other organs. Resource mobilization in such an environment for in-kind contributions, personnel services, and funding is a major effort. Interagency coordination is another difficult task that maintains the linkages between the Security Council, ECOSOC, and the functionally organized Executive Committees that report to the Secretary General. In addition to these coordination measures, which largely occur at UN Headquarters located in New York and Geneva, coordination must extend to the UN participating agencies in the field at the scene of an SSC. Usually, coordination at that level is achieved through a Resident Coordinator, Humanitarian Coordinator, or Special Representative of the Secretary General, depending on the nature of the contingency.

The Secretariat and the funds, programs, and other bodies of the UNS often become involved in SSCs. The DPKO has a role in forming peacekeeping missions and UN Civilian Police for these operations. It has established a Standby Arrangement System[8] to facilitate rapid assembly of such a force. The OCHA has a role in coordinating the international response to rapid onset disasters and has developed the Military Civil Defense Assets (MCDA)[9] system of "service modules" to facilitate the assembly and deployment of resources in these situations or during complex emergencies. The United Nations Children's Fund (UNICEF), UNHCR, WFP, and WHO have response capabilities that are frequently employed during SSCs, and other agencies also contribute their functional expertise to these operations. For longer term economic and social development in a nation affected by an SSC, both the UNDP and the IRDB (the World Bank) play major roles along with the other UN agencies.

2.3.2 Inter-Governmental Organization Participants

IGOs frequently play an important role in SSCs. They come in a variety of forms and often fulfill a number of functions. Three categories of IGOs are addressed: those with a global focus or that span multiple regions, those with a regional focus, and those financial institutions having either global or regional responsibilities.

[8] See http://www.un.org/depts/dpko.

[9] The MCDA Register can be located at: http://www.reliefweb.int/ocha_ol/programs/response/ register.htm.

The IGOs with a worldwide focus address issues that have a global reach such as migration, international criminal activity, or economic development. Others bring together member nations from more than a single region that share a common culture or language. Another group in this category focuses on arms control issues or the prohibition of certain types of weapons or materials used for weapons. Examples include the International Organization for Migration (IOM), the Organization for Economic Cooperation and Development (OCED), the Commonwealth of Nations (CWN), and the Organization for the Prohibition of Chemical Weapons (OPCW).

Many of the regional IGOs have security and economics as their main, but rarely sole, function. Often they are intended to enhance consultation, but some have increased their responsibilities for conflict prevention or peace support operations as recognized regional arrangements under Chapter VIII of the UN Charter. Examples of regional IGOs include the North Atlantic Treaty Organization (NATO), the Association of Southeast Asian Nations (ASEAN), the Gulf Cooperation Council (GCC), the Organization for Security and Cooperation in Europe (OSCE), the Caribbean Community (CARICOM), and the Economic Community of West African States (ECOWAS).

Financial institutions such as the World Bank, the International Monetary Fund (IMF), and the Bank for International Settlements (BIS) have global responsibilities. They work with a number of regional banks to make available economic resources to enable nations to accomplish economic and social development. Examples of regional banks include the African Development Bank and the Caribbean Development Bank.

2.3.3 International Organization Participants

In addition to the characteristics described earlier, IOs operate internationally on the basis of neutrality and impartiality and use a distinctive insignia representing the protection extended by international convention or custom. Three organizations currently meet these criteria: the International Committee of the Red Cross (ICRC), the International Federation of Red Cross and Red Crescent Societies (IFRC), and the Sovereign Military Hospitaler Order of Malta (SMOM).

The International Movement of Red Cross and Red Crescent Societies includes not only the ICRC and the IFRC, but also the 170 national societies worldwide, including the American Red Cross. The role of the ICRC is to protect and assist the victims of armed conflict, while that of the IFRC is to coordinate the International Movement's response capabilities during natural and technological disasters and chronic and acute pathogen emergencies. The ICRC normally works independently of the national societies, whereas a strength of the IFRC is its ability to draw on the resources of those societies when performing disaster relief. The IFRC has developed procedures and standards for Emergency Response Units[10] (ERUs), comparable to the MCDA service modules, to assist the national societies to provide "off-the-shelf" capabilities promptly in a disaster. The roles of the ICRC and IFRC are by definition separate, but during recent complex contingencies, the differences between their roles have often become blurred.

SMOM is the world's oldest humanitarian organization, founded in 1099 by the armies of the First Crusade. It uses the Maltese Cross as its insignia. It is an Order of the Catholic Church focused on charity and humanitarian assistance. To perform these tasks in the modern world, the Order has developed a number of capabilities in national chapters that have been employed during recent SSCs. The Emergency Corps of the Order of Malta (ECOM) also has emergency response units available to meet the needs of affected populations. The Order is unique in that it can operate in either military or civilian modes and has supported both civilian and military casualties.

[10] Emergency Response Units, International Federation of Red Cross and Red Crescent Societies, 1211, Geneva 19, Switzerland, 5 January 1996.

2.3.4 Non-Governmental Organization Participants

NGOs are an institutional expression of civil society. They traditionally work on humanitarian and development problems, but over the past half century have expanded into other areas such as human rights protection and other advocacy issues, citizen diplomacy (referred to as track two or multi-track NGOs), or religious, academic, and scientific activities.

Current estimates[11] suggest there are possibly as many as 32,000 NGOs formed in developed nations (northern hemisphere or international NGOs) that work in less developed nations, and as many as 80,000 NGOs in less developed nations (southern hemisphere, national, or local NGOs) to work on local problems. About 15 to 20 international NGOs have full service capabilities and operate in 70 or more countries with annual budgets of $100 million or more.[12] Others have more limited capabilities but may play an important role during SSCs. Another important consideration is that NGOs are usually already operating in areas by the time military forces are deployed and can be useful sources of information on the local situation.

2.3.5 Major Participating Donor Nations

Donor nations provide the resources that make the international community function. The 21 member nations that form the Development Assistance Committee of OECD are the principal contributors, but several other nations also provide assistance. The contributions for economic and social development, given either bilaterally or multilaterally as Official Development Assistance, are focused on specific programs and targeted to nations and regions that are in keeping with the donor's national objectives. Humanitarian assistance is also provided by donor nations and other responding organizations of the international community. When disasters occur, the assistance is provided on a non-political basis and without compensation to meet the needs of the affected population. While the total amount of official aid has declined recently, the reduction has been more than compensated for through increasing private investments. Private investments, however, require a stable and secure environment to make the risks acceptable to the investors.

A secure environment requires both military security from hostile forces and public security from criminal activities and human rights abuses. Nations must agree to take collective action when another nation is confronted by these problems, and donors have cooperated to develop a UN system to support peacekeeping operations. When peace enforcement is required, the military task is more complex and is usually conducted by a lead nation and other willing partners as an *ad hoc* coalition or by a regional alliance of nations with sufficient capabilities to ensure success.

Unfortunately, the public security component is a more difficult and longer term task that requires the building of responsive institutions and the rule of law. Donors and the international community have not had as much success with the public security sector as they have with the military sector, and this lack of civil capacity often requires the military forces to remain deployed even though the military security tasks have been completed. One factor contributing to this problem is the lack of integrated planning of military and public security activities. Another is the long time required to assemble an international civilian police force and to build necessary institutions. The successful employment of Multinational Specialized Units (MSUs) during complex contingencies since 1998 suggests that this concept of paramilitary forces may: (1) provide the bridge until civilian capabilities can be established, and (2) serve in an economy of force role to enable the military forces to redeploy when their tasks are completed.

[11] World Disasters Report 1997, International Federation of Red Cross and Red Crescent Societies, CH-1211 Geneva, Switzerland, 1997.

[12] Preventing Deadly Conflict Final Report, Carnegie Commission on Preventing Deadly Conflict, Washington, DC, December 1997.

2.3.6 Resources from the Business Community

With the globalization of the world economy, the role of business in contingency operations has expanded. Because of their forward presence and in-country knowledge, they can be a useful source of information for intervening military forces, especially during planning. During execution, they might be able to provide or arrange locally for critical resources needed by the force. Five types of commercial operators are discussed.

The first group of businesses is the contractors used by the DoD to support forward deployed military forces. Each military department has its own program: the Army's Logistic Civil Augmentation Program (LOGCAP), the Navy's Construction Capabilities Contract (CONCAP), and the Air Force's Contract Augmentation Program (AFCAP). These programs provide life support, construction capabilities, maintenance, transportation, and other functions such as medical and communications for the forces deployed to a contingency.

The second group of businesses has formed what is termed by some the "disaster industry." This is a loose conglomeration of companies and middlemen, generally European-based, that supply the needs of victims and relief givers. These companies include small manufacturers, pharmaceutical firms, auto dealers, and suppliers of humanitarian materials.

The third group is businesses that work for other USG agencies, allied nations, or UN agencies. These firms usually provide training, consultant services, or management for large-scale projects. Some of these firms also provide contingency and recovery planning services. In certain cases, commercial firms will be employed to recruit, train, equip, and deploy the USG contribution of civilian police to contingency operations.

Another group includes public-private partnerships. Commercial businesses, when it is in their interest, will partner with governments at the national or local level to accomplish specific projects that benefit the recipient organization. These partnerships leverage capabilities available in advanced economies and frequently provide support to local health and education programs, civilian institution building, and introduction of new technology.

Many of the other SSC participants will also contract with firms to provide them with the supplies and services their organizations need to perform their tasks. When the local security situation is poor, these firms may be the only protection available to the population until military forces arrive. In some cases, specialized firms may engage directly in combat operations for a weakened government using mercenaries.

2.3.7 Military Command and Control and Coordination and Collaboration with Civilian Organizations

Military and civilian organizations, although structured differently, must work together in various types of SSC operations. Both communities have recognized these differences and, to achieve unity of effort, have established or are developing organizational arrangements to facilitate coordination and collaboration between the two groups. Both communities need to understand how the other is organized and where interfaces can be established so that differences can become transparent during planning and operation.

When military forces are employed, whether for MTWs or SSCs, they are generally tailored and grouped into various types of task forces. These organizational arrangements include concepts for single Service, joint, joint interagency, and combined joint task forces, depending on which elements are involved in the operation. During operations, civil-military coordination is effected through the creation of various types of *ad hoc* centers such as a Civil-Military Operations Center, a Humanitarian Operations Center, or an On-Site Operations Coordination Center. Within the USG, a recent initiative has been to establish a Joint

Interagency Coordination Group (JIACG) at two, and eventually all, combatant command headquarters. The JIACG consists of members of relevant government agencies (Departments of State, Justice, Commerce, etc., the Central Intelligence Agency, and others as necessary) to provide to the commanders a means through which they can leverage the efforts of other agencies. Initially conceived for counter-terrorism activities but potentially equally useful for other contingencies, the JIACG will provide at the operational level an advisory group, a focal point for planning, and information and intelligence fusion. The JIACG does not have directive authority to task personnel or agency elements independently.

The use of information technology and the Internet has enabled many civilian organizations to compile and make available very useful information to assist with planning and responding to SSCs. A number of these civilian networks, databases, and systems could provide military forces with useful information during planning and execution of SSC operations. Examples include the Relief Web,[13] the Integrated Regional Information Network (IRIN), and the Global Disaster Information Network (GDIN). The U.S. Agency for International Development also operates an on-line system called Volunteers in Technical Assistance Network (VITANet).[14] The Pan American Health Organization has developed an automated Supply and Management (SUMA) system to track relief supplies from origin to destination. This system is being adapted worldwide and should provide more accurate records of supplies delivered and effective accountability of donor-provided relief during emergency situations. In addition, there are environmental databases as well as reporting systems related to meteorological conditions, maritime distress and safety, health, food shortage, and famine early warning.[15]

Many agencies, especially OCHA, have web-based databases on-line that identify rescue teams and other responding organizations, stockpiles of relief items, and legislation to facilitate customs requirements during emergency situations. These capabilities have enhanced significantly the exchange of vital information within the civilian response community, and can be accessed by military planners to provide a better understanding of available resources.

2.4 Challenges to Achieving Unity of Effort

The key challenge for U.S. military forces is to be ready for both the less likely larger scale MTWs and the more frequent SSCs that require military intervention. This research suggests that the forces are capable of conducting both types of operations, but SSCs, are typically planned and conducted less effectively and efficiently than they might be. Improvements in the capacity of the U.S. military forces to conduct SSCs will require modest but focused investment in its existing forces, not the creation of separate forces for SSCs.

2.4.1 Security Forces

Both aspects of security – military and public security – are recognized in PDD-56 and must be coordinated during planning and execution to achieve unity of effort. Military intervention is often required to separate, disarm, and demobilize warring factions, but local civilian police are frequently part of the same problem. They too must be disarmed and demobilized at the same time as the warring factions, and then rebuilt into a competent force capable of maintaining civil law and order to provide the public with a secure environment so that stability and economic redevelopment can take place. Rebuilding the institutions of police, judiciary, and penal system is a long-term civilian mission.

The unfortunate reality is that civilian police worldwide are fully employed every day and not held in reserve. No nation has civilian police forces available for immediate deployment to an SSC. The capacity of the UN DPKO civilian police program is limited by available national resources and makes it difficult

[13] Relief web is at www.reliefweb.int/.

[14] VITA can be contacted at vita@vita.org. Their home page is http://www.vita.org/default.htm.

[15] See for example: http://geoweb.fao.org/ and www.info.usaid.gov/fews/fews.html.

to assemble a viable force quickly. When they deploy, they are usually assigned observer or mentoring roles with little capacity to conduct coordinated police operations. The U.S. Department of Justice operates the International Criminal Investigative Training Assistance Program (ICITAP) for developing police forces and the Overseas Prosecutorial Development, Assistance and Training (OPDAT) program to rebuild the judiciary. These two programs have been used during a number of contingencies, but require time to rebuild the legal institutions and foundations that are needed in the affected countries.

In August 1998, the first Multinational Specialized Unit (MSU) was deployed to Bosnia by NATO. Assembled from paramilitary forces maintained by several allied nations, these police forces have military status; their mission is to fill the gap between the local police and the NATO Stabilization Force. The MSU, although less than 600 personnel, is a well-trained force capable of operating either as civilian police or as organized military units, and it has an information unit that collects and processes valuable human intelligence (HUMINT). The successful MSU operations should be examined to determine the potential of this type of organization to fill the early security gap during future SSCs. These units could be deployed with the initial military force to bridge the gap until civilian police can be assembled, and then serve in an economy of force role to enable the military forces to redeploy when their tasks have been completed.

2.4.2 Sizing and Training U.S. Military Headquarters for SSCs

Military organizations have been designed and constructed to operate effectively and efficiently within a large hierarchy of units when conducting MTWs. To perform their missions, headquarters receive support from other organizations within the hierarchy. However, when a headquarters is designated to conduct an SSC, it is removed from this complex organizational arrangement, provided with various capabilities embedded within the larger hierarchy, and required to operate with a large, diverse group of civilian organizations to accomplish its mission. The units assigned to the controlling headquarters continue to perform the same tasks, but the staffs of the designated headquarters must expand – some say double in size – to operate unique resources assigned to the SSC force and coordinate with other participants in the operation.

Commanders and staff must learn to employ many assets (e.g., national intelligence means, psychological operations, civil affairs, contracting) that would have been controlled by others in the MTW force. Because each SSC is unique, it is difficult to establish simple rules for sizing SSC-designated headquarters. Moreover, the commanders and their staffs will require additional training to understand the roles and capabilities of the civilian participants in these contingencies so that unity of effort can be achieved.

Within the USG, the Standing Joint Force Headquarters (SJFHQ) is an option currently being evaluated in experiments. The SJFHQ is a permanently assigned 55-person team of operational planners and information command and control specialists that will be available to form the backbone of a Joint Task Force (JTF) command structure. During day-to-day operations, the SJFHQ element is assigned to a theater commander and is embedded in the combatant command's staff. When a contingency requires the establishment of a JTF, all or selected portions of the SFJHQ element will be assigned to a JTF. The SFJHQ uses collaborative tools to build an extensive knowledge base of focus areas that can be used during contingency planning process. It also coordinates with academic, industry, and government centers of excellence to pull specialized knowledge into the planning process. The experiments will evaluate whether the SJFHQ provides more proactive and coherent advance planning and more rapid build up of JTF headquarters capabilities than the current *ad hoc* process.

2.4.3 Military Liaison Capabilities

Within the U.S. military, liaison is often an *ad hoc* duty assigned when the need arises, with little unique training or resource support provided. In traditional MTW operations, such assignments serve typically to

establish information connectivity between headquarters or adjacent units. In multinational coalitions, especially SSC operations, liaison activities require well-trained personnel who are able to bridge the differences between the civilian and military organizations and serve as the glue to hold the temporary coalitions together and to facilitate unity of effort. The liaison personnel become "ambassadors" of their commanders and must understand the broader issues and commander's intent during response operations.

Liaison is also important during peacetime engagement where cultural understanding and trust needed during response operations is acquired. The size of existing U.S. military groups is linked to the volume of foreign military sales; fewer sales lead to a reduction in the group size. The U.S. European Command's military liaison teams provide an alternative model that might have application in other regions. Foreign area and civil affairs specialists, active and reserve, can form the nucleus for fielding such capability, but positions need to identified and filled with trained personnel to carry out engagement activities and to serve as key liaison personnel during response operations.

2.4.4 Human Intelligence Collection and Information Sharing

The U.S. military has excellent technical capabilities for collecting and developing targeting information, but is less capable in the area of HUMINT. During SSC operations, it is frequently critical to assess intentions of various populations and to anticipate potential problems not only in the military sector, but also in the other sectors of civilian activities involved with complex contingencies. Other organizations such as the MSU or UN agencies, IGOs, IOs, NGOs, or commercial businesses may have access to this type of information. Before such information can be collected and exploited to fill the current void in U.S. capabilities, it will be necessary to develop procedures to exchange a wide range of information with these organizations so that unity of effort can be achieved.

2.4.5 USG Interagency Coordination Mechanisms

The existing NSC structure was developed in 1947 and, although modified slightly by each administration, is still based on a strategy of containment and reaction to a major crisis. The current National Security Strategy is one of shaping through engagement and responding when necessary. While the existing structure is capable of responding to individual crises, it has no interagency mechanism to shape the environment through government-wide coordinated engagement activities. Coordinated multi-dimensional engagement activities can reduce tensions in affected states or regions, possibly reducing the need for, or the magnitude of, a future response. Options need to be developed for aligning the existing NSC structure with current National Security Strategy to enable the USG to achieve greater unity of effort both during engagement and response.

2.5 Conclusions

The SSC environment is complicated because of its multinational and multi-discipline participants and the varying capabilities and interests they bring to the operation. A secure environment, one free from military hostilities but also one that follows the rule of law and ensures public security, is essential if redevelopment is to occur. The coordination and collaboration architectures needed to carry out the military and civilian tasks to remedy the conditions that caused the intervention will vary by sector and task, but must be established and maintained so that information can be exchanged among the participants. A key center of gravity is donor nation control of funding, but application of resources is subject to different national interests. Achieving unity of effort in such an environment is challenging and military commanders and their staffs must be aware of these factors and act on them during these operations. Greater emphasis on working with the civilian community during exercises is necessary to build the understanding and trust that is needed during SSC operations.

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Low intensity conflict	Operational analysis	Smaller scale contingencies
Management planning	Operational effectiveness	SSC (Small Scale Contingency)
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14. Abstract

The post Cold War era has witnessed a proliferation of peace support operations, humanitarian operations, and a variety of other smaller-scale contingency operations. These have challenged NATO and others with their frequency, complexity, intractability, and cost. Such operations are likely to remain a major task for the alliance and the international community for the next decade.

The SAS-027 technical team was established by the NATO RTB under the SAS Panel in March 2000 to review current NATO and national planning experiences to devise a comprehensive approach that integrates those experiences in face of new planning challenges. The SAS-027 technical team had an evolving membership with participation from Australia, Canada, France, Georgia, NC3A, the Netherlands, Norway, Sweden, Turkey, United Kingdom, and USA.

This document provides an overview of the current 'state of the art' in the analysis of smaller-scale contingencies. It is intended as a guide to operational analysts tasked with conducting such analysis in support of long term planning, whether force structure planning, analysis in support of equipment acquisition or other analysis of other issues such as the organisation of forces. The work has drawn heavily from the work done by the SAS-025 technical team on Analysis to Support Overall Long-Term Defence Planning.

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