

North Atlantic Treaty Organization

Special Operations

Coordination Centre

(NSCC)



The North Atlantic Treaty Organization

Special Operations Forces Study

4 December 2008

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Executive Summary

There is a common perspective among a variety of defence and security establishments around the world that the nature of the current and future security environment we face presents complex and irregular challenges that are not readily apparent and are difficult to anticipate. Governments are faced with “unusual” or “unconventional” threats that dominate the attention of their political and defence leaders. The diverse set of threats are interconnected and have the potential to undermine wider international stability by creating a state of low level persistent conflict for the foreseeable future.

Special Operations Forces (SOF) provide an inherently agile instrument ideally suited to this ambiguous and dynamic irregular environment while allowing national and collective defence establishments to retain freedom of action through employing economy of force. SOF are characterized as strategic assets because of their ability to achieve political, military, psychological, and informational objectives that represent the foundational instruments of national power. SOF operate outside the realm of conventional operations or beyond the standard capabilities of conventional forces, thus providing a solution to extraordinary circumstances of political interest when no other option is available.

To assure the feasibility of the alternative options SOF provide to decision makers, successful special operations require optimized performance beyond that found in conventional forces. Optimized performance is that which is made as perfect, functional or effective as possible to mitigate the inherent political and physical risk.

A trend is evident from the evolution within many nations that the critical ingredient to optimize SOF is a dedicated national special operations organisation to provide coherent, long term stewardship, authority, and direction over all aspects of special operations. Just as chiefs of the military services serve in a custodial role, the national level SOF organization ensures that SOF are appropriately designed, organized, trained, equipped, and employed to achieve success.

Each NATO member will decide which organisational model provides appropriate and optimal stewardship of SOF within their defence establishment. Since NATO member nations are at different stages of their evolutionary journey to build and enhance their SOF, a single organizational model is not applicable to all. Ultimately, the ideal arrangement would position any national level SOF custodial entity to develop a world class special operations force. Fulfilling this role would require the national special operations organisation to have the ability to:

- Deploy and employ expeditionary SOF tactical units capable of performing special operations in harsh, uncertain, hostile, denied, and politically sensitive environments in concert with other SOF from NATO member and partner nations
- Establish a deployable joint special operations command element capable of commanding and controlling these SOF tactical units independently or as part of a larger national or multinational force
- Establish SOF combat support and combat support forces and capabilities dedicated to enabling joint special operations and national SOF
- Establish a national special operations organization capable of:
 - Providing centralized stewardship, authority, and direction to joint special operations and national SOF
 - Accessing senior defence leaders directly and advising them on SOF
 - Controlling a separate budget for joint special operations and SOF-peculiar items
 - Expediting the rapid acquisition of SOF-peculiar items
 - Conducting or facilitating joint SOF training, exercises, and education
 - Influencing or managing the career development of SOF personnel

While the ideal model may not be optimal for all countries, this study proposes three different organisational models to provide centralized stewardship, authority, and direction to special operations and SOF: a Special Operations National Military Staff Element; a Special Operations Component Command; or a Special Operations Service.

- **National Military Staff Element for Special Operations** - As the senior SOF advisor to the Minister of Defence and Chief of Defence, the chief of the special operations staff element would serve as the focal point for all SOF related matters while serving as the coordinating authority among all service SOF elements.
- **Special Operations Component Command** - As a component command, the Special Operations Component Commander can be more proactive in establishing unity of effort among the service SOF units by integrating and harmonizing their individual capabilities.
- **Special Operations Service** - As a separate management headquarters within the defence establishment, the Special Operations Service would focus on all aspects of raising, training, educating, and sustaining SOF.

In all cases, this organisation must be suitably empowered and positioned to advance the interests of national SOF units, which are underpinned with a long term vision, plan, and investment strategy. Additionally, within each model, SOF

representatives should focus on building and enhancing relationships with the military services, conventional forces, and other NATO SOF.

No short cut exists to create SOF when crises arise. Instead, years of training, education, and experience acquired through an investment in time and resources are necessary to prepare SOF units to successfully perform special operations. In comparison to other defence expenditures, such a SOF capability requires a comparatively minor expenditure of total defence costs, especially when compared to the potential return on investment.

As strategic assets, SOF are understandably viewed primarily through the lens of national interests. However, the increasingly prevalent security perspective indicates that multinational collective security arrangements are a prerequisite for confronting the disparate and complex security challenges of the 21st century. Multilateral and collective SOF solutions will enhance national as well as collective SOF capabilities while capitalizing on the strengths of some and compensating for gaps among others.

I. Introduction

The concept of special operations and those forces that perform these types of operations evolved significantly over the last three and a half decades. In many instances, spectacular feats of triumph and tragic failures have served as catalysts for this evolution. For example, the year 1980 witnessed the success of British Special Forces in London and the failure of an American special operations mission in Iran. Over the last decade, the Special Operations Forces (SOF) of NATO member nations have been engaged almost continuously in out of area, expeditionary operations in geographic areas of economic and political interest to their parent nations – in the Balkans, Africa, Afghanistan, Iraq, and elsewhere. These SOF units have successfully performed a wide variety of missions, unilaterally or in combination with the SOF of other participating nations, under circumstances not envisioned when most of these SOF units were organized, trained, and equipped as national strategic assets during the Cold War.



Operation Nimrod – Hostage Release Operation at the Iranian Embassy in London 1980

More often than not, SOF units performed these missions using *ad hoc* arrangements arrived at on the ground, not through coordinated interoperability

agreements. In the process, they learned important lessons about how to operate more effectively together as elements of joint (national) and coalition (multinational) teams. At the same time, their parent nations learned the critical roles that their SOF units can play in the dynamic and uncertain current and future security environment. Over the course of this process, SOF have emerged from the shadows and received greater public awareness as their images were beamed around the world. However, these dramatic events quite often overshadowed the fact that a significant supporting architecture stemming from years of long term investment created the conditions for these successes.

The relevance of SOF to the contemporary operating environment has resulted in a growing demand for SOF over the years. Alliance SOF operational experiences from the 1991 Gulf War to the ongoing operations in Afghanistan have demonstrated gaps in policy, organisation, interoperability, and resourcing that have caused these highly valuable forces to operate inefficiently and at times at cross purposes. Increasingly, various NATO member nations are recognizing these shortcomings as well as the strategic value of their national SOF units and are taking steps to integrate them into the mainstream fabric of their national defence and security establishments. There has been a trend of movement from stovepiped Army, Navy, and Air Force SOF units controlled by their parent services, toward a unifying national SOF organisation, but not necessarily a command, that is intended to integrate national SOF units and address their proper employment and appropriate resourcing (see Table 1).

1981	Norwegian Defence Special Command (FSK)
1987	United States Special Operations Command (USSOCOM)
1987	United Kingdom Directorate of Special Forces (DSF)
1991	France Commandement des Operations Spécial (COS)
1996	Germany Kommando Spezialkräfte (KSK)
2000	Netherlands Joint Special Operations Branch
2003	Australian Special Operations Command (SOCOMD)
2004	Italian Comando Forze Speciali (COF) Interarma
2005	German Kommando Führung Operationen von Spezialkräften (Kommando FOSK)
2006	Canadian Special Operations Command (CANSOFCOM)
2007	Polish Special Operations Command (POLSOCOM)
2007	Spanish Joint Special Operations Directorate (J3B) within the Joint Command for Operations
2008	Lithuanian Special Operations Command (LITHSOCOM)

Table 1. Evolution of National SOF Organisations

This trend stems from a tacit acknowledgement by these nations that optimizing¹ SOF requires a dedicated national special operations organisational structure to provide comprehensive stewardship, authority, and direction over all aspects of special operations and ensure that SOF are optimized for success.

NATO member nations also recognized that the NATO SOF staff structure was inadequate for the new security environment and that their national SOF were being employed under *ad hoc* coalition command arrangements that were inadequately supported to accomplish current and future requirements. This recognition led to the NATO SOF Transformation Initiative (NSTI).

Study Background and Purpose

As a result of these lessons learned, the North Atlantic Council approved the NSTI to increase the ability of NATO SOF to train and operate together so they can better address the challenges facing NATO today and in the future. Announced with the Riga Summit Declaration by the Heads of State and Government participating in the meeting of the North Atlantic Council in Riga on 29 November 2006, the NSTI was “aimed at increasing their [NATO SOF] ability to train and operate together, including through improving equipment capabilities.”²

As a follow-on project to the NSTI, the NATO Special Operations Coordination Centre (NSCC) commissioned this study in January 2008 to examine broad trends in SOF structure, organisation, capabilities, interoperability, and resourcing. This study represents a compilation of research and analysis intended to provide a reference point to inform the continued optimization of national and NATO SOF.

Study Methodology

In conducting this NATO SOF Study, the Booz Allen Hamilton research and analysis team applied a phased approach. The first phase focused on defining and bounding the NSCC requirement, and on identifying and examining the central issues the study sought to address. The second phase involved collecting data from a representative sample of member nations to provide further insight and exploration of the central issues with specific emphasis on the structure, organisation, and capabilities of SOF. In collecting data, the research and analysis team interviewed a variety of uniformed military and, in some cases, civilian defence personnel at the Ministry of Defence and Chief of Defence levels, as well as the leadership and staff of some SOF units within twelve NATO member nations. Research and analysis teams conducted visits and interviews for this study in the nations listed below.

¹ For the purpose of this paper, “optimizing” SOF refers to making SOF as perfect, functional, and effective as possible.

² NATO, Online Library, Press Release, <http://www.nato.int/docu/pr/2006/p06-150e.htm>.

Canada	Germany	Italy	Romania
Estonia	Greece	Lithuania	Spain
France	Hungary	Netherlands	United Kingdom

Beyond the above list of nations visited, additional nations declined the request to participate in the study or provide input to the study team. The research and analysis team members met with SOF representatives from Norway, the Czech Republic, Slovakia, Australia, and the United States at the NSCC to gain their perspectives for the study. Additionally, the team conducted research on SOF organisations beyond the NATO Alliance. The study also incorporated information collected during the first NATO SOF Symposium in June 2008.³ The information included in this report is a compilation of the Booz Allen Hamilton team's research, interviews, and subsequent analysis of the relevant issues.

³ The NSCC sponsored the first NATO SOF Symposium held on 3-5 June 2008 in Deauville, France.

II. Framing Special Operations and Special Operations Forces

Despite some variances across nations, the NATO definition of special operations, found in MC 437/1, *Special Operations Policy*, as well as the *NATO Glossary of Terms and Definitions*, proved to be the cornerstone for how most member nations characterized special operations:

“Military activities conducted by specially designated, organized, trained and equipped forces using operational techniques and modes of employment not standard to conventional forces. These activities are conducted across the full range of military operations independently or in coordination with operations of conventional forces to achieve political, military, psychological and economic objectives. Politico-military considerations may require clandestine, covert or discreet techniques and the acceptance of a degree of physical and political risk not associated with conventional operations.”
 - *NATO Glossary of Terms and Definitions*

Special Operations

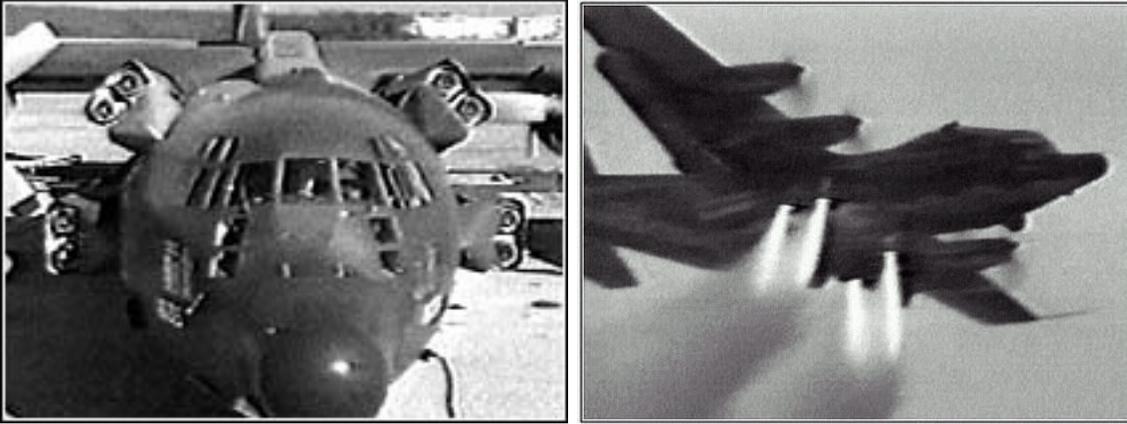
The NATO definition drives at the central point that those military activities deemed “special” are in fact outside the realm of conventional operations or beyond the standard capabilities of conventional forces. As a recently published Canadian Special Operations Command (CANSOFCOM) pamphlet points out, “special operations forces are often requested to service certain target sets for which there are simply no other options available.”⁴ In many instances these extraordinary mission profiles often require operational techniques and modes of employment not standard to conventional forces.

SON TAY RAID, NORTH VIETNAM

The purposeful crashing of a helicopter pre-configured with explosives into an armed camp to deliver an assault force differs substantially from operational techniques considered “standard” to conventional forces.



⁴ Canadian Special Operations Command, *Canadian Special Operations Forces Command: An Overview*, 2008, 18.



IRAN HOSTAGE RESCUE 2

A specially modified special operations C-130 aircraft with multiple jet assisted take off (JATO) rocket systems to enable take off and landing inside of a football stadium is certainly beyond the scope of operational techniques, modes of employment, and equipment used by conventional forces.

Special operations activities are conducted across the range of military operations from peacetime, in conflict and in war to include Article 5 collective defence or non-Article 5 crisis response operations (NA5CROs).⁵ In many instances, special operations require the judicious application of a wide array of skills that range from discreet reconnaissance conducted within the confines of a peacetime mandate to the lightening fast application of discriminatory lethal force on the other end; and some missions may require a seamless and rapid transition between the two extremes.

Special operations embrace two approaches that are mutually supporting and complementary: the direct and the indirect. Distinguishing between the direct and the indirect approach is best achieved by first considering the direct. The direct approach applies short, sharply focused offensive action to rapidly dominate carefully chosen points of vulnerability with clarity of purpose and a clearly defined aim. Operation Barras in September 2000 provides an example, where forces from the United Kingdom's Special Air Service, Parachute Regiment, the Royal Navy, and the Royal Air Force conducted a special operation to release seven personnel held by rebels in a jungle camp in Sierra Leone. Twenty minutes after the commencement of the raid the hostages were extracted by helicopter and enroute to a Royal Navy vessel waiting offshore. The force of some 150 personnel suffered one killed and 15 wounded.

The indirect approach is the one that orients efforts to loosen the adversaries grip by upsetting his balance, thereby setting conditions for the targeted application of the

⁵ NATO, *Allied Joint Doctrine for Special Operations*, Allied Joint Publication 3.5, Ratification Draft, 1-2.

direct component.⁶ In some cases the indirect component targets effects towards the minds of the adversaries and populations, whereas the direct approach orients upon the physical and material with residual psychological impact. The father of the indirect approach, military theorist Sir Basil Henry Liddell Hart wrote about this cerebral aspect of the indirect approach, “a decision is produced even more by the mental and moral dislocation of the command than by the physical dislocation of forces.”⁷ Instead, the indirect approach works more subtle, irregular means in a protracted, methodical, and deliberate manner, often seeking to work through, by, and with indigenous forces to preserve legitimacy or obscure intentions while achieving strategic and operational objectives.

An example of the indirect aspect is the British Special Air Service (SAS) activities in Oman in the 1970s in support of the Sultan’s counterinsurgency efforts against the Popular Front for the Liberation of the Arabian Gulf. SAS British Army Training Teams (BATT) trained and advised indigenous *firqats*⁸ comprised of surrendered Dhofari tribesmen. A major thrust of the counterinsurgency effort included a “hearts and minds” approach. SAS Civilian Action Teams (CAT) provided medical and developmental services to foster rapport and engender support from the population.⁹ This historical example provides a superb retrospective illustration of the indirect facet of the training and advising activities of Military Assistance (MA), one of the principal tasks of NATO SOF.¹⁰ However it is important to note direct means are not excluded from applicability within a broader indirect approach.

The full potential of SOF is brought to bear through the complementary employment of direct and indirect approaches across the full range of potential military operations. Depending on the nature of the objective and the desired end state, SOF employ these different approaches separately or in a suitable combination to achieve a desired aim. The United States Special Operations Command’s Commander, Admiral Eric Olson, described the direct approach as one that is “kinetic, chaotic, (and) violent in nature” with disruption and denial as the main purpose. He further explained, “We

⁶ Basil L Hart, *Strategy*, (New York: Praeger, 1954), 72.

⁷ Basil L Hart, *Strategy*, (New York: Praeger, 1954), 107.

⁸ Literally translated as “units.”

⁹ Calvin H. Allen and W. Lynn Rigsbee II, *Oman Under Qaboos : From Coup to Constitution, 1970-1996* (New York: Routledge, 2000) , 67-68.

¹⁰ Military Assistance (MA) - MA is a broad spectrum of measures in support of friendly forces throughout the spectrum of conflict. MA can be conducted by, with, or through friendly forces that are trained, equipped, supported, or employed in varying degrees by SOF. The range of MA is thus considerable, and may vary from providing low-level military training or material assistance to the active employment of indigenous forces in the conduct of major operations. NATO, *MC 437/1 Military Committee Special Operations Policy*, 14 June 2006, 4.

consider the direct approach to be important, urgent and necessary, but not decisive. It is a holding action that buys time for the indirect approach to have its decisive effect.”¹¹

These different elements are mutually grounded with a common special operations foundational skill set and ethos. However, each respective organisation possesses a slightly different specialized niche role beyond the common base capabilities. The different entities are not necessarily interchangeable, but they do possess rudimentary crossover skills.

These special operations can be performed autonomously in isolation from conventional forces or adapted to provide effects that complement conventional forces at the strategic or operational level. It is important to emphasize special operations can provide a strategic alternative to conventional operations or can be complementary to them, but SOF are not a substitute for conventional military capability.

“SOF focus on harmonization of effects – not synchronization of activities. Simply put, although SOF normally operate independently, their effect is coordinated with the theatre campaign plan to support, enhance, and advance the impact of conventional forces.”
- *Canadian Special Operations Forces Command (CANSOFCOM)*

Another distinguishing characteristic of special operations concerns the degree of signature inherent to special operations. Special operations are routinely conducted under circumstances where the activities performed must remain unnoticed, are not attributable, or are conducted discreetly so as to minimize visibility. In all instances, missions deemed “special” quite often entail significant politico-military risks with an entirely different calculus than those performed by conventional forces.

The NATO definition of special operations also highlights the strategic nature of special operations by emphasizing that such operations are undertaken to achieve political, military, psychological, and informational objectives that represent the foundational instruments of national power.

Special Operations Forces

The extraordinary tasks and non-standard operational techniques and equipment used to perform special operations also require special personnel that are selected, trained, organized and developed specifically to employ such unorthodox methods.

Research both in the field and in open source literature indicated perspectives vary across and within different national military establishments regarding the precise

¹¹ Vice Admiral Eric T. Olson, interview, Special Operations Technology Online, Jun 05, 2008 in Volume: 6 Issue: 4.

definitions of Special Forces (SF) or special operations forces (SOF). In fact, the research and analysis team found this topic somewhat controversial across the NATO SOF community. In some instances the concern stems from a desire to ensure the “special forces” component is maintained within the broader SOF community. In other instances the concern arises from the desire of “special operations capable” conventional units to be designated as SOF even though they are not dedicated to SOF missions. While seemingly somewhat inconsequential in nature, such a concern is an important point of departure to forging commonality among a force of some 24 NATO SOF elements.

Regardless of the distinctions made within some countries between Special Forces and special operations forces, there was a common characterization of SOF among those interviewed for the study, which corresponds to existing NATO definitions.

SOF - Designated active or reserve component forces of national military services specifically organized, trained, and equipped to conduct and support special operations.

- MC 437/1 *Special Operations Policy*

The level of subtlety and sophistication inherent to those operations diverge greatly from the requirements of traditional conventional operations, and because of this the personnel required are manifestly different as well: “These individuals possess the intellectual agility to conceptualize creative and effective solutions with surgical precision in ambiguous situations to develop coherent options.”¹² It is important to note that SOF are strategic assets that are employed to achieve strategic effect.¹³ Some experts have even suggested Special Forces should be more appropriately labelled “strategic forces” to more accurately reflect their role and emphasize this particular point.¹⁴

A baseline understanding of special operations and SOF provides a frame of reference for exploration of their unique roles as both national and NATO assets. An examination of the value of SOF relative to the current and future security environment as well as the capability requirements that NATO has identified as critical for the future serves an important backdrop to subsequent discussions on how best to optimize SOF.

¹² Canadian Special Operations Command, *Canadian Special Operations Forces Command: An Overview*, 2008, 7.

¹³ NATO, *MC 437/1 Military Committee Special Operations Policy*, 14 June 2006, 3.

¹⁴ Dr. David Kilcullen’s remarks at the NATO SOF Symposium, 3-5 June 2008 in Deauville, France.

III. The Relevance of SOF to National and Collective Defence

SOF “are playing an increasingly important role in the asymmetric environment and are highly appropriate forces to help tackle diffuse threats to NATO --- such as the multiple forms of Terrorism.”

- *Military Committee Special Operations Policy, 3.*

While the contributions of SOF to national and collective defence cannot serve as a substitute for the requirement to maintain the ability to apply overwhelming military force to achieve one’s ends, SOF provide an alternative or supporting strategy that skilfully delivers a series of well placed blows against carefully selected critical vulnerabilities.¹⁵ This strategy can be employed directly or indirectly to achieve strategic results. SOF in essence provide a strategic offensive and defensive asymmetric capability. In doing so, SOF provide political and senior military leaders with options that retain freedom of action while at the same time employing economy of force,¹⁶ creating value disproportionate to their size and required commitment of resources.¹⁷ The recently published *White Paper on Defence* in France specifically affirmed the vital importance of increasing such freedom of action by declaring it one of the centrepieces of France’s new military strategy.¹⁸

The use of SOF in such a strategy is not limited to the lower end of the spectrum of conflict. The employment of SOF remains applicable across the full range of military operations from defence and diplomacy during peacetime engagement all the way through major combat operations.¹⁹ However, SOF possess the unique ability to perform tasks specifically in environments where conventional forces are comparatively at a strategic or operational disadvantage throughout peacetime, conflict, or war.²⁰ The current and anticipated future environments plagued with uncertainty and ambiguity are precisely those for which SOF are ideally suited.

¹⁵ Bernd Horn, J. Paul de B. Taillon, and David Last, ed., *Force of Choice Perspectives on Special Operations, SOF: The Perfect Grand Strategy?*, by William H. McRaven (Montreal: McGill-Queen’s University Press, 2004), 62.

¹⁶ *Ibid.*

¹⁷ Canadian Special Operations Command, *Canadian Special Operations Forces Command: An Overview*, 2008, 7.

¹⁸ Présidence de la République, “The French White Paper on Defence and National Security,” 12.

¹⁹ NATO, *Allied Joint Doctrine for Special Operations*, Allied Joint Publication 3.5, Ratification Draft, 1-2, 1-3.

²⁰ Bernd Horn, J. Paul de B. Taillon, and David Last, ed., *Force of Choice Perspectives on Special Operations, SOF: The Perfect Grand Strategy?*, by William H. McRaven (Montreal: McGill-Queen’s University Press, 2004), 64.

The current and future security environment

From all corners of the defence and security establishment around the world, the security environment is characterized as “increasingly complex and unpredictable”²¹ where “more diverse, less visible and less predictable”²² irregular threats²³ create a state of low level persistent conflict for the foreseeable future.²⁴ Data from interviews among a representative sample of NATO SOF personnel echoed these observations. A distinguished group of senior defence officials succinctly captured the essence of this anticipated environment in their publication *Towards a Grand Strategy for an Uncertain World - Renewing Transatlantic Partners*²⁵

“Living in a situation of uncertainty and being confronted with a host of multi-faceted and multi-dimensional risks and dangers, we must be prepared to react to the unexpected at very short notice and, at the same time, to work hard to prevent the emergence of new confrontations.”

Towards a Grand Strategy for an Uncertain World: Renewing Transatlantic Partnership

The value of SOF relative to the requirements of the anticipated environment

The NATO Comprehensive Political Guidance (CPG) echoes these common appraisals of the future: “This environment continues to change; it is and will be complex and global, and subject to unforeseeable developments.”²⁶ SOF provide an inherently agile instrument ideally suited to this ambiguous and dynamic operational environment, allowing national and collective defence establishments to retain freedom of action while employing economy of force.

Amid this strategic environment NATO has identified a number of capability areas targeted for specific improvement to enhance its ability to confront these challenges.²⁷

²¹ Cabinet Office, “The National Security Strategy of the United Kingdom: Security in an Interdependent World,” March 2008, 3.

²² European Union, *A Secure Europe in a Secure World, European Security Strategy*, Brussels, 12 December 2003, 3.

²³ Department of Defence (United States), *National Defence Strategy*, June 2008, 2.

²⁴ Department of the Army (United States), *2008 Posture Statement, Information Paper, Persistent Conflict*, http://www.army.mil/aps/08/information_papers/prepare/Persistent_Conflict.html.

²⁵ Naumann, General (ret.) Dr. Klaus, KBE, General (ret.) John Shalikashvili, Field Marshal The Lord Inge, KG, GCB, PC, Admiral (ret.) Jacques Lanxade, General (ret.) Henk van den Breemen, *Towards a Grand Strategy for an Uncertain World: Renewing Transatlantic Partnership* (Luteren: Noaber Foundation, 2007), 118.

²⁶ NATO, *Comprehensive Political Guidance*, Part 3, Section 16, Riga, Latvia, 29 Nov. 2006 <http://www.nato.int/docu/basicxt/b061129e.htm>.

²⁷ *Ibid.*

One of the desired capabilities sought by NATO is:

“...the ability to adapt force postures and military responses rapidly and effectively to unforeseen circumstances. This requires, *inter alia*, an effective capability to analyse the environment and anticipate potential requirements, a high level of readiness for our forces, and the necessary flexibility to respond to any sudden shifts in requirements.”²⁸

SOF are ideally suited to fulfil this need as they can be formed into versatile, self-contained teams that provide an extremely flexible force capable of operating in ambiguous and swiftly changing scenarios. SOF are high readiness forces that can be task-organized quickly and deployed rapidly to provide tailored responses to many different situations.²⁹ One particular NATO area of focus concerns the ability to “anticipate and assess threats, risks and challenges.”³⁰ The French White Paper on Defence and National Security similarly stressed “knowledge and anticipation” as one of five basic strategic functions.³¹ In a security environment of uncertainty, the capability for “strategic anticipation”³² can provide the opportunity to preclude emerging conflict and respond with agility should those efforts fail.

This capability is inherent to the NATO SOF principal task of special reconnaissance and surveillance,³³ where SOF can provide early identification and assessment of a crisis or threat assessments as part of peacetime engagement activities or target assessments during major combat operations. Across the range of military operations, SOF provide senior decision-makers with on-the-ground *fingerspitzengefuehl*, the “feeling in the fingertips,” to inform their strategic or operational decisions.³⁴ SOF habitually and instinctively survey and assess local situations and report these assessments rapidly while posturing to provide unconventional options for addressing ambiguous situations.³⁵

NATO increasingly recognizes the overriding importance of “the ability to deter, disrupt, defend and protect against terrorism” in order to “contribute to the protection of the Alliance’s populations, territory, critical infrastructure and forces, and to support consequence management.”³⁶ An inherent implication of this requirement is the ability to potentially confront these threats beyond one’s borders by conducting expeditionary

²⁸ *Ibid.*

²⁹ NATO, *Allied Joint Doctrine for Special Operations*, Allied Joint Publication 3.5, Ratification Draft, II-2.

³⁰ NATO, *Comprehensive Political Guidance*, Part 2, Section 7b.

³¹ Présidence de la République, “The French White Paper on Defence and National Security,” 10.

³² Commandement des Opérations Spéciales (France) Informational Brief.

³³ NATO, *Allied Joint Doctrine for Special Operations*, Allied Joint Publication 3.5, Ratification Draft, 2-1.

³⁴ NATO, MC 437/1 *Military Committee Special Operations Policy*, 14 June 2006, 2.

³⁵ NATO, *Allied Joint Doctrine for Special Operations*, Allied Joint Publication 3.5, Ratification Draft, II-2.

³⁶ NATO, *Comprehensive Political Guidance*, Part 3, Section 16.

out of area operations. The European Security Strategy similarly acknowledged that a passive approach to confronting threats of this nature is infeasible:

In an era of globalisation, distant threats may be as much a concern as those that are near at hand... The first line of defence will be often be abroad. The new threats are dynamic...

Conflict prevention and threat prevention cannot start too early.”

- *European Security Strategy, Brussels, 12 December 2003*

SOF provide a highly adept capability particularly suited to confront this challenge. One of the designated additional activities of NATO SOF is “support to counter-irregular threat activities” defined as:

“Support to Counter-Irregular Threat Activities. Counter-terrorism (CT) is an overarching umbrella of offensive measures designed to reduce the vulnerability of Allied interests, their forces, individuals, and property to terrorism; to include counter-force activities and containment by military force and civil agencies. COIN [counterinsurgency] operations are those military, paramilitary, political, psychological, and civic actions taken to defeat an insurgency. CT and COIN are not the exclusive domain of NATO SOF, but SOF can effectively complement the overarching application of diplomatic, economic, informational, and military operations applied in a COIN role. An irregular threat, by virtue of its very nature, will usually involve NATO SOF conducting CT activities within COIN operations across the operational continuum.”³⁷

Research indicated that in some NATO nations, SOF also maintain formal and informal relationships to domestic counter-terrorism organisations and can provide varying degrees of support when circumstances require additional capabilities and assistance is requested.

An additional pressing concern for NATO regarding future capabilities includes “weapons of mass destruction and chemical, biological, radiological and nuclear (CBRN) hazards, including the ability to defend deployed NATO forces against theatre missile threats.”³⁸ The European Defence Agency Steering Board also identified CBRN as one of twelve priority areas for capability development.³⁹ Countering CBRN weapons also is designated as an additional activity of NATO SOF, defined as:

“Activities designed to secure, interdict, destroy, or assist with the rendering safe of chemical, biological, radiological, and nuclear (CBRN) weapons are inherently

³⁷ NATO, *Allied Joint Doctrine for Special Operations*, Allied Joint Publication 3.5, Ratification Draft, 2-4.

³⁸ NATO, *Comprehensive Political Guidance*, Part 3, Section 16.

³⁹ European Defence Agency, *EU Governments Endorse Plan for Future Military Needs, Pledge Joint Efforts*, 8 July 2008, <http://www.eda.europa.eu/newsitem.aspx?id=385>.

complex, involve restrictive operational security (OPSEC) procedures, and generally necessitate the employment of specially trained and equipped personnel.”⁴⁰

Another desired area for NATO capability improvement for the future identified in the NATO CPG is the capability “to conduct operations in demanding geographical and climatic environments.”⁴¹ SOF environmental training habitually prepares SOF to “conduct operations in austere, harsh environments without extensive support.”⁴² SOF typically thrive in such environments because of their ability to exercise the operational autonomy and independence these circumstances create. Quite often SOF seek to leverage the conditions in these environments to their advantage for infiltration, exfiltration, or to obscure the signature of their activities.

In response to the anticipated security environment, NATO also seeks to enhance its ability “to identify hostile elements, including in urban areas, in order to conduct operations in a way that minimizes unintended damage.”⁴³ The conduct of special operations frequently requires a high degree of discriminate and precise use of force in urban environments. This has become a near universal basic level skill set among most NATO SOF. As such, NATO SOF receive unique training that in many instances allows for the discriminate application of force to limit collateral damage while engaging an adversary.⁴⁴

The NATO CPG also desires “the ability and flexibility to conduct operations in circumstances where the various efforts of several authorities, institutions and nations need to be coordinated in a comprehensive manner to achieve the desired results, and where these various actors may be undertaking combat, stabilisation, reconstruction, reconciliation and humanitarian activities simultaneously.”⁴⁵ SOF habitually work closely “with regional military and civilian authorities and populations and are adept at organizing people into working teams to help solve local problems.”⁴⁶ SOF plays a unique and multifaceted role in support of this comprehensive and preventative approach to conflict management. In order to minimize adverse informational consequences of these efforts, SOF are accustomed to deploying with a lower profile and less intrusive presence than those typical of larger conventional forces while simultaneously providing a sense to decision makers as to what is happening on the ground.⁴⁷

⁴⁰ NATO, *Allied Joint Doctrine for Special Operations*, Allied Joint Publication 3.5, Ratification Draft, 2-4.

⁴¹ NATO, *Comprehensive Political Guidance*, Part 3, Section 16.

⁴² NATO, *Allied Joint Doctrine for Special Operations*, Allied Joint Publication 3.5, Ratification Draft, II-3.

⁴³ NATO, *Comprehensive Political Guidance*, Part 3, Section 16.

⁴⁴ NATO, *Allied Joint Doctrine for Special Operations*, Allied Joint Publication 3.5, Ratification Draft, II-3.

⁴⁵ NATO, *Comprehensive Political Guidance*, Part 3, Section 16.

⁴⁶ *Ibid.*

⁴⁷ NATO, *Allied Joint Doctrine for Special Operations*, Allied Joint Publication 3.5, Ratification Draft, II-3.

SOF clearly offer a highly useful and inherently versatile military instrument relative to the complex operational environment of today and of the future. Although the entire military and security establishment seeks to continue to evolve and enhance its capabilities to confront the dynamic threat among the ambiguous environment, SOF in particular needs to be optimized or made as perfect, functional, and effective as possible to ensure they can succeed when called to perform missions and tasks beyond the standard capabilities of conventional forces.

IV. The Need to Optimize SOF – The Burden of a “No Fail” Mandate

“In an operation such as that at Entebbe, all elements are interdependent. The slightest error, the slightest lack of co-ordination, and the whole structure is liable to collapse like a pack of cards...Such operations leave little or no margin for security.”

*- John Arquilla, *The Ultimate Rescue, From Troy to Entebbe*.*

Clausewitz described the inherent friction found in warfare and the challenge of managing its inevitable appearance in combat. The inherent complexity surrounding the successful execution of special operations exponentially increases the potential for friction.⁴⁸ The need for performing special operations arises when other available options, military or otherwise, are unsuitable due to political, military, or informational constraints. Special operations provide extraordinary solutions to extraordinary problems, where no other viable means of resolution exists. Specifically, other conventional alternatives may not possess the geographical reach, the required rapidity of response, the ability to apply force discriminatively, the appropriate level of discreetness, or in some instances the ability to leverage a patient and protracted indirect approach.

To assure the feasibility of the alternative options SOF provides to decision makers, successful special operations require a degree of optimized performance beyond that found in conventional operations. Optimized performance is that which is made as perfect, functional or effective as possible to mitigate the inherent physical and political risk when these types of operations are called for. In a sense, special operations are to military operations as Formula One is to all other forms of automotive racing. The speeds, the circuits, automobiles, drivers, technology, and pit crews must perform synergistically at the highest level to compete. The standards and demands of this form of racing are unparalleled.

Similarly, SOF must operate comfortably in uncertain, hostile, denied, or politically sensitive environments⁴⁹ with high physical and political risks as the norm. Successful special operations depend upon “individual and small unit proficiency in a multitude of specialized, often non-conventional operational skills applied with

⁴⁸ William H. McRaven, *Spec Ops Case Studies in Special Operations Warfare: Theory and Practice*, (Novato: Presidio Press, 1995), 1.

⁴⁹ Department of Defense, (United States), Joint Publication 1-02, *Dictionary of Military and Associated Terms*, 30 September 2008. **Uncertain environment** - operational environment in which host government forces, whether opposed to or receptive to operations that a unit intends to conduct, do not have totally effective control of the territory and population in the intended operational area; **hostile environment** - operational environment in which hostile forces have control as well as the intent and capability to effectively oppose or react to the operations a unit intends to conduct; **denied area**- an area under enemy or unfriendly control in which friendly forces cannot expect to operate successfully within existing operational constraints and force capabilities.

adaptability, improvisation, innovation, and self reliance.”⁵⁰ The need for precision and effectiveness is further complicated by the fact that special operations mission profiles are rarely the exclusive domain of one particular service. In most cases, successful missions of this nature require the orchestration of special operations air, maritime, and ground elements operating collaboratively under extremely non-standard conditions.

Historically, *ad hoc* temporary arrangements cobbled together to perform these operations prove incapable of fulfilling the challenges inherent to special operations and result in disastrous consequences. Painful experiences in Munich, Ma'alot, Malta, Desert One, and Beslan provide just a few illustrations of the price for inadequate preparation to face the inevitable challenges all governments will eventually encounter.



**Munich, Germany - Black September
September 6, 1972**

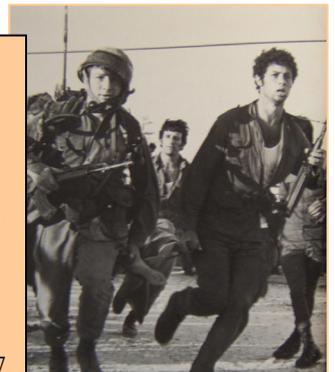
Nine Israeli Olympic athletes are killed in a botched assault by an ad hoc group of German security personnel. General Ulrich Wegener, the first Commander of the Grenzschutzgruppe (GSG) 9 force stood up in the tragic wake of this incident attributed the failure to the fact that “the available security forces, with conventional means at their disposal, were unable to effectively counter the acts perpetrated by the terrorist(s)... Their lack of preparedness was glaringly obvious. There was a complete absence of an anti-terrorist strategy and tactical concepts...”

-Bernd Horn, J. Paul de B. Taillon, and David Last, ed., *Force of Choice Perspectives on Special Operations*, 108-109.

**Ma'alot, Israel; Democratic Front for the Liberation of Palestine (DFLP)
May 15, 1974**

Israeli Commandos undertake an assault upon a schoolhouse held by three Palestinian terrorists. “Inappropriate weaponry, failing to employ such high tech and revolutionary tools as electronic sensors and stun grenades to locate the terrorists and disarm them,” the assault was executed in a slow, deliberate, and unsuccessful manner allowing the terrorists to kill twenty-two school children and critically wound over sixty. “Ma’a lot was a historic turning point for the antiterrorist policy and strategy of the Israeli Defence Ministry. The seizure of the children proved that counterterrorist operations had to be conducted by a highly specialized force.”

-Samuel M. Katz *The Elite*, 177



**Luqa International Airport, Malta; Popular Front for the Liberation of Palestine
November 24, 1985**

Egyptian Commandos assault a 737 aircraft characterized as “appallingly executed by a force lacking the critical intelligence, equipment, training, and skills to undertake a mission of this importance.” “Poor planning and training, unsophisticated techniques orchestrated by an ill-led, ill-trained counterterrorist force resulted in the bloodiest hostage rescue in aviation history,” where 57 passengers were killed, many by the rescuing force’s indiscriminate fire and inappropriate use of explosives to obtain entry to the aircraft.

-J. Paul de B. Taillon, *Hijacking and Hostages: Government Responses to Terrorism*, 154

⁵⁰ NATO, *Allied Joint Doctrine for Special Operations*, Allied Joint Publication 3.5, Ratification Draft, 1-2.



**Desert One Landing Site, Near Tabas, Iran; Iranian Revolutionary Guards
April 24, 1980**

Aborted U.S. attempt to rescue 53 hostages held in the embassy in downtown Tehran ended in tragedy at a remote improvised landing strip as aircraft collided while taxiing to refuel. Eight servicemen were killed and four wounded. A subsequent investigation pointed out that, “The *ad hoc* nature of the organisation and planning is related to most of the major issues and underlies the group’s conclusions.” In the aftermath a major reorganisation of disparate special operations capabilities began.

-Holloway Commission Report ,60

**Beslan, North Ossetia, Russian Federation; Chechen separatist
terrorists**

September 3, 2004

334 hostages including 156 school children were killed and nearly 800 persons were wounded in a disjointed, cumbersome, and catastrophic assault conducted by a chaotic mix of police, military, and armed citizens upon a fortified school rigged with explosives.

-Beslan School Siege, http://news.bbc.co.uk/2/shared/spl/hi/world/04/russian_s/html/1.stm



Some of these examples served as powerful catalysts for introspective examination of SOF requirements and associated capabilities. As part of the research and interview process, the study team learned that similar near catastrophic events or the lack of capabilities during previous crisis frequently energized NATO member nations to explore the need to enhance the effectiveness of their national SOF units. In particular, the events of September 11 provided significant momentum for exploration and enhancement of SOF capabilities to confront emerging “unusual” or irregular threats.

The exponential increase in potential friction for special operations requires optimization of SOF to mitigate risk of failure and instead provide for the highest probability of success.⁵¹ Optimization of SOF to mitigate potential friction and enhance chances for mission success requires coherent stewardship by a dedicated SOF specific organisation that plots a course and manages the laboured journey to a *bona fide* “no fail”⁵² SOF capability.

⁵¹ William H. McRaven, *Spec Ops Case Studies in Special Operations Warfare: Theory and Practice*, (Novato: Presidio Press, 1995), 1.

⁵² Canadian Special Operations Command, *Canadian Special Operations Forces Command: An Overview*, 2008, 16.

V. The Critical Ingredient – Coherent Long Term Stewardship, Authority, and Direction for SOF: Organizational Models

“The general who wins in a battle makes many calculations in his temple before the battle is fought. The general who loses a battle makes but few calculations beforehand.”

*- Sun Tzu, *The Art of War**

A historical trend is evident among nations that are building and enhancing their special operations capabilities that an oversight mechanism is required to provide comprehensive stewardship, authority, and direction over these forces. As is the case for each of the military services – army, navy, and air force – SOF contribute particular capabilities to a nation’s national security. The chiefs of the military services are responsible for raising, training, and sustaining conventional forces to achieve the nation’s security objectives, but historically the chiefs of the military services in many nations have been unwilling or unable to provide their SOF units with appropriate stewardship, and in any case do not have the authority to do so for joint special operations or joint SOF. Therefore, just as chiefs of the military services provide stewardship of their conventional forces and advise their national leadership on how to design, organize, train, equip, and employ their forces effectively, SOF units also require a separate organisation dedicated to providing comprehensive stewardship of joint special operations and SOF. Many nations recognize that SOF contribute specialized capabilities to national security parallel to the capabilities of the other military services and have put in place appropriate mechanisms to provide suitable stewardship and direction specifically for SOF.

Through the course of this study, we found that all nations interviewed emphasized the need for a dedicated and distinct special operations organisation to provide comprehensive stewardship, authority, and direction over all aspects of joint special operations and SOF.

Some national SOF are well established and viewed as legitimate partners under agreeable circumstances within their respective defence establishments and have demonstrated their strategic value. Other national defence establishments within NATO are just now beginning to adopt a joint operational frame of reference within their armed forces and their SOF remain very service centric organisations that have undergone minimal evolutionary change. Furthermore, some newer NATO members are starting to transform conventional units into Special Forces units with fledgling SOF capabilities. These organisations are striving to find their place within their defence establishments. Despite the differences among the development of SOF within each nation, all NATO members agree that some form of oversight or management structure is necessary to serve as a custodian for the SOF units within their defence

establishments, and to play a role similar to the one that the military service chiefs perform for conventional forces.

While exploring the optimal oversight or management structure for joint special operations and SOF, the study team examined several different national organisational models and determined that no single model was applicable across all the NATO member and partner nations. However, there are three common roles that all such national organisations must fulfil. At the strategic level, a national special operations

“During the Gulf War, our allies...integrated in a unique joint staff command, which proved to be more effective. Whereas, [our] special forces were badly exploited due to a lack of a coordinating body.”

Interview participant

organisation must be empowered to exercise a measure of coordination, oversight, and direction to integrate the various SOF elements; advise and inform on the appropriate employment of SOF; and establish a resourcing strategy that links together policy, doctrine, organisation, training, education, and procurement to execute operations effectively in the field.

Role 1: Unify and Integrate National SOF Units

A common responsibility for any national special operations organisation is to provide a comprehensive vision and long term plan that serves to unify the efforts and purpose of the various SOF units that exist within the national defence establishment. The vision needs to capture the role of SOF within the broader defence establishment and the contribution of SOF to national security requirements. The vision should articulate the complementary capabilities provided by SOF to the wider defence and security establishment. The long term plan should provide a strategy and action plan for continuous enhancement and adaptation of SOF to meet evolving national security requirements, including any collective security obligations of the nation. The plan should provide the conceptual framework for the further development and employment of SOF.

In order to unify and integrate the efforts of the various national SOF units, the national special operations organisation should provide joint operational guidance to ensure that the service SOF units focus their development activities to align with the vision and long term plan. This would require the national special operations organisation to continuously monitor the activities and development of each of the service SOF units. The organisation would also represent their capabilities in joint operational plans.

Role 2: Advise and Educate on the Appropriate Development and Employment of SOF

Another key role that all nations interviewed highlighted was the need for a national special operations organisation to advise, educate, and inform the defence leadership and conventional forces on the application of national SOF capabilities and

limitations to ensure SOF are employed appropriately and prevent their misemployment with disastrous consequences.

Within many nations, efforts to develop more robust SOF capabilities stem from an increasing awareness of their inherent applicability to the persistent irregular security challenges of the 21st century. However, the evolution of SOF is encumbered by a lack of complete understanding of SOF and how they should interconnect with the defence establishment. In some cases SOF have been underemployed simply because the national leadership is not fully aware of their roles, capabilities, and potential contributions. A national special operations organisation should ensure that SOF units are employed and operate together synergistically, while also ensuring their efforts are orchestrated to complement the capabilities of conventional forces and other national capabilities. The SOF leadership therefore should educate and advise others within the national defence and security establishment on how to integrate SOF with conventional forces and other national capabilities in a complementary manner. One of the critical roles of such an organisation is to accurately convey to senior decision makers and operational commanders the capabilities and limitations of SOF in order to appropriately frame their expectations and explain what is within the realm of the possible. In order to do so effectively, a wide variety of interview participants emphasized the need for SOF leaders to have sufficient rank to operate as equals with, and have the appropriate level of influence among, their counterparts in the military services and on the national military staff.

Role 3: Establish SOF Resource Requirements and Priorities

The national special operations organisation should be responsible for linking a long term SOF resourcing strategy directly to the national SOF vision, which should guide national SOF research and development, investments, and resource allocation as well as inform SOF education and training.

No short cut exists to create SOF when crises arise. Instead, years of investment in time and resources are necessary to prepare SOF units to successfully perform special operations. All nations face resource constraints, so a comprehensive SOF resourcing strategy is necessary that links policy objectives to operational, organisational, educational, training, and materiel requirements. Appropriate resource allocation will ensure that SOF have the necessary capabilities to perform their assigned missions.

While building and optimizing SOF requires a long term approach, the nature of SOF as a rapid reaction expeditionary force requires that it also have the ability to procure SOF-peculiar, non-standard equipment rapidly to meet ongoing operational demands. Often, standard acquisition processes are cumbersome by design. However, SOF must be able to adapt quickly to a range of operational environments and dynamic threats. This need to fill unforeseen gaps in capability quickly requires that SOF have the means to rapidly procure SOF-peculiar, non-standard equipment that is specifically

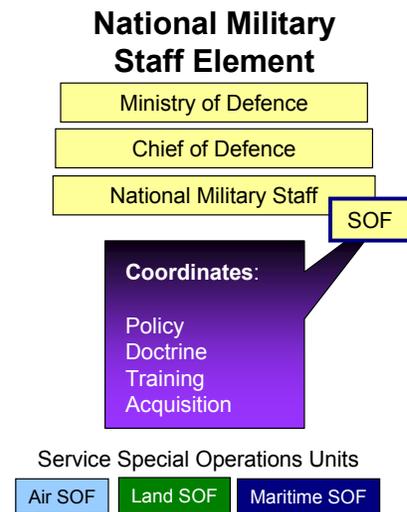
tailored to their immediate operational needs. As an ancillary advantage, conventional forces often benefit from the eventual migration to them of equipment originally considered SOF-peculiar.

Determining the Optimal National Special Operations Organisation

Every member nation with SOF must determine which national special operations organisation best suits its national requirements for SOF. The study team observed a range of national special operations organisations within NATO as well as within non-NATO nations and captured best practices for each stage of SOF development. The outcome was three models from which NATO member nations can choose depending upon their national requirements and their stage of SOF development: a National Military Staff Element; a Component Command; or a Military Service.

National Military Staff Element for Special Operations

The primary role of a National Military Staff Element for special operations should be to coordinate special operations plans, activities and requirements within the national military staff and externally with the Ministry of Defence, the parent military services of the nation’s SOF units, relevant operational military commands, and other government agencies as required. The staff element should integrate with the operations and planning (J3 and J5) elements of the national military staff as well as the designated operational command staff. During the conduct of operations, the special operations staff element should continuously monitor and report on SOF activities and their contribution or significance to the overall operational effort. The staff element should also monitor and report on the status of service SOF training and exercises.



The special operations staff element also should advise and educate senior decision-makers on the capabilities, limitations, and requirements of national SOF. It should be the focal point for representing national SOF in multinational organisations such as NATO and the European Union as well as in bilateral activities with the SOF of other nations.

As the senior SOF advisor to the Minister of Defence and Chief of Defence, the chief of the special operations staff element would inform and educate the senior defence leadership, including the conventional force leadership, about SOF capabilities and issues just as the military service representatives on the national military staff advocate and educate on the capabilities of their respective services. This would

involve representing, translating, and integrating SOF capabilities as they apply to national defence policy and guidance so senior defence leaders will have an appreciation of what capabilities SOF provide and what is possible for SOF to achieve. Specifically, the special operations staff element would inform defence leadership on the contributions that the service SOF units offer regarding national defence issues and in international commitments. In addition, the staff element would convey to service SOF units information on national defence policy, planning, and requirements so that the units can adjust their capabilities as necessary to achieve national needs. In this role, the staff element would serve as a SOF interlocutor and liaison within the national defence establishment, representing the SOF perspective and capabilities in defence guidance, strategic plans, joint publications and doctrine as well as addressing SOF-related issues as they arise.

“The joint special operations directorate is designed to provide the vision for SOF...with a long term intent to establish joint special operations doctrine...and a joint special operations training center...”

Interview participant

In representing the interests and equities of all SOF units within the national defence establishment, the special operations staff element should provide the vision for SOF within the defence establishment. The vision would serve as a guide to integrate and unify the service SOF units, optimizing their ability to operate together

in a cohesive manner. To accomplish this, the staff element should be the primary coordinating authority⁵³ among the service SOF units and with conventional forces. It should foster integration and unity of effort among the service SOF units. It should be responsible for developing national SOF policy, doctrine, training, exercises, and operational procedures while also codifying SOF doctrine, training, exercises, and acquisition across the services.

By establishing a special operations staff element at the National Military Staff level, a nation creates a focal point for the Ministry of Defence for the development and employment of SOF. Senior defence leaders benefit from a senior SOF advisor capable of providing expert advice on the appropriate employment of SOF and who coordinates and rationalizes SOF policy, doctrine, training, and acquisition. However, while this level of SOF stewardship may be appropriate for a nation with relatively few SOF units, a staff element cannot provide authoritative direction to national SOF units and cannot control a joint special operation. Even with coordinating authority, the chief of the

⁵³ The authority granted to a commander or individual assigned responsibility for coordinating specific functions or activities involving forces of two or more countries or commands, or two or more services or two or more forces of the same service. He has the authority to require consultation between the agencies involved or their representatives, but does not have the authority to compel agreement. In case of disagreement between the agencies involved, he should attempt to obtain essential agreement by discussion. In the event he is unable to obtain essential agreement he shall refer the matter to the appropriate authority. NATO Standardization Agency, *NATO Glossary of Terms and Definitions*, Allied Administrative Publication-6, April 2008, 2-C-17.

special operations staff element has no direct control over the SOF units of the military services. As a result, this organisation will need to coordinate and work cooperatively with the military services to ensure that SOF units maintain and develop their capabilities in a balanced fashion with the competing requirements of their parent services. It will also need to coordinate and work cooperatively with the operational military command to monitor and influence the employment of deployed SOF units.

As the focal point for SOF within the defence establishment, the National Military SOF Staff Element will monitor SOF operations and activities while advising and advocating the capabilities that SOF contribute. A summary of the responsibilities of the National Military SOF Staff Element include:

- Serving as the senior SOF advisor to the Minister of Defence and Chief of Defence to educate and inform on the capabilities, limitations, optimal employment, and requirements of national SOF
- Developing a joint SOF vision to serve as a guide for unifying the service SOF units
- Developing national SOF policy, doctrine, training, exercises, operational procedures, and acquisition
- Integrating the SOF perspective and capabilities into defence guidance, strategic plans, joint operational plans, joint publications and doctrine
- Serving as the primary coordinating authority among the service SOF units and with conventional forces
- Working cooperatively with the military services to ensure that SOF units maintain and develop their capabilities
- Monitoring and reporting on SOF operations, activities, joint training and exercises
- Representing national SOF in multinational organisations and bilateral situations

Special Operations Component Command

A number of NATO member nations have established a joint Special Operations Component Command⁵⁴ to provide some degree of stewardship, authority, and direction over their national SOF. In most cases, this joint component command is in addition to a special operations staff element within the national military staff. In other cases, the joint special operations component command also serves as the special operations staff element.

The Special Operations Component Commander normally serves as the senior SOF advisor to the Minister of Defence, Chief of Defence, and conventional joint

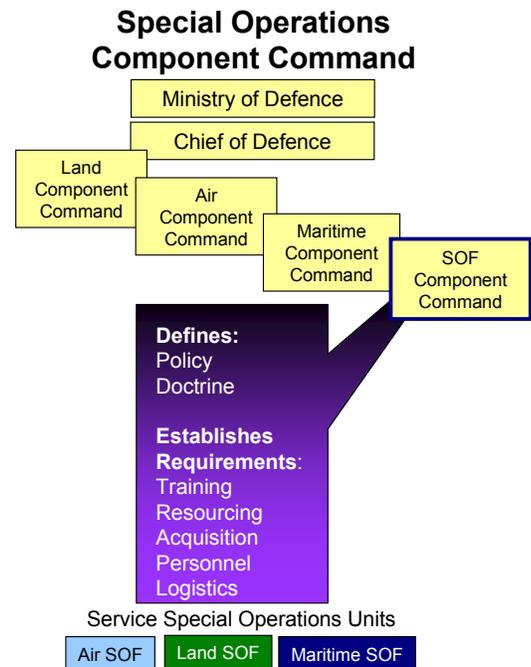
⁵⁴ Canada, France, Italy, Poland, the United States, and the United Kingdom have joint special operations commands.

operations commander. The Special Operations Component Commander is also normally responsible to them for the planning, coordination, and conduct of joint special operations, either independently or in combination with a joint conventional force commander. Within (or subordinate to) the Special Operations Component Command headquarters is a standing deployable joint task force headquarters for the command and control of national joint special operations. This deployable joint task force headquarters could also form the nucleus of a combined joint force special operations component command (CJFSOCC) for a NATO or coalition contingency operation.

As an operational commander who is normally of flag rank, the Special Operations Component Commander can be more proactive than a national military staff officer in establishing unity of effort among the service SOF units by integrating and harmonizing their individual capabilities. By developing joint SOF policy and doctrine and conducting joint SOF planning, training, and exercises, the Special Operations Component Command can work in concert with the military services to integrate and unify their service-specific SOF capabilities into an effective joint operational capability under unified command for the actual conduct of special operations.

The Special Operations Component Command should integrate SOF capabilities into national operational planning and force development processes. These processes are a means to identify operational requirements and the necessary resources to meet them. Clearly outlining the operational requirements is critical in determining necessary SOF resources such as equipment and assets, enabling support capabilities,⁵⁵ logistics support, and the necessary training for personnel to meet mission standards.

In addition to identifying operational requirements, the Special Operations Component Command’s long term strategy should account for multi-year resource investments as they align with the SOF vision. The strategy should include managing programming and acquisition of SOF peculiar equipment as well as SOF investments in research and development. While the services provide the predominant resources to their service SOF units, including funds to modify or procure equipment, the Special Operations Component Command should have access to funding for joint training,



⁵⁵ See Annex A, Enablers and Force Structure Implications for SOF, for details on the elements that comprise “enablers” or “enabling support”.

exercises, and operations. SOF units maintain high readiness standards and are often called upon as a rapid reaction, expeditionary force. Therefore, the Component Command should have access to contingency funding for rapid acquisition of mission tailored and, sometimes, non-standard equipment, supplies, and services.

The Special Operations Component Command should have the responsibility to resource, plan, coordinate, and conduct joint and combined SOF training and exercises. Joint SOF training and exercises provide a foundation to test and build commonality and standardize tactics, techniques, and procedures among the service SOF units while also ensuring that SOF units and personnel meet the necessary standards to execute designated SOF missions. By resourcing and conducting joint SOF planning, training, and exercises, the Component Command will orchestrate the service-specific SOF capabilities into an integrated joint operational capability. National SOF readiness training and exercises should integrate evaluation criteria to certify the ability of the service SOF units to combine their capabilities together to operate in a cohesive fashion.

While SOF-specific training activities primarily focus on honing tactical skills and integrating SOF capabilities, the Component Command should not overlook appropriate educational opportunities to improve and enhance the force. The Command should provide tailored educational opportunities for SOF personnel and those personnel that support or enable SOF.

While the Special Operations Component Command may fulfil the same roles as the SOF element on the National Military SOF Staff, it will have greater influence and involvement in force management and force development activities. As a summary, the Special Operations Component Command will be responsible for:

- Serving as the senior SOF advisor to the Minister of Defence, Chief of Defence, and conventional joint operations commanders
- Developing joint SOF vision, policy, long term strategy, and doctrine to integrate and harmonize service SOF units and enabling capabilities
- Planning, coordinating, and conducting joint special operations independently or in combination with a joint conventional force commander
- Identifying operational requirements and the necessary resources (equipment, assets, enablers, logistics support)
- Establishing a standing deployable joint task force headquarters for the command and control of national joint special operations or combined joint force special operations
- Managing programming and acquisition of SOF peculiar equipment, and rapidly procuring mission-specific equipment, supplies, and services
- Resourcing, planning, coordinating, and conducting joint and combined SOF training and exercises to standardize SOF tactics, techniques, and procedures

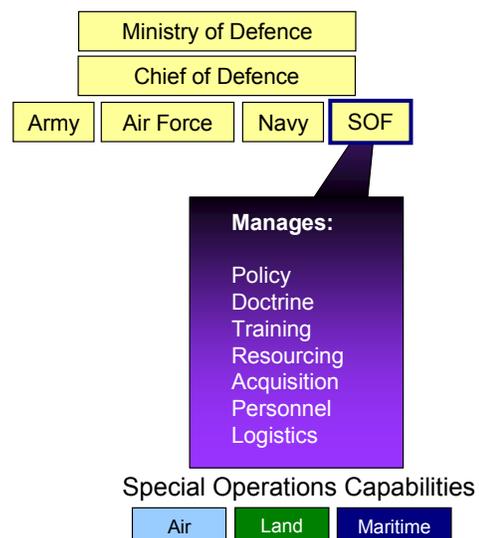
- Establishing evaluation criteria to certify the ability of the service SOF units to meet the necessary standards for executing designated SOF missions
- Designing tailored educational opportunities for SOF personnel and those personnel that support or enable SOF

Establishing a Special Operations Component Command to provide stewardship, authority, and direction for special operations and SOF has been a milestone event for every NATO member nation that has done so. It is also appropriate for a nation with army, navy, and air force SOF that need to be integrated into a joint special operations force of multiple special operations task groups (SOTGs) under unified command to achieve national security objectives. The challenge of this model is to balance the operational requirement for joint integration and unified command with the force management requirements of the parent services. Under this model, the parent services retain command of their SOF units until they deploy on operations. The parent services play a vital role in SOF force management, force development, and base operations. Therefore, an informal but critical role for the Special Operations Component Commander is to manage the relationship of his headquarters and SOF units with the parent military services to ensure that their requirements are met and that they retain a vested interest in the development, enhancement, and operational performance of their SOF units. Particularly as the Special Operations Component Command grows in authority and influence, the maintenance of a balanced approach toward the military services is essential. A few interview participants in countries with an established joint special operations command expressed the opinion that maintaining a proper balance of control with the services was one of their most important and persistent challenges.

Special Operations Service

Another model for a national special operations organisation is that of a separate special operations military service. This model provides SOF senior leadership the authority, control, and resources necessary to optimize national SOF capabilities within the defence establishment. However, this model also diverts the attention of the SOF senior leadership from joint operational matters to service force management (i.e., administrative, logistics, resourcing, base operations) and force development (i.e., concept and doctrine development, training and education, professional development) matters.

Special Operations Service



As a separate management headquarters within the defence establishment, the Special Operations Service would focus on all aspects of raising, training, educating, and sustaining SOF. The Special Operations Service Chief would be empowered and positioned to represent the capabilities, interests, and equities of SOF as an equal with the other service chiefs. The Special Operations Service Chief would also have the authority to harmonize and rationalize all elements of SOF into a balanced, coherent and integrated joint force.

Establishing a Special Operations Service would foster a common SOF culture that advances the competencies of SOF operators. The SOF culture engenders unconventional thinking and approaches – a different way of operating. The uniqueness of the SOF culture is its emphasis on the individual SOF operators, enhancing their capabilities by harnessing their initiative and encouraging unorthodox solutions. SOF culture fosters and encourages critical thinking and SOF leadership maintains trust and confidence in the operators, allowing them freedom to present their ideas and explore alternative. SOF operational designs and techniques are particularly relevant in combating irregular threats but also important to integrate into conventional military approaches.

The effectiveness of SOF is contingent on the skills and ability of the SOF operators. As a separate military service, the Special Operations Service would develop and control its own personnel management system and be responsible for its own professional development, career paths, and career management. Recruiting, personnel management and professional development through training, education, and experience are the primary means to identify and create the most competent and capable SOF operators and enabling personnel. By managing and developing its own personnel, the Special Operations Service would be able to align the professional advancement of personnel based on their competencies and capabilities and the needs of the Special Operations Service. This would free SOF operators and SOF enabling personnel of having to live within the constraints of conventional service personnel management systems and career development paths designed to produce different types of people to perform different types of missions under diverse conditions and to dissimilar standards.

In examining its specific roles and responsibilities, the Special Operations Service may fulfil the same roles as a Special Operations Component Command but with the added service authorities for force management and force development. As a summary, the Special Operations Service will be responsible for:

- Developing the SOF vision and long term strategy that is aligned with national defence guidance
- Developing SOF-specific policy derived from broader defence policy guidance

- Advising and educating senior defence leadership, service chiefs, and joint force commands on the capabilities and limitations of SOF
- Developing and managing the Service budget, which includes establishing resourcing requirements and priorities
- Advocating for service resources
- Developing SOF doctrine
- Managing the professional development of SOF personnel and SOF enabling personnel
- Designing, developing, and managing SOF educational and training programs
- Developing and managing a SOF acquisition system for identifying SOF requirements and priorities and for developing and procuring service common and SOF-peculiar material
- Resourcing and developing SOF-specific logistics capabilities

The Special Operations Service Chief may not continue to command the national joint special operations component command. The Special Operations Service Chief may relinquish operational control of deployed national SOF to a national joint force special operations component command reporting directly to the national joint operational commander or another senior operational headquarters. For example, in the United States SOF model, the Commander of the U.S. Special Operations Command has command of non-deployed SOF units in the United States but theatre special operations commands exercise operational control of deployed SOF units.

It was not clear to the research and analysis team from the data collected what decision criteria or triggers would cause a defence establishment to establish a separate Special Operations Service. There would have to be a critical mass of SOF assets to justify all the management overhead and resource reallocation associated with creating another military service. In some nations, establishing another military service would be an evolutionary move within the defence structure while in other nations it would require revolutionary momentum to overcome the resistance of the other military services to losing their SOF resourcing and sharing their power with a new service. The magnitude of these costs would depend on the systems and structure that may exist within a Special Operations Component Command headquarters already exercising some service-like authorities for joint special operations and SOF.

What was apparent from the range of input collected for the study is that the primary advantage of establishing a separate Special Operations Service is the service chief having the authority and flexibility to transform national SOF capabilities into a coherent, integrated joint force under unified command and being optimized to address the challenges of the security environment and meet national security objectives.

Each NATO member will have to decide which organisational model would be optimal for providing the appropriate stewardship of their SOF within their defence

establishment. Since NATO member nations are at different stages of their evolutionary journey to build and enhance their SOF, a single organizational model is not applicable to all. Ultimately, the ideal arrangement would position any national level SOF custodial entity to develop a world class special operations force. Fulfilling this role would require the national special operations organisation to have the ability to:

- Deploy and employ expeditionary SOF tactical units capable of performing special operations in harsh, uncertain, hostile, denied, and politically sensitive dangerous environments and in concert with other SOF from NATO member and partner nations
- Establish a deployable joint special operations headquarters capable of commanding and controlling these SOF tactical units independently or as part of a larger national or multinational force
- Establish SOF combat support and combat support forces and capabilities dedicated to enabling joint special operations and national SOF
- Establish a national special operations organization capable of:
 - Providing centralized stewardship, authority, and direction to joint special operations and national SOF
 - Accessing senior defence leaders directly and advising them on SOF
 - Controlling a separate budget for joint special operations and SOF-peculiar items
 - Expediting the rapid acquisition of SOF-peculiar items
 - Conducting or facilitating joint SOF training, exercises, and education
 - Influencing or managing the career development of SOF personnel

In any model, the senior SOF representatives will need to foster relationships with the military services and joint operational commanders either through formal or informal arrangements.

VI. The Importance of Long Term Planning and Investment for the Future

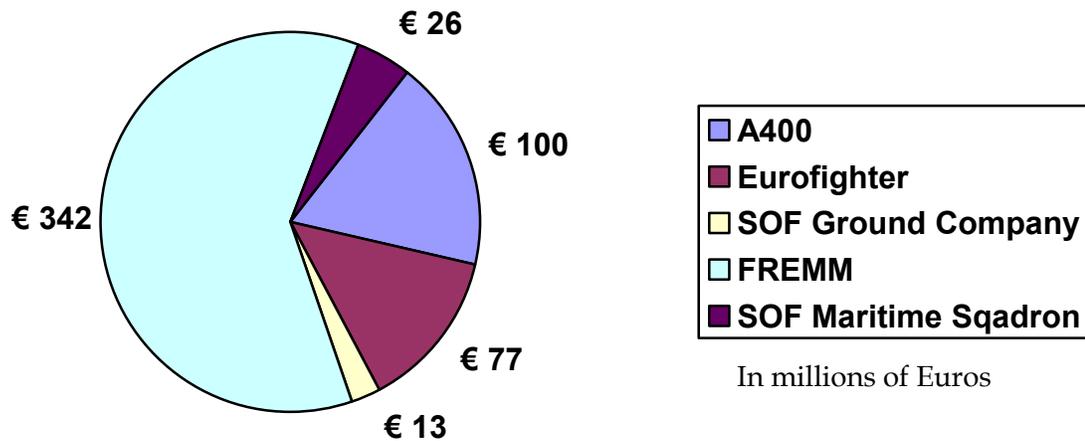
“Competent SOF cannot be created after emergencies occur.”

*- Canadian Special Operations Forces Command
(CANSOFCOM): An Overview*

As mentioned, no short cut exists to create SOF when crises arise. Instead, years of training, education, and experience acquired through an investment in time and resources are necessary to prepare SOF units to successfully perform special operations. NATO member nations should perform a cost benefit analysis and examine the relative utility offered by a fully resourced SOF organisation in comparison to other allocations of defence budget resources. What is most important according to several of those interviewed for the study, is an understanding that a small world class SOF force possessing the appropriate level of skills, capabilities, and experience is preferable to a larger force of inferior quality. Such a SOF capability requires a relatively minor expenditure of total defence costs.

The cost of one Eurofighter is 77 million Euros, an NH-90 helicopter 16 million Euros a copy, and the A400 aircraft approximately 100 million Euros per unit. The price for a single unit of one of these airframes pales in comparison to the approximate 342 million Euro cost for a European Multi-Mission Frigates (FREMM).⁵⁶ Comparatively, an investment of approximately 13 million Euros could completely outfit a 110 man land oriented SOF company/squadron sized organisation with equipment including vehicular mobility, communications, computers, weapons, night vision, surveillance optics, and various other specialty equipment. A state of the art maritime SOF organisation comprised of some 250 personnel including support and maintenance personnel, equipment, and weapons would cost approximately 26 million Euros.

⁵⁶ http://www.deagel.com/Frigates/FREMM_a000420001.aspx



Using the 2007 defence expenditures, this amount of 13 million Euros or approximately 18 million U.S. dollars would roughly calculate to approximately 5% the Estonian defence budget, 3% of the Latvian, Lithuanian, and Belgian defence budgets, 2% of the Slovenian defence expenditures, 1% of the Slovakian, Polish, and Hungarian, and less than even .001% of the German, Italian, French, Canadian, Spanish, United Kingdom, or the United States' total defence costs. From another perspective, for the 77 million Euros price of one Eurofighter, a nation could theoretically outfit nearly six 110 man SOF land companies/squadrons or seven of the same formations for the price of just one A400.

For a relatively inconsequential proportional investment, a nation can equip a world class SOF organisation and enable a significant national strategic capability. Clearly, other annual costs are incurred in terms of schooling, operations and maintenance, and other non-operational costs; but this major cost is clearly a small fraction of larger defence budgets when compared to other defence systems and platforms. The critical difference between those investments and SOF is the capability obtained relative to the anticipated security environment. It would seem that for 5% on the high end and less than .001% on the lower end, investment in a 110 man special operations land company/squadron that could provide a diverse suite of strategic capabilities is a pragmatic and prudent decision.

VII. Optimized NATO SOF – Operating “As One”

“For the strength of the Pack is the Wolf, and the strength of the Wolf is the Pack.”

- Rudyard Kipling

As strategic assets, SOF are understandably viewed primarily through the lens of national interests. However, the increasingly prevalent security perspective is one that multinational collective security arrangements are a prerequisite for confronting the disparate and complex security challenges of the 21st century. This stems from the reality that no one nation possesses the capabilities to do so unilaterally.

Similarly, one may surmise the same collaboration is required among international SOF as they face the same issues and, in some cases, greater ones regarding high end SOF specific capabilities. Throughout the conduct of interviews among NATO SOF personnel, this collaborative, collective effort repeatedly surfaced as one of the keys to long term success for SOF. Those interviewed clearly understood that just as no one nation can confront the threats of the 21st century alone, no national SOF are capable of unilaterally performing their role in isolation. Multilateral and collective SOF solutions will enhance national as well as collective SOF capabilities capitalizing on the strengths of some and compensating for gaps among others. Make no mistake, all members of the SOF team, playing their respective positions are vital to the success of the larger organisation, and the combined capabilities will be required to succeed in the face of the future threats. NATO contributing member nations recognize that protracted rotational participation in long duration coalition expeditionary operations require highly competent world class national SOF formations capable of easily integrating into and operating as part of a larger multinational force. Quality is clearly more important than quantity where SOF are required to perform protracted collective security and national reputation encounters in an unforgiving environment such as that of Afghanistan.

Such an endeavour appears as a tall order of a magnitude so grand that it may be overly complicated and infeasible, but the ethos of independent national SOF has already begun to grip this difficult problem. The foundation of this transformation rests in the personal relationships among multinational SOF personnel. As mentioned earlier, the overriding intent of the NSTI announced at the Riga Summit was aimed at increasing the ability of NATO SOF to train and operate together.⁵⁷

One naval special operations commander interviewed during the study provided an interesting observation regarding the challenge of operating together. He indicated that in order to command a naval SOF individual from another nation and assume responsibility for the employment of that individual or unit, one had to know the

⁵⁷ NATO, Online Library, Press Release, <http://www.nato.int/docu/pr/2006/p06-150e.htm>.

people and their abilities well. He described that he would need to work with them in order to know them well enough to effectively employ them. As a result, so much of the success of NATO SOF hinges upon the personal relationships developed among the community. Bureaucratic obstacles, politics, and agendas are typically set aside when SOF work together on the ground at the tactical level where the threat is near and mission success depends on close collaboration. This collaborative effort and those relationships must then be replicated upward, among the SOF senior leadership to further solidify the network of the NATO SOF family.

Formalized Multilateral NATO SOF Partnerships

In order to provide a framework for these relationships to develop and grow, NATO SOF needs to move beyond random and disparate bilateral relationships and large choreographed exercises. Formalized partnerships between various NATO SOF units are required to group complementary capabilities for training with a subsequent dividend in terms of force generation, NATO Response Force rotations, and out of area operations. *Ad hoc* random partnerships cannot build the level of mutual trust and confidence needed for better interoperability on the battlefield. Carefully arranged partnerships of different NATO SOF nations arrived at with adequate research, negotiation, and analysis will create a structure to generate multiple Special Operations Task Groups (SOTGs) for use by NATO. These partnerships need to transform from casual acquaintances and intermittent contact to relationships more akin to blood and family. These are the sorts of bonds that will provide the foundation for multinational composite SOTGs to deploy out of area and perform demanding tasks seamlessly when called upon by NATO.

Commonality

Commonality is defined in NATO as “a state achieved when groups of individuals, organisations, or nations use common doctrine, procedures, or equipment.”⁵⁸ This is precisely what NATO SOF require to coalesce into a viable NATO instrument. The relationships among NATO SOF personnel and the formalization of partnership frameworks will lead to the development of common doctrine, training, operational procedures, and equipment. The exchange of tactics and specialized techniques among international SOF elements is not new. Bilateral training, exchanges, and multinational exercises have always sought to achieve some degree of interoperability among friendly and allied SOF. Typically, those relationships are exclusive, somewhat insular, fickle, temporary, and often inconsistent because of concerns over information sharing, cost benefit analysis, political winds, limited resources, or conflicting requirements.

⁵⁸ NATO Standardization Agency, *NATO Glossary of Terms and Definitions*, Allied Administrative Publication-6, April 2008, 2-C-10.

Collaboration

Many of those interviewed in the course of this study thought a great deal of the solution to achieving commonality is collaboration and burden sharing within the NATO SOF community regarding specialized training facilities and apparatus, as well as the actual training courses themselves. From simple tactical level tasks to planning procedures, common training courses serve to reduce costs while training personnel to a common standard. Similar to the diverse spectrum of SOF capabilities across NATO, various nations possess SOF specific training areas or facilities that provide appropriate venues for specific niche SOF training. The sharing of these resources and common curriculum could serve as a cost saving measure while simultaneously making enormous inroads toward fostering the earnest personal relationships mentioned previously.

Of particular importance is the continued emphasis upon common NATO SOF leader and staff training. SOF leadership and staff requirements differ somewhat from those of the conventional armed forces and the training and education of SOF personnel need to reflect this reality. This is an invaluable vehicle to foster commonality in terms of doctrine and procedures among disparate SOF elements across NATO. It will also serve to further reinforce the personal relationships across national SOF lines.

Similar to the oversight organisational framework proposed for national level SOF, an optimal arrangement would be for a NATO SOF oversight organization to serve as a central authority for providing stewardship and direction in the creation of a world class NATO SOF capability. Ideally, the NATO SOF oversight organisation would be in a position to advise and educate the various NATO administrative and operational headquarters on the capabilities and contributions of NATO SOF. The primary objective of this organisation would be to foster unity of effort among NATO SOF by establishing NATO SOF doctrine and creating a federation of SOF schools and training centres. Through these mechanisms, the NATO SOF oversight organisation would be able to standardize and certify the capabilities of each NATO member nation's SOF, thereby fostering commonality and enhancing interoperability. It should have access to NATO common funding as a means to establish SOF-dedicated NATO enabling capabilities. In support of NATO operations, the NATO SOF oversight organisation should be responsible for defining force generation requirements and orchestrating the rotational flow of SOF units and their critical enablers.

Many of these responsibilities are placed in the NATO Special Operations Coordination Centre (NSCC) by its charter. As the NSCC moves toward full operational capability, it has made dramatic progress in the areas outlined above. The NSCC continues to push forward. Those interviewed for this study expressed significant optimism regarding the gains achieved thus far and the potential future contribution the NSCC can make in order to transform and optimize NATO SOF. Continued commitment from contributing nations will foster the institutionalisation of

the NSCC and allow it to better orchestrate partnerships, commonality, and collaboration of NATO SOF.

VIII. Conclusion

The capabilities and strategic freedom of action that SOF provide a nation are ideally suited to address the irregular security challenges prevalent today and those anticipated in the future. As valuable as these strategic assets are, special operations frequently carry a degree of political and physical risk that requires national defence establishments to ensure these forces are as perfect, effective, and functional as possible to assure success. In order to do so, SOF need the stewardship and oversight of a national level organisation. The resounding theme that emerged through the course of this study is that an oversight or management structure is necessary to enhance SOF capabilities, create unity of effort among the SOF tactical units, and enable elements within each military service. Additionally, a national level SOF organization would serve to advise senior defence leadership and conventional operational commanders on the capabilities and limitations of SOF and their proper employment in joint operations.

Since SOF across NATO are at varying stages of development and in different positions of formally integrating themselves within their national defence establishments, one universally applicable organisational model does not exist. A suitable model needs to be tailored within each individual nation to provide the appropriate stewardship for SOF. However, there are common characteristics that any national special operations organisation must possess in order to create a world class SOF. It needs direct access to the senior defence leadership. It must structure itself into a lean organisational architecture to facilitate agility but have the capacity to influence the career development of SOF operators and SOF enabling personnel, establish a SOF training and education system, and generate a deployable joint special operations headquarters with dedicated enablers. Its flexibility is achieved through the ability to rapidly procure non-standard equipment and services.

SOF provide a value enormously disproportionate to the relatively inconsequential financial resources required to fund them. However, the initial financial investment must include a commitment to sustain the force, and not accept normal equipment degradation without an associated commitment to recapitalize worn-out or obsolete equipment, and refresh equipment, especially communications gear, at a rate commensurate with technological advances. Additionally, the initial investment must be accompanied by an associated long term investment in time, personnel, organisational structure, professional development, training, and education that is guided and directed by a well articulated vision. SOF have increasingly become a force of choice, but in order to ensure they are a truly effective military instrument, prepared to deliver results in the face of extraordinary challenges when called upon, they must be optimized to fulfil their “no fail” mandate with a comprehensive plan.

As NATO member nations continue to enhance their SOF and SOF enabling capabilities, these national assets can be leveraged to contribute to NATO and other multinational or bilateral operational commitments. Consequently, it would be advantageous for a NATO SOF oversight organisation to facilitate interoperability among NATO SOF, which would foster full integration of NATO SOF into deployable force packages for expeditionary out of area operations.

Annex A – Enablers and Force Structure Implications for SOF

The complex nature of special operations creates modified requirements that demand similar modification of SOF organisational requirements. The operational packaging of SOF requires organic, dedicated, or habitually associated enabling assets and capabilities, specifically tailored and embedded in the force structure to perform or support special operations. *Ad hoc* attachment of these assets and capabilities fail to create the habitual relationships and “no fail” proficiency required by SOF.

Mobility

SOF mobility needs are diverse and essential to mission success. SOF do not manoeuvre against an adversary in the traditional sense, but instead use non-standard capabilities to position and reposition forces into denied areas and harsh environments where conventional forces cannot typically operate for extended periods. The lifeblood of SOF is its ability to project force rapidly to confront emergent crises; to infiltrate and exfiltrate into uncertain, hostile or politically sensitive environments; or to manoeuvre tactically in these environments. In most instances, this SOF mobility must minimize the possibility of detection to ensure survivability and mission accomplishment. SOF typically maintain a broad ability to infiltrate via air, maritime, and ground means, with specific teams specializing in more advanced techniques. SOF sometimes employ a sequence of multiple infiltration means.

Mobility is the critical SOF enabler because it provides necessary agility and responsiveness. SOF mobility considerations must be examined in a context broader than traditional territorial defensive requirements. When considering mobility requirements, nations should do so taking into account the pragmatic declaration from the NATO CPG that attacks may increasingly originate from outside the Euro-Atlantic area.⁵⁹ Similarly, the European Security Strategy declared that these distant threats must be confronted abroad. With some exceptions, special operations are likely to be performed outside of a nation’s sovereign territory, so it is important not to limit SOF mobility based upon national geography. NATO’s CPG describes the need to enhance the capability to “conduct operations in demanding geographical and climatic environments” with an eye towards future NATO out of area operations. SOF mobility capability is a critical enabler for NATO to perform such operations.

⁵⁹ NATO, *Comprehensive Political Guidance*, Part 2, Section 5.

Air Mobility

Air assets are the most flexible and essential means of SOF mobility, yet they are also the most resource-intensive. Rotary wing, short take-off and landing (STOL) fixed wing, and medium fixed wing tactical airlift are three major platform categories that SOF require. Static line, high altitude high opening (HAHO), and high altitude low opening (HALO) freefall parachuting techniques as well as fast-rope and abseiling provide additional flexibility for employing the air as a means of infiltration and exfiltration.

Because these means are non-standard and the conditions and circumstances are comparably edgy in practice (for example, low-level terrain following flight in the dark using night vision goggles), the skill sets require finely tuned proficiency that is only built through repetitive⁶⁰ joint training between SOF aircrews and operators. The optimal arrangement is dedicated SOF air platforms under the command of a SOF air component that specializes in providing the required capabilities to support special operations. Such an arrangement facilitates exclusive focus on supporting the specific needs of special operations. It also minimizes potentially counterproductive friction through repetitive habitual training and interaction. A less optimal solution is dedicating specific air crews and platforms to SOF support without placing them under the direct command or control of the joint special operations commander. In such a case, SOF have the ability to foster close working relationships and develop procedures with specific air crewmembers and undertake modifications or upgrades of specific platforms for use during special operations. Such an arrangement needs formal recognition and acknowledgement by the supporting conventional force commander to ensure long term continuity and sustainment of such a working relationship. Informally arranged agreements and handshakes are unsuited for solidifying such an important permanent relationship between SOF and the air assets that support them. *Ad hoc* arrangements with rotational supporting aircrews and airframes are simply contrary to effective special operations and greatly increase the likelihood of catastrophic mission failure.

Maritime Mobility

One of the unique values to maritime manoeuvre is the capability for SOF to leverage the vast oceans and waterways to surreptitiously gain access to a particular region. SOF maritime assets can poise off shore from operational areas unobtrusively, while situating themselves in such relative proximity to provide potential SOF options. Maritime capabilities, similar to air mobility and manoeuvre capabilities are dependent upon a number of key platforms and specialized equipment that allow for infiltration

⁶⁰ William H. McRaven, *Spec Ops Case Studies in Special Operations Warfare: Theory and Practice*, (Novato: Presidio Press, 1995), 8-23.

and exfiltration on or below the surface of the water. Some of these maritime assets require slight modification of standard systems. In other more sophisticated instances, they require specialized platforms and crew members trained specifically to support special operations.

One of the most powerful combinations of maritime mobility links air capabilities to maritime capabilities. Seventy-one percent of the earth's surface is comprised of water and can serve as a drop zone for aerial delivery of maritime SOF infiltration boats. The ability to deploy SOF and boats via parachute for follow-on infiltration provides a powerful capability for SOF to operate globally. Similarly, maritime platforms capable of supporting SOF aviation assets allow SOF to situate themselves near potential trouble spots yet maintain stand off in international waters and launch from maritime platforms as required.

Ground Mobility

SOF ground mobility requirements are affected by the variety of environments and geography in which SOF may operate. Versatile four wheel drive platforms, as well as motorcycles and all terrain vehicles (ATVs) are standard requirements for SOF. A degree of armour protection from explosive and direct fire attacks is increasingly important for operations in urban environments. SOF also are required in certain specific mission profiles to operate discreetly using specialized civilian vehicles, sometimes equipped with a degree of armoured protection as well. Due to the wide range of ground mobility platforms employed by SOF, SOF personnel require a higher level of driving proficiency across a broad repertoire of vehicles because of the central importance of employing vehicles. The availability of a wide variety of ground mobility means to SOF is typically complemented by a diverse driver training regime operating these different vehicles in a host of different environments from defensive driving commonly associated with personal security type work to extreme on and off road cold weather driving in snow and ice.

Ground mobility is not limited to vehicular capabilities alone. In some instances SOF must rely on advanced mountaineering capabilities and the ability to move and operate at altitude in winter conditions for extended periods. Afghanistan is a prime example of an area of operation requiring this advanced proficiency. Such a capability requires not only specialized equipment ranging from skis to snow vehicles, but also includes habitual retraining to retain baseline proficiency. SOF need to move effectively in these environments over the least likely routes undetected with essential equipment. Beyond the material resources required, such overland movement capabilities in mountain and winter environments require a suitable investment in training time on a regular basis. While not quite as intense in terms of equipment, proficiency in the intricacies of desert vehicular mobility also requires a degree of maintenance to preserve skills.

In most cases, all SOF require a baseline proficiency in these skills and designated elements maintain a higher level of proficiency in one mobility means or another. It is important to highlight that the requirements to perform special operations inevitably require extraordinary skills to do so. In many cases the rapidity of the required SOF response will create circumstances where SOF must “come as they are” with little preparation time.

Countering Chemical, Biological, Radiological, and Nuclear (CBRN) Weapons

The NATO CPG specifically states the need to pay “special attention to the threats posed by terrorism and the proliferation of weapons of mass destruction.”⁶¹ Clearly from every corner of the defence and security establishment the anticipated proliferation of CBRN weapons appear as a given. As countering CBRN weapons is an additional activity of NATO SOF, SOF units should seek to possess an organic CBRN capability in their force structure.

The Canadian Special Operations Forces Command (CANSOFCOM) is a relatively new special operations organisation designed and established with the benefit of historical analysis and mission requirements while looking to the 21st century. CANSOFCOM recognized the central importance of an organic CBRN capability and therefore created the Canadian Joint Incident Response Unit (CJIRU):

“The Canadian Joint Incident Response Unit (CJIRU) is a high readiness, agile and robust special operations unit capable of supporting and conducting a wide range of operations including support of Federal Departments and International Operations for management of Nuclear, Biological, Chemical, Radiation and Explosives Emergencies. At full strength, the company sized unit will be composed of a Response Squadron, Headquarters Troop and Support Troop.”⁶²

The Special Operations Command Australia (SOCAUST) also maintains a similar capability designated as their Incident Response Regiment. This unit was created in 2002 in the wake of the attacks the previous year in the United States as part of Australia’s effort to bolster its counterterrorism capabilities. The role and composition that encompasses this capability is described by Australia:

“... to provide specialist response to incidents involving chemical, biological and radiological (CBR) and/or explosive hazards, including other hazardous material and situations including fire. The Incident Response Regiment comprises command and logistic support elements, two specialist organisations,

⁶¹ NATO, *Comprehensive Political Guidance*, Part 2, Section 7.

⁶² CANSOFCOM CJIRU website http://www.cansofcom.forces.gc.ca/en/cjiruinfo_e.asp.

and its headquarters. The specialist organisations have key capabilities in conventional emergency response and enhanced chemical, biological, radiological and improvised explosives hazard reduction. In accordance with Australia's treaty obligations, the Regiment contributes to the ADF's ability to conduct domestic security and off-shore operations.⁶³

The United Kingdom's Special Forces Support Group (SFSG) established on 3 April 2006 also includes CBRN Specialists.⁶⁴

While the size and scope of each nation's SOF CBRN capability may vary, in general the predominance of CBRN threats in the future requires an organic SOF CBRN capability. The ability of SOF to "secure, interdict, destroy, or assist with the rendering safe of [CBRN] weapons"⁶⁵ can not be achieved with a part time capability. Trends in SOF force structure highlighted above and the strident emphasis from a variety of perspectives on the inevitability of this challenge indicate the central importance of an organic SOF CBRN capability. While some of the high end technical tasks involved in some CBRN related tasks may prove out of reach of most NATO nations, at a minimum SOF should be able to operate and perform their core missions in a CBRN environment.

Liaison

Communications and Information Systems (CIS) saturate military headquarters, staffs, and even operational elements today, and SOF are no different. This advent of networked warfare seeks to obtain an advantage over adversaries by turning information into knowledge with speed and accuracy in order to make good decisions faster. Integrating a variety of systems is challenging enough, but leveraging multinational CIS can prove even more challenging. Yet even with this degree of automation and technological interface, SOF require face to face interaction with a host of entities from conventional headquarters, to higher staffs, coalition partners, civilian organisations, embassies, and other supporting organisations dependent upon the mission. These positions are frequently viewed as painful obligations rather than critical enablers, but SOF lessons learned have demonstrated the criticality of quality liaison personnel placed at key nodes to ensure positive coordination, deconfliction, and information sharing with partner organisations. Within any SOF organisational structure these positions must be filled with appropriately experienced personnel that possess the confidence and close relationship with the SOF chain of command to ensure they are empowered to provide appropriate linkage with other organisations. These

⁶³ The Incident Response Regiment, "The Incident Response Regiment," *The Australian Journal of Emergency Management* 20 No. 2 (May 2005) : 18.

⁶⁴ *Parliamentary Debates, Commons, Daily Debate, Daily Hansard, Written Answers, Infantry Battalion Strength of the Regular Army and Full Time Reserve Service (FTRS) by Battalion*, as at 1 March 2007, 12 November 2007,

<http://www.publications.parliament.uk/pa/cm200708/cmhansrd/cm071112/text/71112w0013.htm>.

⁶⁵ NATO, *Allied Joint Doctrine for Special Operations*, Allied Joint Publication 3.5, Ratification Draft, 2-4.

influential positions should not be viewed as ancillary after thoughts and filled with available personnel after other roles are filled; they are the eyes, ears, and voice of the SOF unit and must be selected accordingly.

Unmanned Aerial Vehicles (UAV)

Unmanned aerial vehicles (UAVs) increasingly are an integral subcomponent of the intelligence, surveillance, and reconnaissance suite of military capabilities around the world. These capabilities continue to expand with emergent technological breakthroughs in terms of miniaturization, armament, and sensors. The inherent versatility of UAVs further enhances the ability of SOF to perform special operations. In the United States, SOF UAV capability was viewed with such importance that the 2006 Quadrennial Defence Review directed the establishment of a dedicated SOF UAV squadron to locate and target adversary capabilities in denied or contested areas.⁶⁶ While serving as Deputy Commander of the United States Special Operations Command, Admiral Eric Olson underscored the central importance of UAVs to SOF:

“Over the past several years, our special operation forces have successfully integrated unmanned aerial vehicles into day-to-day operations. These systems provide tactical aerial surveillance as a force protection measure for special operation forces operating in high risk/threat combat regions in addition to reconnaissance and surveillance, forward observation, communications links, and battle damage assessment. The value of UAVs is increasing as we find new and more effective ways to employ them in the various theatres and environments in which we operate.”⁶⁷

UAVs have become an indispensable and omnipresent organic asset for SOF as evidenced by the wide range of SOF UAV users, including China, France, and Poland.⁶⁸ UAVs are no longer a high-end exotic asset but are essential enablers for special operations. The continued explosive growth of nanotechnology and its impact on UAV development and design will allow for even greater proliferation of these valuable assets among even the smallest special operations task units (SOTUs).

All-Source Intelligence

Different SOF objectives and methodologies require different intelligence support as well. Special operations are normally planned in considerable detail, and

⁶⁶ Department of Defence (United States), *Quadrennial Defence Review Report*, February 6, 2006, 45.

⁶⁷ Vice Admiral Eric T. Olson, interview, *Special Operations Technology Online*, Jul 13, 2004 in Volume: 2 Issue: 4.

⁶⁸ Unmanned Aerial Vehicle (UAV) – PLA SOF is equipped with a variety of UAV for reconnaissance and surveillance roles. These UAV can be launched by handheld or from a small vehicle-mounted launcher., Sinodefence.com, <http://www.sinodefence.com/organisation/groundforces/specialoperations.asp> ; *Defence News*, (Springfield), 27 Mar 2008.; Aeronautics Press Release, July 27, 2007 - Polish Army Selects Aeronautics as Supplier of Mini UAV.

SOF relies on accurate, current intelligence to ensure that plans precisely address the situation in the intended target area. SOF habitually employ and synthesize multiple intelligence disciplines to include open-source intelligence, human intelligence (HUMINT), imagery intelligence (IMINT), signal intelligence (SIGINT), and counterintelligence (CI) to provide comprehensive situational awareness. Access to timely, detailed, tailored, all-source intelligence coherently fused for use at the SOF operator level is essential for a successful operation.⁶⁹ SOF, in some cases, seek to avoid detection rather than seeking to engage an adversary directly, and as a result SOF intelligence might seek to avoid detection in some cases as well as seeking to locate an adversary. The flexible intelligence support required of SOF is often of greater detail than that required by conventional forces and must be disseminated to the lowest levels in a timely manner for mission execution.

In his examination of the future of Canadian SOF, Doctor J. Paul de B. Taillon described how special operations require “an integrated intelligence support unit able to ‘reach back’ to all source intelligence...capable of fusing these sources into coherent, timely and actionable intelligence.”⁷⁰ Such an organisation needs to perform collection management; all source fusion of single source information; single source collection of SIGINT and HUMINT; and analysis, production, and dissemination of finished intelligence products in the form of target intelligence packages to SOF users. Increasingly, SOF intelligence will need to provide supporting information to better understand more complex and culturally diverse adversaries, which will in turn demand more sophisticated intelligence products and enhanced interdepartmental and interagency cooperation in obtaining such information.

Medical

SOF medical support is characterized by an austere structure and a limited number of medical personnel with enhanced medical skills. SOF medical personnel provide emergency treatment and a basic level of medical care at the operational team level. SOF also require a dynamic enhanced organic Role/Echelon 1+ (SOF) medical capability.⁷¹ This medical capability does not stand alone but is designed to augment other Role/Echelon 1 capabilities and would require water, shelter of opportunity, and communications support.

⁶⁹ NATO, *Allied Joint Doctrine for Special Operations*, Allied Joint Publication 3.5, Ratification Draft, 1-4.

⁷⁰ J. Paul de B. Taillon, “Canadian Special Operations Forces: Transforming Paradigms,” *Canadian Military Journal* (Winter 2005 – 2006) : 71.

⁷¹ A special operations mobile field surgical team comprised of an 11 person team that includes two general surgeons, an orthopaedist, two anaesthetists, two emergency medicine physicians, a physician’s assistant, a nurse/technician, and two special operations medics. Such an element provides the ability to perform up to 20 life or limb saving procedures over the course of 48-72 hours operating from backpack kits.

Casualty evacuation (CASEVAC) for SOF is another enabling element with implications for organic SOF force structure. SOF typically operate beyond the range of conventional CASEVAC assets. Although SOF at some point in the evacuation process normally seek to enter their casualties into existent CASEVAC pipelines when and where feasible, extracting SOF casualties from hostile and often denied areas is an extraordinary challenge that quite often will require the employment of organic SOF mobility assets (air, ground, and maritime) to evacuate casualties. This fact reinforces the requirement for robust organic SOF medical capabilities to compensate for the peculiarities of SOF quite often operating beyond the range of conventional CASEVAC coverage.

Explosive Ordnance Disposal (EOD)

EOD is defined by NATO as “the detection, identification, onsite evaluation, rendering safe, recovery and final disposal of unexploded explosives ordnance. It may also include explosives ordnance which has become hazardous by damage or deterioration.”⁷² Improvised Explosive Devices (IED) are a preferred instrument of our adversary and are often encountered when conducting operations against the irregular threats of the 21st century. Counterterrorism and counterinsurgency operations habitually encounter devices ranging from small antipersonnel IEDs to larger “car bombs” that require EOD expertise. As a result of the high probability of encountering explosive challenges, SOF require a dedicated or organic EOD capability embedded within the SOF organisational structure. Similar to other enabling and supporting capabilities, the EOD support to SOF is non-standard and requires desensitization to the dynamic special operations environment. *Ad hoc* cross attachment of conventional EOD elements with SOF is inadequate for such a critical enabling capability. Well established and thoroughly rehearsed tactics, techniques, and procedures, thoroughly rehearsed and inculcated among SOF and the supporting EOD element are essential. Such collaboration is only achieved through an organic SOF EOD capability.

Logistics

The nature of special operations often requires independent forces operating in austere remote locations without robust logistic infrastructure. SOF logistics are expeditionary in nature; they are tailored and structured for rapid dispatch into austere environments. In order to maintain of the necessary flexibility and independence in such circumstances, a small SOF logistics support element is necessary to bridge the gap to conventional logistics support. This SOF logistics capability would requisition, procure, inventory and control all equipment; provide limited food service in a field facility; maintain a truck capability; control ammunition, fuel, and other supplies; provide water production; provide basic maintenance support; perform air delivery; and provide rudimentary graves registration functions.

⁷² NATO Standardization Agency, *NATO Glossary of Terms and Definitions*, Allied Administrative Publication-6, April 2008, 2-E-7.

The SOF logistic support element should also provide the link to the organisation responsible for development, testing, and acquisition of SOF-peculiar and non-standard materials and supplies. SOF quite often require non-standard equipment acquired in an accelerated manner through non-standard channels.

Psychological and Information Operations

In light of increasing recognition that the face of 21st century warfare appears as a struggle for legitimacy and influence among and between relevant populations and political authorities, the relationship between psychological operations (PSYOPS) and special operations becomes ever more important.

Special operations have historical links to PSYOPS. During World War II, the British Political Warfare Executive (PWE) served as a sister organisation to the Special Operations Executive (SOE). United States Army Special Forces actually emerged from the U.S. Army Psychological Warfare Center at Fort Bragg in 1952, an organisation originally chartered with the mission:

“To conduct individual training and supervise unit training in Psychological Warfare and Special Forces Operations; to develop and test Psychological Warfare and Special Forces doctrine, procedures, tactics, and techniques; to test and evaluate equipment employed in Psychological warfare and Special Forces Operations.”⁷³

Some NATO SOF have been augmented by conventional PSYOPS personnel in Afghanistan and found them completely unsuited to the operational environment. Clearly, in the battle for hearts and minds in counterinsurgency, revolutionary, and irregular warfare, the psychological and informational aspect is crucial - arguably more important than any kinetic activity. SOF units need trained PSYOPS cells with requisite expertise in the application of PSYOPS and Information Operations to assist SOF with the critical psychological aspect of warfare in the 21st century.

Air Force Ground SOF Personnel

Trained SOF air force ground personnel are another critical enabler for SOF. As many of the mission profiles for special operations call for infiltration, exfiltration, resupply, or fire support delivered from the air, trained air force SOF personnel embedded on the ground are necessary for special operations. Lessons learned from both Iraq and Afghanistan demonstrate the critical importance of ground-air coordination and the central role of fixed wing, rotary wing, and unmanned aerial vehicles. Controlling aircraft on unimproved austere airfields, calling precision air

⁷³ Piece on Major General Robert Alexis McClure: Forgotten Father of US Army Special Warfare, by Dr. Alfred H. Paddock Jr., <http://www.psywarrior.com/mcclure.html>.

strikes in support of ground forces, and deconflicting with other airborne platforms requires dedicated air force ground SOF personnel, sensitized to the non-standard requirements of special operations.

Annex B – Operational Command and Control (C2) of Special Operations

Similar to other aspects of special operations, the C2 of special operations has non-standard requirements as well. SOF C2 should be agile, dynamic, and lean. Special operations demand a nimble and responsive unified C2 architecture that provides clear and unambiguous authority and direction across the diverse range of SOF operating jointly in diverse environments. SOF frequently requires direct connectivity to the highest military and political levels for operational decisions. Multiple layers of headquarters are counterproductive as they are cumbersome, decrease responsiveness, and create opportunities for security compromise.

SOF headquarters must be able to plan and execute rapidly, efficiently, and precisely on a continuous basis. These headquarters are required to orchestrate the intricate arrangement of multiple SOF units conducting concurrent missions over extended distances. The exercise of SOF C2 requires appropriately trained staff with the requisite special operations expertise and experience to plan, execute and support operations. Ample historical examples exist of catastrophic misemployment of SOF by leaders and staffs lacking adequate understanding of the capabilities and limitations of the specific SOF units being employed.

At the operational level, national C2 arrangements for special operations varied dramatically across the different forces interviewed through the course of this study. In many cases the nature of the mission dictated the operational command relationship. At the operational level, several nations possess a SOF element that assumes control of service SOF upon their deployment abroad to perform operations.

Autonomous Special Operations

Autonomous special operations require a direct line of C2 from the senior deployed SOF operational headquarters to the National Military Staff, Chief of Defence, and Minister of Defence. Such an arrangement provides for a direct line of command from the tactical level to the highest military and political strategic decision making authorities. These C2 arrangements for autonomous special operations are typically straightforward with minimal complication. Such direct C2 arrangements provide for optimal unity of command and unity of effort, maximized operational security, and expedited decision-making and reporting.

Integration with Conventional Forces

Various permutations for SOF operating in concert with large conventional forces exist depending on the mission and the nation. Feedback on existent trends in the field came largely from Afghanistan, but also includes methods employed in other

national troop deployments. The additional complication of the multinational nature of operations in Afghanistan precludes any definitive derivation of enduring lessons, but instead provides a singular data point that must be examined in context.

In principle, national SOF can either (1) provide complementary effects to a Joint Force Commander's overall campaign while operating autonomously in a designated Joint Special Operations Area (JSOA), or (2) conduct integrated operations with conventional forces being either the supporting or supported component to achieve the Joint Force Commander's intent. Geographical separation of conventional forces and SOF through the designation of a dedicated JSOA is a less complicated option than integration, but such a clean arrangement is not always feasible. This is particularly true when SOF and conventional forces are collocated in the same operational area but performing different missions, as has frequently been the case in Iraq and Afghanistan. The quandary is that in theory a national military headquarters may exercise formal operational control (OPCON) of a deployed SOF element, but the reality on the ground is that a national military headquarters is not in a position to coordinate with the conventional headquarters and then direct the activities of SOF units in support of a Joint Force Commander.

Integration among conventional forces and SOF has historically been challenging when the issues of command relationships and command authority and responsibility for an area of operation (AO) are involved. The idea of another organisation operating independently within a commander's AO is frequently problematic but the area commander is often incapable of providing effective OPCON to collocated SOF units. According to information obtained through research, anecdotal information from Afghanistan and interviews indicates that in some cases SOF are used inappropriately when they are placed under the tactical control of conventional force commanders. Even when a CJFSOCC or SOCCE is working closely with conventional forces to serve as a buffer, SOF units are understandably beholden to the senior military commander in their AO or to several such commanders if the AOs overlap.

Allied Joint Publication 3.5, *Allied Joint Doctrine for Special Operations*, provides important guiding principles concerning this integration. Supporting and supported relationships must be established by the superior headquarters with the degree, type, and priority of support clearly defined. For SOF, these arrangements should seek to ensure mission approval authority remains at the lowest possible level to ensure timeliness of support and flexibility.⁷⁴

Two teams playing on the same pitch are clearly difficult to manage. Doctrinal concept and wiring diagrams frequently give way on the ground either to the force of traditional military rank and authority or, alternatively, to friction and subsequently

⁷⁴ NATO, *Allied Joint Doctrine for Special Operations*, Allied Joint Publication 3.5, Ratification Draft, 4-1.

ignoring the requirement for integration. However, research conducted in the course of this study indicates that SOF and conventional force commanders have achieved integration in many cases by inadvertently applying some of the recommendations found in *Allied Joint Doctrine for Special Operations*, Allied Joint Publication 3.5.⁷⁵

One of the most critical points reinforced by some of those SOF personnel interviewed is that SOF and conventional force integration should occur well before commitment to combat operations. Personal relationships and sensitization during peacetime set the stage for productive operational working relationships. These efforts tend to break down some of the animosity and misunderstanding that frequently contributes to unproductive relationships between SOF and conventional forces. This needs to happen early so that both SOF and conventional forces gain a better understanding of where they can work better together, as well as appreciate each other's capabilities and limitations more thoroughly. One nation's SOF representatives indicated this process of establishing rapport with conventional force commanders is a scheduled, deliberate, campaign like activity designed to solidify that relationship before deployment, ideally as soon as the planning process commences.

The productive nature of this relationship also must hold true when conventional forces are supporting SOF. If the size, scope, or nature of the mission requires a SOF lead and the SOF commander serves as the senior national operational commander, SOF should be the supported command. For example, aviation, engineer, security, transportation assets, or others might provide support for a counterinsurgency or military assistance mission led by a SOF commander designated specifically because of the irregular nature of the task.

A new command relationship called "mutual support" is emerging from combat operations in Iraq. When a conventional force and a SOF tactical unit are operating in the same AO but performing different missions, the superior commander may place them in mutual support. Under this arrangement, both commanders must cooperate and collaborate for their common good, with the supporting and supported relationship changing for any given tactical action depending on what makes sense for mission accomplishment. At any given time, each force may have a number of different supporting and supported relationships in effect for their subordinate elements. A change in the tactical situation may change these relationships on a moment's notice. Mutual support arrangements allow for dynamic C2 and build tactical agility and flexibility into the system, but only if the commanders and their staffs focus on mission requirements more than they do on who is in charge.

⁷⁵ *Ibid.*, 4-3.

Annex C – NATO SOF Capability Levels

This annex describes a methodology to assign specific NATO SOF capability levels when assessing and categorizing national SOF units to perform the three principal NATO SOF missions: Special Reconnaissance (SR), Direct Action (DA), and Military Assistance (MA). It proposes terms of reference for standardizing SOF organizations, commands, and subordinate units to facilitate assessment of SOF command and control, communications, intelligence, mobility, medical support, and sustainment. Finally, the criteria below provide a general framework for assessing units for possible inclusion in NATO SOF and defining their “minimum” and “desired” capabilities. These criteria fall into four categories:

- (1) Tactical Capability
- (2) Mobility, Deployability and Enablers
- (3) Sustainability
- (4) Command and Control (C2) Capability

Criteria for NATO SOF Capability Levels

(1) **Level IV** – Effective and deployable tactical capability to perform all three NATO SOF mission sets (SR, DA, and MA) and proficient in the sustainment and C2 of multiple Special Operations Task Groups (SOTGs) and Special Operations Air Task Groups (SOATGs) in a complex, dynamic coalition environment. Able to establish a Combined Joint Force Special Operations Component Command (CJFSOCC) and provide tactical SOF enablers (see Annex A).

(2) **Level III** – Effective and deployable tactical capability to perform all three NATO SOF mission sets, but limited sustainment or C2 capability.

- (a) Manning restricts ability to sustain or control multiple SOTGs and SOATGs.
- (b) Has manpower, equipment and training to control multiple SOTGs and SOATGs, but is untested or requires additional refinement of coalition processes.
- (c) Effective in certain NATO SOF missions, but not proficient in others (e.g., Proficient in DA but only limited proficiency in MA).

(3) **Level II** – Minimally effective and deployable tactical capability to perform some but not all NATO SOF mission sets (e.g. SR and DA but not MA).

- (a) Possess ground, maritime or aviation SOF units.
- (b) Significant limits to deployability.
- (c) Not tactically proven NOR has good tactical ability, but:
 - 1) Limited C2 (i.e.: manning, training, equipment).
 - 2) Limited ability to project forces beyond own borders.
 - 3) Lacks basic enablers to operate in coalition operations (i.e.: language limitations, commonality of vehicles / communications)
 - 4) Has not previously operated in combined operations.
- (d) Unable to sustain forces (i.e.: unable to provide multiple coalition rotations without extended force regeneration efforts at home; lacks coherent plan to maintain force levels).

(4) **Level I** – Nascent SOF or no true SOF units. Requires a high investment of time and resources to achieve Level II capability.

Criteria for NATO SOF Framework Nation

For a nation to contribute to NATO SOF as a Framework Nation (FN), its SOF contribution should meet the following minimum criteria:

- (1) Deploy and establish a Combined Joint Task Force (CJTF) / Deployable Joint task Force (DJTF)-level component headquarters around a combined and joint staff structure that can command and control four to six JSOTFs / SOTGs / SOATGs.
- (2) Conduct NATO J1-J8 staff functions.
- (3) Command and control of SOF aviation, either independently or through a Combined Joint Special Operations Air Command (CJSOAC).
- (4) Provide the CJFSOCC a tactical-level SOF fixed- or rotary-wing lift SOATG.
- (5) Conduct advanced crisis response and time-sensitive operational planning.
- (6) Develop operational intelligence, and integrate SOF intelligence, surveillance, target acquisition, and reconnaissance (ISTAR) platforms, sensors, and human intelligence (HUMINT) into theatre-level collection plans.

(7) Develop and provide operational security (OPSEC) measures, to include restrictive procedures involving sensitive or compartmented SOF operations.

(8) Operate, manage, and maintain NATO operational-level command and control information systems (C2IS) down to SOTG level.

(9) Provide protection for the CJFSOCC headquarters, as required.

(10) Deploy appropriate planning and liaison teams to operational headquarters and other component commands beginning at the initiation and orientation phases of NATO operations.

(11) Coordinate combat service support (CSS) functions for subordinate JSOTFs / SOTGs / SOATGs.

Criteria for NATO SOF Troop Contributing Nation

For a nation to contribute to NATO SOF as a Troop Contributing Nation (TCN), its SOF troop contribution should meet the following minimum criteria:

(1) Conduct SR, DA, and MA across the range of military operations.

(2) Provide at least one special operations task group (SOTG) composed of:

(a) A headquarters consisting of the J1-J6 staff functions.

(b) Subordinate SOTUs.

(c) Combat support (CS) units.

(d) Combat service support (CSS) elements.

(3) Conduct infiltration / exfiltration by using air, land or maritime means into, within, and out of an operational area, ideally utilizing organic mobility assets.

(4) Conduct intra-SOTG communications using lightweight, reliable, mobile equipment that have a low probability of detection at the NATO SECRET level.

(5) Provide CS and CSS functions to SOTGs in hostile, denied, or politically sensitive areas.

(6) Provide C2 and intelligence to deployed elements.

(7) Conduct mission planning.

- (8) Operate as part of a CJFSOCC.
- (9) Conduct escape and evasion from a hostile or denied operational area.
- (10) Deploy in support of CJTF, DJTF, and NATO Response Force (NRF) operations in accordance with established deployment timelines.
- (11) Conduct activities independently or in combination with conventional forces.
- (12) Conduct overt, covert, or discreet operations.
- (13) Provide protection for own forces.

Criteria for NATO CJFSOCC

The CJFSOCC headquarters has a combined and joint staff structure normally formed around a SOF FN nucleus providing, as a minimum, the commander, key staff personnel, base life support capabilities, and the command, control, communications, computers and intelligence (C4I) structure for operational control (OPCON) of all SOF in a designated theatre of operations. The CJFSOCC nominally controls between two and six JSOTFs, SOTGs and /or SOATGs. Forces may also include conventional forces under the OPCON of the CJFSOCC. A CJFSOCC headquarters should have the following minimum capabilities:

- (1) Conduct NATO J1-J8 functions, advanced crisis response, time sensitive operational planning, and theatre-level campaign planning.
- (2) Plan, coordinate, and direct special operations separately or as part of a larger force.
- (3) Develop operational intelligence and integrate ISR platforms, sensors and HUMINT into theatre-level collection plans.
- (4) Operate, manage and maintain NATO operational-level communication and information systems (CIS) down to SOTG level.
- (5) Provide planning and liaison teams to higher headquarters and to other operational headquarters or component commands beginning at the initiation and planning phases of operations.
 - (a) Provide special operations planning and liaison element (SOPLE) to the theatre-level Combined Joint Force Commander.

- (b) Provide special operations liaison element (SOLE) to the theatre-level Combined Joint Air Component Commander.
- (6) Develop and provide operational security (OPSEC), to include restrictive OPSEC procedures involving sensitive or compartmented SOF operations.
- (7) Manage force protection for the CJFSOCC headquarters, as required.
- (8) Command and control SOF aviation either directly or through a CJSOAC.
- (9) Coordinate CSS functions for subordinate SOTGs.
- (10) Provide at least one SOTG and one SOATG under its established CJFSOCC.
- (11) Deploy within established deployment timelines with all classes of supply to sustain itself for at least 10 days.
- (12) Plan, coordinate, and direct special operations separately or as part of a larger force.
- (13) Assign sufficient English-speaking personnel to the appropriate positions to allow interoperability when attached to a multinational force.

Criteria for NATO SOCCE

When SOF operate directly in the area of operations (AO) of conventional forces, or when the likelihood of integrated or converging operations with conventional forces is probable in a joint operational area, the CJFSOCC commander may establish a SOCCE to synchronize, deconflict, and coordinate operations with conventional forces. The SOCCE does not have a fixed organization; it is a combined staff structure formed around a Framework Nation (FN), Lead Nation (LN) or a composite of national contributions that can deploy and establish a headquarters. The SOCCE will normally collocate with the appropriate-level conventional forces headquarters (maritime or land) and must be prepared to exercise control of affected SOF of between two and six SOTGs and / or SOATUs. A SOCCE should have the following minimum capabilities:

- (1) Conduct NATO J1-J8 functions.
- (2) Integrate SOF into theatre-level campaign plans.
- (3) Receive, review, and distribute operational intelligence from conventional force and monitor integration of ISR platforms, sensors and HUMINT into conventional forces' collection plans.

- (4) Maintain OPSEC, to include restrictive OPSEC procedures involving sensitive or compartmented SOF operations.
- (5) Manage force protection for the SOCCE headquarters, as required.
- (6) Deploy within established deployment timelines with all classes of supply to sustain itself for at least 10 days.
- (7) Assign sufficient English-speaking personnel to the appropriate positions to allow interoperability when attached to multinational force.
- (8) Operate, manage and maintain NATO operational-level C4I down to SOTG level.
- (9) Coordinate CSS functions for subordinate SOTGs.
- (10) Provide liaison teams to other operational headquarters commands beginning at the initiation and planning phases of operations.

Criteria for NATO Land SOTG

The Land SOTG headquarters can provide C4I structure for OPCON of between two and six SOTUs and attached CS and CSS elements to plan and conduct special operations missions. A SOTG, with its subordinate SOTUs, should have the following minimum capabilities:

- (1) Conduct J1-J6 staff functions.
- (2) Plan, coordinate, and direct special operations separately or as part of a larger force.
- (3) Command subordinate SOTUs, CS units and CSS units.
- (4) Maintain OPSEC, to include restrictive OPSEC procedures involving sensitive or compartmented SOF operations.
- (5) Manage force protection for the SOCCE headquarters, as required.
- (6) Deploy within established deployment timelines with all classes of supply to sustain itself for at least 10 days.
- (7) Sustain itself once deployed with its organic CSS capability via host nation support (HNS) agreements and/or tailored national support arrangements.

- (8) Establish liaison element on the appropriate level to provide advice, coordination, and staff assistance on the employment of SOF to superior SOF and / or conventional headquarters.
- (9) Provide augmentation to superior SOF and / or conventional headquarters.
- (10) Perform all-source intelligence analysis and fusion.
- (11) Disseminate tactical intelligence.
- (12) Incorporate intelligence products into mission planning.
- (13) Conduct surveillance of a target using unmanned aerial vehicles (UAVs).
- (14) Conduct chemical, biological, radiological, nuclear (CBRN) reconnaissance using accredited metering systems.
- (15) Conduct tactical signal intelligence (SIGINT) gathering operations.
- (16) Provide SOF teams with an embedded language capability to train and advise and / or employ with national military or paramilitary forces.
- (17) Provide organic powered vehicle mobility.

Criteria for NATO Land SOTU

All Land SOTUs should have the following minimum capabilities:

- (1) Plan and conduct special operations missions in hostile, denied, or politically sensitive areas, separately or as part of a larger force.
- (2) Deploy within established deployment timelines with all classes of supply to sustain itself for at least 10 days.
- (3) Infiltrate and exfiltrate specified operational areas by air, land or sea.
- (4) Conduct operations in remote areas and hostile environments for extended periods (minimum of five days) with minimal external support.
- (5) Develop, organize, equip, train, and advise or direct host nation military or paramilitary forces. Teams will have an embedded language capability.
- (6) Conduct optical surveillance of targets by day reconnaissance / establish landing sites and coordination points.

- (7) Conduct optical surveillance of a target by day and night.
- (8) Conduct surveillance of a target using remote sensors and optics.
- (9) Conduct surveillance of a target using unmanned aerial vehicles (UAVs).
- (10) Conduct chemical, biological, radiological, nuclear (CBRN) reconnaissance using accredited metering systems.
- (11) Conduct signal intelligence (SIGINT) gathering operations.
- (12) Conduct surveillance operations by foot and vehicle.
- (13) Conduct patrol / section / squad level limited stand-off attack using sniper and man-pack explosive devices employed delayed fuse systems.
- (14) Conduct troop / platoon level manoeuvre operations using integral tactical mobility and support weapons.
- (15) Conduct air terminal control tasks.
- (16) Direct and / or effect terminal guidance control of precision guided munitions.
- (17) Incorporate intelligence products into mission planning.
- (18) Provide organic powered vehicle mobility.

Criteria for NATO Special Air Operations Capabilities

Airpower adds an entire dimension to friendly force capability, setting the conditions that can allow friendly forces to seize and maintain the initiative and prevent terrorists and insurgents from shaping and pacing operations. Exploitation of the air domain is essential to controlling the operational tempo of special operations missions. Assessments of NATO capabilities to conduct special air operations should focus on aviation capabilities and limitations; aircrew capability; critical resource availability and sustainability; and operational potential.

The scale of special air operations capabilities in many nations is relatively small in terms of force size, total sortie potential, resource consumption and availability, and overall support costs. Additionally, many airpower missions supporting SOF can be performed by conventional force aviation units; therefore, many special air operations capable units will not necessarily be dedicated SOF units. The contributions and capabilities of these units, however, can be vital to the success of NATO SOF.

Therefore, NATO should use the following categories to define specific NATO special air operations capability levels and assess national special air operations capabilities:

(1) **Special Air Operations Capable**: Non-dedicated assets capable of conducting SOF support missions – predominantly infiltration, exfiltration, resupply and limited strike support. These assets possess the necessary capabilities to support SOF operations but do not maintain the habitual relationships or conduct the advanced training necessary for more complex SOF missions. Their support will be limited and confined to less sensitive missions. These assets may have limited ability to conduct command and control and sustainment of long duration SOF missions and, therefore, rely on dedicated SOF air units to perform these functions. To qualify as a Special Operations Capable unit requires a habitual training relationship and established tactics, techniques, and procedures guiding the integration of these units with designated air, land, and maritime SOF units.

(2) **Special Air Operations Dedicated**: Designated SOF air units that conduct the support missions above as well as air assault, sustained close air support / interdiction / armed reconnaissance as well as independent air operations such as medical casualty evacuation, personnel recovery, and intelligence, surveillance, and reconnaissance (ISR). In general, these units possess SOF peculiar platforms that can conduct specialized air missions in politically sensitive or denied areas. These units also possess specially trained aircrews capable of performing these missions. Additionally, these units possess the necessary organic capability to command, control, and sustain special air operations including airborne command and control for special operations.

The following discussion presents a framework for assessing national special air operations capabilities that support the NATO SOF missions, including measurable criteria for assessing SOF command and control, communications, intelligence, mobility, medical support, and sustainment as well as independent special air operations.

When assessing the capability of a nation to support special air operations, there are three dimensions that can be used, which also form a framework for strategic investments and help focus appropriate capability development initiatives (Figure C1):

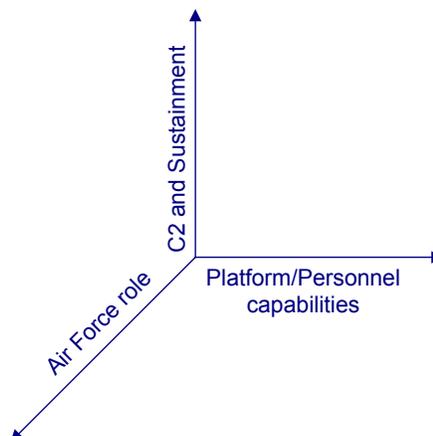


Figure C1. Dimensions of Special Air Operations

(1) Platforms and personnel – ranging from Special Air Operations capable to Special Air Operations dedicated. Many applications of airpower in special operations are applicable to a broad range of military operations. This allows for these organizations to support less demanding or lower risk SOF missions as well as support SOF in the conduct of more traditional military tasks. However, there are also unique environments and operations that require either dedicated aircrews or specialized equipment.

(2) Air Force role – ranging from supporting forces to conducting independent air missions and providing military assistance to others. The most commonly requested application of special air operations is in a direct support role to surface SOF forces through insertion, extraction, air assault, close air support, ISR, and resupply missions. In low-risk, less sensitive operations, these missions can usually be supported by Special Air Operations capable platforms and personnel who have a habitual relationship with surface forces – enough to ensure familiarization with each other's people, tactics, techniques, and procedures. As risk and sensitivity increase, the need for more specialized and dedicated assets and aircrew increases. Additionally, a national level Air Force capable of operations independent of surface forces is needed for the application of air power in the conduct of special operations missions to include precision strike and dedicated ISR. These capabilities must be able to shape the battlefield in a manner unique to air forces. The most advanced role for special air operations is the ability to provide military assistance to others. These special air operations advisors are designated SOF air units with advanced training necessary to advise and train aviation forces to employ and sustain their own assets and, when necessary, to integrate those assets into joint, combined operations. These units would provide SOF air liaison teams to train, advise, equip, and support friendly host nation military or paramilitary forces.

(3) Sustainment and C2 of special air operations forces – ranging from a reliance on other nations for international deployments, to self-sustainment of indigenous units, to robust capabilities to deploy globally and prepare, sustain, protect, and command and control special air operations units in support of a CJFSOCC. The key to effective application of airpower in joint special operations is seamlessly integrating airpower into a joint strike / mobility / ISR capability to provide friendly forces the tactical and operational advantage inherent in air power. This includes such capabilities as civil engineering, communications and information, intelligence, logistics, medical, operations planning, security forces, space operations, and weather support. The

majority of these capabilities are not SOF peculiar but may require some specialized capabilities based on the austere and unimproved locations in which SOF may operate.

Criteria for NATO CJSOAC

A CJSOAC headquarters has a combined and joint staff structure normally formed around a FN SOF air staff, the base life support capabilities, and the C4I structure for OPCON of all special air operations in a designated theatre of operations. While desirable, the FN for a CJSOAC does not need to be the same nation as that which contributes the CJFSOCC. A CJSOAC controls between two and six SOATGs or SOATUs within a theatre of operations. Regardless of the number of subordinate elements, NATO should establish a single CJSOAC within a theatre to preserve unity of command and make the most effective use of limited assets. A CJSOAC headquarters should have the following minimum capabilities:

- (1) Conduct NATO J1-J8 functions, advanced crisis response, time sensitive operational planning, and theatre-level campaign planning.
- (2) Plan, coordinate, and direct special air operations and integrate them into theatre air, land, and maritime operations.
- (3) Operate, manage and maintain NATO operational-level communication and information systems (CIS) down to SOATU level.
- (4) Provide planning and liaison teams to superior headquarters and to other operational headquarters or component commands beginning at the initiation and planning phases of operations.
- (5) Develop and provide operational security (OPSEC), to include restrictive OPSEC procedures involving sensitive or compartmented SOF operations.
- (6) Manage force protection for the CJSOAC headquarters, as required.
- (7) Coordinate CSS functions for subordinate SOATGs and SOATUs.
- (8) Provide at least one SOATG under its established CJFSOCC.
- (9) Deploy within established deployment timelines with all classes of supply to sustain itself for at least 10 days.
- (10) Assign sufficient English-speaking personnel to the appropriate positions to allow interoperation when attached to a multinational force.

Criteria for NATO SOATG

A SOATG is a headquarters level organization of expeditionary SOF air composed of fixed-wing, rotary-wing, or tilt-wing SOATUs and special operations capable conventional aviation units employed to conduct or support NATO SOF missions. A SOATG should have the following minimum capabilities:

- (1) Conduct J1-J6 staff functions.
- (2) Plan, coordinate, and direct special air operations separately or as part of CJSOAC.
- (3) Command subordinate SOATUs, special operations capable conventional aviation units, CS units and CSS units.
- (4) Maintain OPSEC, to include restrictive OPSEC procedures involving sensitive or compartmented SOF operations.
- (5) Manage force protection for the SOATG headquarters, as required.
- (6) Deploy within established deployment timelines with all classes of supply to sustain itself for at least 10 days.
- (7) Sustain itself once deployed with its organic CSS capability via host nation support (HNS) agreements and/or tailored national support arrangements.
- (8) Establish liaison element on the appropriate level to provide advice, coordination, and staff assistance on the employment of SOF air assets to superior SOF and / or conventional headquarters.
- (9) Conduct chemical, biological, radiological, nuclear (CBRN) reconnaissance using accredited metering systems.
- (10) Assign sufficient English-speaking personnel to the appropriate positions to allow interoperability when attached to a multinational force.

Criteria for NATO SOATU

A SOATU is an expeditionary SOF tactical air unit composed of 1-5 fixed-wing or 2-6 rotary-wing/tilt-wing aircraft and aircrews. An SOATU may also be comprised of combat aviation advisors, or combat controllers/forward air controllers employed to conduct or support NATO SOF missions. A SOATU can consist of any combination of combat controllers / forward air controllers, operations (aircrew and aircraft), and support functions (maintenance / logistics, weather, command and control, planning, intelligence). A SOATU should have the following minimum capabilities:

- (1) Operate as part of SOATG or CJFSOCC.
- (2) Conduct mission planning and command and control of organic assets.
- (3) Sustain crews, support personnel, and aircraft.
- (4) Conduct or support the three NATO SOF principal missions of SR, DA and MA across the range of military operations.
- (5) Deploy with sufficient classes of supplies to sustain operations or have access to appropriate classes of supplies.
- (6) Conduct chemical, biological, radiological, nuclear (CBRN) reconnaissance using accredited metering systems.
- (7) Assign sufficient English-speaking personnel to the appropriate positions to allow interoperation when attached to a multinational force.

Criteria for NATO SOF Aircraft Performance Capabilities

SOF air mobility platforms should have the following minimum capabilities:

- (1) Conduct low light operations.
- (2) Conduct night vision goggle (NVG) operations. Aircraft should possess NVG-compatible lighting (internal and external).
- (3) Conduct visual low altitude navigation and terrain avoidance.
- (4) Conduct precise navigation (<75 meter position accuracy and <2 minute timing accuracy). Aircraft should possess redundant, stand alone navigation systems (i.e.: dual inertial navigation systems (INS), INS / Global Positioning System (GPS)).
- (5) Conduct multi-ship formations (rotor wing/tilt-rotor only).
- (6) Conduct secure communications of bi-directional networked air-air and air-surface, electronic warfare resistant voice and data.
- (7) Conduct stand-alone infrared / electronic countermeasures (IRCM / ECM). Aircraft should possess infrared (IR) / radar missile warning system.
- (8) Conduct defensive suppressive fire (rotor wing/tilt-rotor only).

- (9) Conduct operations from austere locations including forward area refuelling and rearming (either receiver or tanker operations).
- (10) Conduct helicopter air-air refuelling (AAR).
- (11) Conduct reduced visibility landings (e.g.: dust-out, reduced weather minimums – 30.5 meter ceilings and 800 meter visibility).
- (12) Conduct infrared marked landing / drop zones operations.
- (13) Conduct operations from unprepared landing surfaces.
- (14) Conduct winching (rotary wing only).
- (15) Conduct fast rope insertion (rotary wing only).
- (16) Conduct static line, freefall (High Altitude Low Opening (HALO) / High Altitude High Opening (HAHO)) airdrop (supplemental oxygen system) (fixed wing only).
- (17) Provide automatic response to external electronic interrogation by military and civilian ground and airborne interrogators.
- (18) Operate in a CBRN threat environment.

SOF air mobility platforms should have the following desired capabilities:

- (1) Conduct all environment flight operations.
- (2) Conduct instrument Flight Rules (IFR) low altitude navigation and terrain avoidance (e.g.: terrain avoidance, terrain following radar).
- (3) Conduct shipboard operations.
- (4) Conduct precision airdrop (<95 meter accuracy).
- (5) Conduct fast rope insertion / exfiltration (rotary wing only).
- (6) Conduct autonomous identification of landing and drop zones.
- (7) Conduct Automatic Computed Air Release Point Systems (ACARPS) operations.
- (8) Conduct operations on unmarked landing / drop zones.

- (9) Conduct discreet or covert operations.
- (10) Conduct multi-ship formations with dissimilar aircraft.

SOF air mobility platforms should have the following desired characteristics:

- (1) Improved situational awareness sensor suite (e.g.: infrared sensor, enhanced mapping radar).
- (2) Enhanced mission management system with precision timing of +/- 30 seconds.
- (3) Automated self-contained approach capability (all-weather landings to austere landing zones).
- (4) Extended range (e.g. auxiliary tanks, in-flight refuelling).
- (5) Helicopter AAR below 305 meters (rotary wing only).
- (6) Beyond line-of-site communications suite.
- (7) Data link communications.
- (8) Active defensive systems (e.g.: directed infrared countermeasures).
- (9) Ballistic armour.
- (10) Automated IRCM / ECM suite.
- (11) Reduced aircraft signature.

SOF air strike platforms should have the following minimum capabilities:

- (1) Conduct positive control of air strikes.
- (2) Conduct precision munitions employment against static and moving targets.
- (3) Conduct identification of friendly forces (e.g.: beacons, visual markings).
- (4) Provide bomb damage assessment (BDA) recorder.
- (5) Provide automatic response to external electronic interrogation by military and civilian ground and airborne interrogators.

(6) Deliver ordnance precisely in extremely close proximity to friendly forces (ranges inside specified Danger Close ranges – ground force commander must accept responsibility).

SOF air strike platforms should have the following desired characteristics:

- (1) Fire control computers.
- (2) Low light level television.
- (3) Infrared detection set.
- (4) Strike radar (all weather precision engagement).

SOF air ISR platforms should have the following minimum capabilities:

- (1) Conduct visual / photographic collection and thermal imaging.
 - (a) Conduct wide area sensor surveillance for the detection and tracking of slow moving ground targets and of distinguishing between tracked and wheeled vehicles by day or night, clear or adverse weather.
 - (b) Conduct pre-planned imagery collection with in-flight mission update/re-tasking capability.
 - (c) Record mission history (Data/Display Recording) and electronic support data for post-mission analysis (Tactical Electronic Processing and Evaluation).
 - (d) Provide in-flight dissemination of reconnaissance imagery and data to appropriate receiving stations, in near real time when required.
 - (e) Provide very high quality imagery at ranges up to 100km.
 - (f) Provide very high quality optical and infrared imagery - clear conditions, day/night.
 - (g) Provide very high quality optical and infrared imagery (IR National Imagery Interpretability Rating Scale (NIIRS) > 6) from low to medium altitude (10,000 - 45,000 feet).
 - (h) Provide very high quality optical and IR imagery (multi-spectral NIIRS > 6) from low to medium altitude (10,000 - 45,000 feet).
 - (i) Provide very high quality optical and IR imagery (optical NIIRS > 7) from low to medium altitude (10,000 - 45,000 feet).
 - (j) Provide very high quality optical and IR imagery (still frame, video).
- (2) Conduct signal intelligence (SIGINT).
 - (a) Transmit collected signals data to appropriate receiving stations, near real time when required.
 - (b) Conduct unmanned SIGINT missions in operational situations when aircrew should not be risked.

(3) Conduct electronic signals intelligence (ELINT) and communications intelligence (COMMINT).

(a) Conduct wide area sensor surveillance for collecting, direction finding and locating the source of all militarily significant radio frequency (RF) communications and non-communications signals. Quality of collection should be of sufficient quality for emitter recognition.

(b) Operate by day and night and in all weathers.

(c) Provide secure, robust, reliable line of sight (LoS) and beyond line of sight (BLoS) communications.

(4) Provide automatic response to external electronic interrogation by military and civilian ground and airborne interrogators.

(5) Provide in-flight review of reconnaissance data.

(6) Integrate into the wider joint intelligence, surveillance and reconnaissance (JISR).

(7) Provide persistent coverage of an area of interest (loiter/long dwell) or broad area coverage of several, possibly remote, areas of interest.

(8) Conduct operations at medium altitude (10,000 - 45,000 feet) with long endurance (greater than 8 hours).

(9) Penetrate denied airspace.

Specialized SOF air ISR platforms (e.g.: Predator UAV armed with Hellfire) should have the following desired capabilities:

(1) Attack surface targets by day and night.

(2) Attack surface targets in all weather conditions.

(3) Attack ground targets in all terrain conditions.

(4) Attack fixed hard and soft targets.

(5) Attack mobile targets, including armoured vehicles attempting concealment to avoid detection.

(6) Attack ground targets at medium ranges from the forward line of troops (FLOT).

Criteria for NATO Maritime Special Operations Capabilities

Maritime special operations (MSO) offer nations the ability to conduct special operations in an environment that covers three quarters of the earth's surface. Keeping similar themes as addressed in the special air operations section, the assessments of MSO capabilities to conduct special operations should focus on maritime capabilities and limitations; subsurface swimmer capability; vessel and crew capability; critical resource availability and sustainability; and operational potential.

MSO can expect to operate in hostile, contested or permissive environments; and because of the surroundings in which they operate and its inherently discreet nature, they are particularly adept at conducting extremely sensitive special reconnaissance within the most hostile of areas situated near waterways. Another vital use of MSO is the interdiction of littoral/nearshore areas and being able to project and extend that capability over the horizon in conjunction with a larger host nation navy capability. Inherent in this, MSO and conventional navy forces need to train together to build habitual relationships to increase their abilities to synchronize actions and, therefore, strengthening their effectiveness. The other core missions MSO are expected to conduct are direct action and military assistance across the operational continuum in a comparable fashion as their Land SOTU brethren. MSO also offer infiltration means to areas that may be inaccessible to traditional land or air methods. As an exfiltration means, to include use during personnel recovery (PR) operations, MSO can extract personnel or equipment that may not be possible through other means or too high a risk.

In addition, MSO, as a part of a nation's "toolkit", can advise conventional and maritime commanders on the challenges presented by hybrid or irregular threats. Adversaries have shown their ability to use watercraft as a means of attack, such as against the USS Cole, and also as a means to supply their efforts, such as by smuggling personnel, arms and equipment through under-monitored waterways, as exist between the coasts of Somalia and Yemen.

All of these operations as conducted by MSO require advanced equipment, a large amount of service support assistance and maintenance and dedicated individuals willing to undertake these operations. The level of training required to qualify for these units is extremely high, not only for the operators, but also for the support personnel whose countless man-hours maintain extremely sophisticated equipment on which the mission's success and the operators lives depend.

Consequently, MSO is one of the more difficult areas to resource in order to raise units to this high state of proficiency. These capabilities are not cheap. However, the additional capability and security these forces provide to nations that have major lines of communication or critical infrastructure in or near water clearly require them. Sources of energy and the means to extract, produce and refine it are vital to a major

portion of the world's economy. Most often these energy nodes are in or near waterways and are particularly vulnerable to attack. MSO can be used to identify these vulnerabilities, inspect areas for tampering and postulate how attacks would be accomplished against the previously identified vulnerabilities and what measures can be taken to eliminate or mitigate the risks.

Criteria for NATO Maritime SOTG

A Maritime SOTG is an expeditionary SOF organization composed of multiple Maritime SOTUs specializing in the employment of subsurface swimmer capabilities, subsurface delivery vehicles (SDVs) and surface watercraft to conduct special operations in maritime, littoral and riverine operational environments. A Maritime SOTG should have the same minimum capabilities of a Land SOTG, but these capabilities, like those of a Maritime SOTU, should be optimized for their employment in maritime, littoral and riverine operational environments.

Criteria for NATO Maritime SOTU

A Maritime SOTU is an expeditionary SOF tactical unit specializing in the employment of subsurface swimmer capabilities, subsurface delivery vehicles (SDVs), or surface watercraft to conduct special operations in maritime, littoral, and riverine operational environments. Maritime SOTUs can consist of any combination of operators (subsurface swimmers), surface and subsurface watercraft and their crews and support functions (maintenance / logistics, weather, command and control, planning, intelligence).

In addition to the same minimum capabilities of a Land SOTU, **a Maritime SOTU specializing in subsurface swimmer operations should have the following minimum capabilities:**

- (1) Conduct combat swimmer ship attack using closed circuit breathing apparatus with man-pack explosive devices employing a delayed fuse system.
- (2) Conduct shipboard / offshore platform assault.
- (3) Conduct static-line water parachute insertion.
- (4) Conduct Combat Rubber Raiding Craft (CRRC) Over-The-Horizon (OTH) navigation.
- (5) Conduct helicopter personnel cast and recovery.
- (6) Conduct rendezvous at sea.
- (7) Conduct nearshore hydrographic reconnaissance (combat).

- (8) Conduct beach feasibility reconnaissance.
- (9) Conduct nearshore / foreshore obstacle clearance.
- (10) Conduct nearshore submerged hydrographic reconnaissance.

Maritime SOTUs specializing in subsurface swimmer operations should have the following desired capabilities:

- (1) Conduct submarine surface launch and recovery.
- (2) Conduct helicopter tethered CRRC insertion.
- (3) Conduct CRRC helocast insertion.
- (4) Conduct CRRC parachute insertion.
- (5) Conduct riverine infiltration / exfiltration.
- (6) Conduct submarine operations (lock-in / lock-out).
- (7) Conduct surface boat hydrographic survey.
- (8) Conduct riverine hydrographic reconnaissance.

A Maritime SOTU specializing in SDV operations should have the following minimum capabilities:

- (1) Conduct underwater demolition of an offshore facility.
- (2) Conduct interdiction against a port facility.
- (3) Conduct personnel and / or equipment recovery.
- (4) Conduct personnel and / or equipment delivery.
- (5) Conduct LIMPET assembly modular ship attack.
- (6) Conduct submarine / dry dock shelter / SDV launch and recovery.
- (7) Conduct combat swimmer ship attack using closed circuit breathing apparatus.

- (8) Conduct harbour penetration.
- (9) Conduct Pinger / receiver rendezvous.
- (10) Conduct contour navigation.
- (11) Conduct deep water navigation.
- (12) Conduct submarine / dry dock shelter / SDV launch, rendezvous, and recovery.
- (13) Conduct underwater telephone operations.
- (14) Conduct SDV V-communication radio operation.
- (15) Conduct nearshore hydrographic reconnaissance (combat).
- (16) Conduct beach feasibility reconnaissance.
- (17) Conduct nearshore submerged hydrographic reconnaissance.

A Maritime SOTU specializing in SDV operations should have the following desired capabilities:

- (1) Conduct dry dock shelter mass swimmer launch and recovery.
- (2) Conduct dry dock shelter emergency procedures.
- (3) Conduct disabled SDV recovery.
- (4) Conduct at-sea rescue.
- (5) Conduct resupply delivery.
- (6) Conduct dry dock shelter mobility.
- (7) Conduct submarine attack at pierside.
- (8) Conduct a grid search.

A Maritime SOTU specializing in surface watercraft operations should have the following minimum capabilities:

- (1) Conduct waterborne visit, board, search, and seizure (VBSS).

- (2) Conduct combat craft direct fire support.
- (3) Conduct combat first aid / medical evacuation.
- (4) Conduct combat search and rescue.
- (5) Conduct live fire small arms skills proficiency.
- (6) React to fire on craft.
- (7) Abandon / scuttle craft.
- (8) Conduct special boat unit / air coordinated operation.
- (9) Manoeuvre in formation.
- (10) Conduct man overboard actions.
- (11) Conduct low-visibility piloting.
- (12) Conduct mooring.
- (13) Conduct towing.
- (14) Conduct damage control onboard.
- (15) Conduct coastal surveillance / intelligence collection.
- (16) Conduct combat team insertion / extraction.
- (17) Conduct combat team embarkation / disembarkation.

A NATO Maritime SOTU operating surface watercraft operations should have the following desired capabilities:

- (1) Conduct special boat unit support SDV sled tow.
- (2) Conduct boat hoisting and lowering.
- (3) Conduct operational deception.
- (4) Conduct surface contacts radar and visual identification.

- (5) Conduct alongside debarkation / embarkation of troops / equipment from ship underway.
- (6) Support non-combatant evacuation operation (NEO).
- (7) Conduct surface boat hydrographic survey.

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Annex E – List of Acronyms

AAR	Air-air refuelling
AO	Area of operation
ATV	All terrain vehicle
ACARPS	Automatic computed air release point systems
BATT	British Army Training Teams
BDA	Bomb damage assessment
BLoS	Beyond line of sight
C2	Command and control
C4I	Command, control, communications, computers and intelligence
CANSOFCOM	Canadian Special Operations Command
CASEVAC	Casualty evacuation
CAT	Civilian Action Teams
CBRN	Chemical, biological, radiological and nuclear
CI	Counterintelligence
CIS	Communications and information systems
CJFSOCC	Combined Joint Force Special Operations Component Command
CJIRU	Canadian Joint Incident Response Unit
CJTF	Combined Joint Task Force
COIN	Counterinsurgency
COMMINT	Communications intelligence
CPG	Comprehensive Political Guidance (NATO)
CRRC	Combat rubber raiding craft
CS	Combat support
CSS	Combat service support
CT	Counter-terrorism
DJTF	Deployable joint task force
ELINT	Electronic Signals Intelligence
EOD	Explosive ordnance disposal
FLOT	Forward line of troops
FREMM	European Multi-Mission Frigates
GPS	Global positioning system
HAHO	High altitude high opening
HALO	High altitude low opening
HNS	Host nation support
HUMINT	Human intelligence
IED	Improvised explosive devices
IFR	Instrument flight rules
IMINT	Imagery intelligence
INS	Inertial navigation systems
IR	Infrared

IRCM/ECM	Infrared/electronic countermeasures
ISR	Intelligence, surveillance and reconnaissance
JISR	Joint intelligence, surveillance and reconnaissance
JSOA	Joint special operations area
LN	Lead nation
LoS	Line of sight
MA	Military assistance
MSO	Maritime special operations
NA5CROs	Non-Article 5 Crisis Response Operations
NATO	North Atlantic Treaty Organisation
NEO	Non-combatant Evacuation Operation
NIIRS	National Imagery Interpretability Rating Scale
NRF	NATO Response Force
NSCC	NATO Special Operations Coordination Centre
NSTI	NATO SOF Transformation Initiative
NVG	Night vision goggle
OPCON	Operational control
OTH	Over-the-horizon
PR	Personnel recovery
PSYOPS	Psychological operations
PWE	Political Warfare Executive (United Kingdom)
RF	Radio frequency
SAS	Special Air Service
SDVs	Subsurface delivery vehicles
SF	Special Forces
SFSG	Special Forces Support Group (United Kingdom)
SIGINT	Signal intelligence
SOCAUST	Special Operations Commander Australia
SOCCE	Special Operations Command and Control Element
SOE	Special Operations Executive
SOF	Special Operations Forces
SOLE	Special Operations Liaison Element
SOPLE	Special Operations Planning and Liaison Element
SOTG	Special Operations Task Group
SOTU	Special Operations Task Unit
STOL	Short take-off and landing
TCN	Troop contributing nation
UAVs	Unmanned aerial vehicles
VBSS	Visit, board, search, and seizure