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# DEFENSE ANALYSIS CAPSTONE PROJECT REPORT

**MITIGATING THE SHORTAGE OF SPECIAL OPERATIONS AVIATION BY AN UNCONVENTIONAL APPROACH**

by

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The quantitative shortage of special operations aviation within NATO has resulted in canceled special operations in Afghanistan, targets not being actioned, and Danish Special Operations Forces (SOF) being deployed to Mali without dedicated aviation, despite the Danish SOF's request for Danish helicopters. The majority of the European NATO members primarily focus air power on fighters and only secondarily on air mobility. If unaddressed, this shortage of aircraft and crews to conduct special air operations will continue.

Inspired by the NATO special operations doctrine, the U.S. combat aviation advisors' training of the Afghan Special Mission Wing, and the U.S. use of contracted air in Uganda, this capstone explores alternatives to mitigate the shortage of special operations aviation. This capstone recommends establishing combat aviation advisors within the Danish Air Force and increasing the use of contracted air. In addition to training host-nation air units, the combat aviation advisors can facilitate interactions and integration when using contracted air. This capstone argues that "special" is not necessarily the same as elite and that "special" does not always require high-end aircraft to carry out special air operations. Furthermore, this approach demonstrates why "humans are more important than hardware."

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# MITIGATING THE SHORTAGE OF SPECIAL OPERATIONS AVIATION BY AN UNCONVENTIONAL APPROACH

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Submitted in partial fulfillment of the
requirements for the degree of

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# ABSTRACT

The quantitative shortage of special operations aviation within NATO has resulted in canceled special operations in Afghanistan, targets not being actioned, and Danish Special Operations Forces (SOF) being deployed to Mali without dedicated aviation, despite the Danish SOF's request for Danish helicopters. The majority of the European NATO members primarily focus air power on fighters and only secondarily on air mobility. If unaddressed, this shortage of aircraft and crews to conduct special air operations will continue.

Inspired by the NATO special operations doctrine, the U.S. combat aviation advisors' training of the Afghan Special Mission Wing, and the U.S. use of contracted air in Uganda, this capstone explores alternatives to mitigate the shortage of special operations aviation. This capstone recommends establishing combat aviation advisors within the Danish Air Force and increasing the use of contracted air. In addition to training host-nation air units, the combat aviation advisors can facilitate interactions and integration when using contracted air. This capstone argues that "special" is not necessarily the same as elite and that "special" does not always require high-end aircraft to carry out special air operations. Furthermore, this approach demonstrates why "humans are more important than hardware."

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# LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| AJP | Allied Joined Publication |
| AvFID | Aviation Foreign Internal Defense |
| CAA | Combat Aviation Advisor |
| DA | Direct Action |
| DOTMLPF-I | Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities, Interoperability |
| FARP | forward arming and refueling point |
| FID | Foreign Internal Defense |
| ISR | Intelligence, Surveillance, and Reconnaissance |
| MA | Military Assistance |
| NATO | North Atlantic Treaty Organization |
| SMW | (Afghan) Special Mission Wing |
| SOATG | Special Operations Air Task Group |
| SOF | Special Operations Forces |
| SR | Special Reconnaissance |

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# EXECUTIVE SUMMARY

Only a few North Atlantic Treaty Organization (NATO) member states have dedicated special operations aviation, and because the most NATO members focus their air power on air superiority rather than air mobility capabilities, the treaty organization suffers a shortage of aircraft and crews capable of conducting special air operations.

This quantitative shortage of special operations aviation within NATO has resulted in cancelled special operations in Afghanistan, targets not being actioned, and Danish Special Operation Forces (SOF) being deployed to Mali, for example, without dedicated aviation, despite requesting Danish helicopters. If unaddressed, this shortage will continue to degrade the overall effectiveness, security, and strategic reach of Special Forces.

If the Royal Danish Air Force is to be seen as an integrated part of Special Operations both within the Danish Special Operations Command, the SOF units, and especially within the Air Force itself a comprehensive and joint approach is needed. In the Danish Air Force, it is particularly important not to focus solely on extremely expensive units and technology, but to embrace the Special Operations Force truth: "Humans are more important than hardware." It is important to acknowledge that what characterizes a mission or operation as "special" does not always come down to whether the Air Force uses highly specialized and extremely expensive aircraft. Throughout history, airmen have conducted special operations in conventional aircraft and thereby proved that it is not merely a matter of high-end technology or a question of the size of the military budget. Neither is it simply a parochial debate about more flight hours, better electro-optical sensors, and better performing aircraft. Instead, it is a change of mindset that is required to understand how to create the special, or unexpected, and how to complete the task with limited resources and capabilities.

For the Danish Air Force to cover all aspects of the special operations continuum and special operations doctrine effectively, it needs an increased focus on Military Assistance. The successful U.S. establishment of the Afghan Special Mission Wing, for

example, is most likely too big and too expensive an operation for Denmark to carry out alone. Nevertheless, Denmark will be able to participate in similar operations, such as those led by the U.S. 6th SOS (6th Special Operations Squadron) or their counterparts, thereby contributing to mitigate the shortage of special operation aviation.

In addition, the Danish Air Force needs to further exploit unconventional means of transportation as mentioned in Allied Joint Publication 3.5 (AJP-3.5). One approach is the use of contracted air either alone or in support of other assets. While combat aviation advisors' focus is on military aircrews, their skills are also beneficial when using contracted air in a more innovative approach.

To enable the reader to envision the unused potential within the Danish Air Force and how this potential might be applied innovatively, our research includes several vignettes. They portray a Danish hostage rescue operation in Somalia; a Danish special operation in a low-intensity environment in an African country in support of the Danish Ministry of Foreign Affairs; and a Danish Air Force train, advise, and assist special operation in Bolivia. With a change of mindset and more focused training, Danish combat aviation advisors will be able to carry out Military Assistance to non-special operation aviation units or contracted aviation in order to heighten the quality of these capabilities to a degree, making them useful in Danish Special Operations.

The establishment of Danish combat aviation advisors will not only mitigate the shortage of special operations aviation and increase the Danish Defence special operations potential, but also increase Denmark's strategic reach.

# ACKNOWLEDGMENTS

Numerous individuals at Naval Postgraduate School were involved in this capstone. Both our professors and our classmates have contributed with valuable knowledge, ideas, and feedback. Our sincere appreciation goes to the dean of Graduate School of Operational and Information Sciences, Dr. Gordon McCormick; the chair of the Defense Analysis Department, Dr. John Arquilla; the SOF chair at the Defense Analysis Department, Colonel Michael Richardson; and specifically, our advisors, Professor Kalev Sepp and Professor Brian Greenshields. You have provided invaluable contributions not only to our capstone, but also to our understanding of the dilemmas and challenges facing air power and special operations.

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We also would like to thank the external help we have received from Dr. Richard D. Newton from Joint Special Operations University at Hurlburt; Lieutenant Colonel Matteo Nasi from NATO Special Operations Head Quarters in Belgium; Brian Dougherty from RAND Corporation; Eivind Johansen from the Royal Norwegian Air Force; and Anne Teppel and Peter Beck Rasmussen, legal advisors in the Danish Special Operations Command and Royal Danish Air Force.

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# I. INTRODUCTION

> During 2008 and 2009 in Afghanistan, NATO SOF missions were often unable to be executed due to a lack of aviation support. Simply a lack of airframes made it impossible to action targets. [1]
>
> — Major Steven Ayre and Major Jeremy Hough,
> Naval Postgraduate School

A shortage of special operations aviation within the North Atlantic Treaty Organization (NATO) sharply limits the full potential of NATO Special Forces. Dedicated special operations aviation is a rare commodity in European countries, and as Major Andrew M. Jett notes in his 2012 Naval Postgraduate School thesis: "Twenty-six of the twenty-eight NATO member nations have a SOF capability, but only six have a special operations aviation capability."[2] The majority of these six nations focus on creating elite special operations aviation units. This focus does not mitigate the quantitative shortage of special operations aviation. The United States, by contrast, uses military assistance and contract air to mitigate the shortage of special operations aircraft and aircrews. This study examines whether this approach to mitigate the shortage is feasible for the smaller European air forces.

## A. RESEARCH QUESTION

Can a small nation's air force use an unconventional approach to increase its capacity to support and conduct special operations?

This capstone examines how a small nation's air force can improve its special operations aviation capability. Specifically, this study examines how can Air Military

[1] Steven Ayre and Jeremy Hough, *The NATO Special Operations Headquarters Air Warfare Center: A Smart Defense Approach*, ed. Arthur D. Davis and Keenan D. Yoho, NPS-DA-12-001 (Monterey, California: Naval Postgraduate School, 2012), 5.

[2] Andrew M. Jett, "Out of The Blue: NATO SOF Air Wing" (master's thesis, Naval Postgraduate School, 2012), 3.

Assistance and unconventional means, such as third-party air assets, be utilized by smaller nations in NATO's special operations.

## B. RESEARCH DESIGN

This chapter describes the methodology, target audience, and the aim of this study. Finally, it provides a brief outline of the capstone.

### 1. Methodology

This capstone uses the Inverted Pyramid approach to first, contextualize the problem and its consequences; then secondly, to conceptualize the problem in order to understand, analyze, and develop possible solutions.[3] The conclusion assesses the degree to which the solutions are feasible for the Royal Danish Air Force. The approach is described in Figure 1.

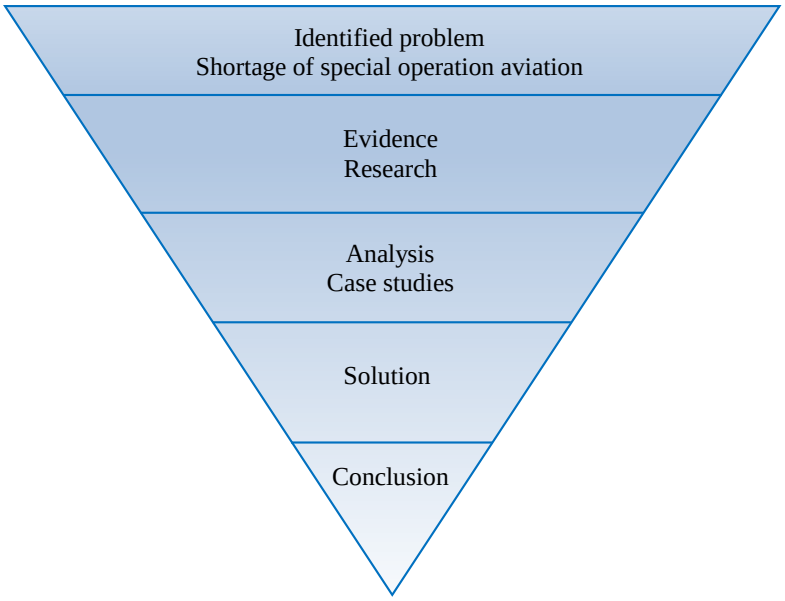


Figure 1. The Inverted Pyramid Approach[4]

[3] Patrick A. Regoniel, "How to Write a Good Thesis Introduction: From General to Specific," SimplyEducate.Me, March 7, 2014, http://simplyeducate.me/tag/college-thesis/page/2/.

[4] Adapted from Regoniel, "How to Write a Good Thesis Introduction: From General to Specific."

## 2. Target Audience and Capstone Aim

The target audience for this capstone is small-nation air forces. The Royal Danish Air Force is used to frame the identified problem, however, as it shares several similarities with the smaller Western European air forces. Among the themes common to smaller European nations is how to address domestic tasks versus military tasks and lack of robustness and sustainability, combined with a conventional force focus. Therefore, this capstone argues that there is a sufficient level of applicability from the Danish Air Force example/model. The use of other small nation air forces as examples primarily serves to support or challenge the arguments.

This capstone aims to spur debate on how to mitigate the shortage of special operations aviation by changing the Danish Air Force's mindset. Further debate, operational testing, and evaluation needs to be conducted prior to implementation of the recommendations. In Figure 2, the implementation of a new DOTMLPF-I (Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities, and Interoperability) approach is depicted.

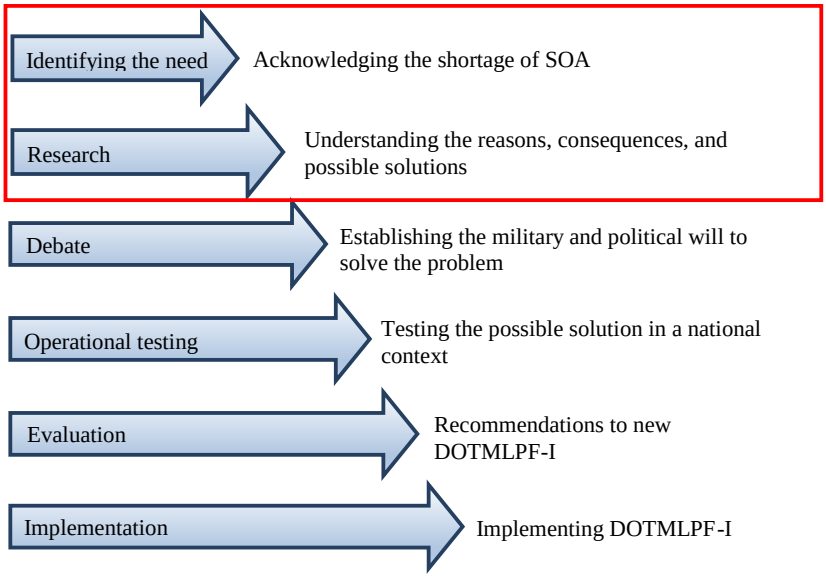


Figure 2. Implementation Process for a New DOTMLPF-I[5]

[5] Adapted from, Brandon Cholek, "OMI Demonstration with USPACOM - Ppt Download," Slideplayer.com, accessed November 15, 2017, http://slideplayer.com/slide/3861722/.

### 3. Evidence

This capstone uses U.S. and NATO research on the topic to prove the problem exists and what the consequences are. Danish research and relevant NATO doctrines establish what constitutes Danish special operations, the public perception, and the historical context. In addition, the Royal Danish Air Force is described and serves as a foundation for the analysis.

### 4. Analysis

This capstone uses two descriptive case studies on how Military Assistance and an unconventional approach are utilized in present-day operations: U.S. SOF use of a "Civilian Air Force" to conduct special operations in Uganda,[6] and Air-Military Assistance for the "Special Mission Wing" in Afghanistan. The comparison of the Danish capabilities and the two case studies employs a DOTMLPF-I (Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities, Interoperability) approach. The DOTMLPF approach was invented by the U.S. Department of Defense,[7] and an "I" for Interoperability was added when NATO adopted the approach.[8] This capstone applies the approach as follows:[9]

- Doctrine: how tasks are accomplished according to doctrines, procedures, tactics, and legal considerations.
- Organization: how forces are organized and integrated to accomplish the tasks during the mission and when not deployed.

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[6] David Axe, "'Blackwater Air' Is Back, and Flying for U.S. Special Forces," The Daily Beast, February 13, 2017, http://www.thedailybeast.com/articles/2017/02/13/blackwater-air-is-back-and-flying-for-u-s-special-forces.html; Bill Berkowitz, "Blackwater's Erik Prince Pursuing Secret Air Force," Buzzflash, April 14, 2016, http://www.truth-out.org/buzzflash/commentary/blackwater-s-erik-prince-pursuing-secret-air-force.

[7] Joint Chiefs of Staff, *DOD Dictionary of Military and Associated Terms* (Joint Chiefs of Staff, 2017), 287, http://www.dtic.mil/doctrine/new_pubs/dictionary.pdf.

[8] "NATO Acronyms & Definitions," NATO, accessed August 10, 2017, http://www.act.nato.int/acronyms#D.

[9] The authors have adjusted the definition of each word, removed Policy, and added Interoperability to fit this capstone. Adapted from "DOTmLPF-P Change Recommendation (DCR)," Defense Acquisition University, October 31, 2017, https://www.dau.mil/acquipedia/Pages/ArticleDetails.aspx?aid=0f017b62-6273-4d58-b02c-d72c776198e8.

- Training: how forces train, exercise, and prepare in order to accomplish the tasks with the right mindset.
- Materiel: what equipment is needed to accomplish the tasks (weapons, sensors, spares, etc.) so forces can operate effectively.
- Leadership: how the leaders are educated and prepared to accomplish the tasks. Including those directly participating in the task solution, and the leadership/organization that dedicates the personnel to the tasks.
- Personnel: how to manage the availability of qualified personnel for peacetime, wartime, and various contingency operations.
- Facilities: what real property; installations and industrial facilities (government-owned ammunition production facilities) are required to accomplish the tasks.
- Interoperability: how to integrate with allied and own forces.

#### *a. Short- and Long-Term Possibilities for the Danish Air Force*

The analysis identifies the requirements for the Danish Air Force in order to enable short- and long-term Air Military Assistance and the use of third-party air assets. These findings serve as the foundation for the three vignettes testing the recommendations.

#### *b. Operationalization and Assessment*

Three vignettes operationalize and assess the previous found suggestions in scenarios where Air Military Assistance and an unconventional approach might be beneficial.

### 5. Conclusion and Critique

Since the research question is not thoroughly covered by other scholars and the use of contractors often is regarded as controversial, this capstone critiques the conclusion based on external inputs.[10]

[10] Jeremy Scahill and Cole Matthew, "Inside Erik Prince's Treacherous Drive to Build a Private Air Force," The Intercept, April 2016, https://theintercept.com/2016/04/11/blackwater-founder-erik-prince-drive-to-build-private-air-force/.

## C. CAPSTONE OUTLINE

This capstone consists of eight chapters. Chapter I describes the scope of and method employed for the research. In Chapter II, the consequences of the shortage of special operations aviation are explored along with the factors that contribute to the shortage. The chapter also considers the capabilities the Danish Air Force has to conduct and support special operations. Chapter III offers an overview of the solutions introduced by the United States to mitigate the shortage of special operations aviation. Specific case studies of two such solutions are analyzed in Chapter IV using the DOTMLPF-I model. First we analyze the U.S. Special Forces utilization of Military Assistance to the Special Mission Wing in Afghanistan, and second, the use of contracted air in Uganda. Chapter V examines what Denmark can achieve in the short- and long-term by utilizing the unconventional approach within the Air domain to conduct and support special operations. Further, the chapter considers what is required in order to achieve this.

In Chapter VI, we present three fictional vignettes. The first vignette is a hostage rescue operation in Somalia where civilian aviation assets are used to augment the Danish special operation. The second vignette takes place in an African country where members of the Ministry of Foreign Affairs of Denmark are present. The security situation deteriorates and the Danish Special Operations Command and the Danish Air Force Special Operations Air Task Group (SOATG) uses contracted helicopters combined with Danish combat aviation advisors to enable freedom of movement and increase the safety of the Danish representatives. The third vignette is an Air Military Assistance operation in Bolivia where Danish combat aviation advisors train and advice the Bolivian Air Force.

Our assessment of the degree to which the solutions are feasible for the Royal Danish Air Force is presented in Chapter VII, which also offers recommendations for implementing the solutions. Finally, Chapter VIII considers possible critiques of the solutions proposed in this capstone and potential resistance to their implementation.

# II. THE SHORTAGE OF SPECIAL OPERATIONS AVIATION

This chapter examines why the experienced shortage of aircraft and crews capable of conducting special air operations, most likely, will be aggravated in the future. The authors argue that, despite an increase in demand for air mobility, the majority of the NATO member states continue to focus on air superiority. Furthermore, the chapter will argue that the Danish SOF focus is generally on being elite rather than "being special," and analyze the Danish air capabilities in a NATO SOF doctrinal context.

## A. INCREASED SPECIAL OPERATIONS FOCUS

Special Operations Forces have enjoyed a renewed political focus since 9/11.[11] Especially in the smaller Western European nations, deployments of SOF have increased in recent years. In Scandinavian countries such as Denmark, Norway, and Sweden, this has resulted in the establishment of Special Operations Commands and a Special Operations Air Task Group within the Royal Danish Air Force. One of the reasons for the popularity of SOF is that they enable smaller countries to have a strategic military reach without challenges in regards to large deployments of troops, logistical issues, or military footprint that often follow conventional operations and make them costly, both financially and politically.[12]

With increased strategic attractiveness, SOF units have been deployed increasingly further away from their homeland and often with limited embedded mobility support. In a majority of missions, SOF units have to rely on allied or host nations' air mobility assets. In fact, for SOF units to effectively cover a large area and to have strategic outreach, air mobility is often essential. Air mobility shortens transportation time and thereby enables maritime or land task units to be present in a large area that would otherwise need an increased number of soldiers. In addition, air mobility enhances

[11] Jett, "Out of the Blue," 3.

[12] Lars H. Ehrensvärd Jensen, *Special Operations - the Central Role of Air Capabilities* (Copenhagen, Denmark: Institute for Strategy, Royal Danish Defence College, 2014), 6–7, https://pure.fak.dk/ws/files/5944816/Special_Operations_the_Central_Role_of_Air_Capabilities.pdf.

the ability to solve trigger-based operations or other short notice missions. Moreover, air mobility avoids threats from improvised explosive devices, underdeveloped infrastructure, rough terrain, and so forth. Aviation assets can also serve as vital parts in Command and Control (C2) and Intelligence, Surveillance, Targeting, Acquisition, and Reconnaissance (ISTAR) before, during, and after a special operation. Furthermore, the fire support delivered from aviation assets (e.g., Close Air Support or Close Combat Attack), is often necessary to establish the relative superiority of the Special Forces over their opponents.

## B. THE SHORTAGE OF SPECIAL OPERATIONS AVIATION

In most special operations, the first priority is often to deploy organic aviation assets in order to benefit from a habitual relationship, trust in the level of adequate training, maintenance and logistical support.[13] However, a shortage of special operations aviation assets and platforms is more often the rule rather than the exception, even in American special operations with organic dedicated special operations aviation.[14] The American experience with a shortage of special operations aviation indicates that the problem is more than a matter of funding, since American military spending is much higher than that of the European nations.

In a study from the Naval Postgraduate School presented to the NATO Special Operations Headquarters Air Warfare Center, Steven Ayre and Jeremy Hough state that "the lack of SOA [special operations aviation] assets negatively impacted the land and maritime SOF in Afghanistan to action their targets."[15] As an example, they write:

> During 2008 and 2009 in Afghanistan, NATO SOF missions were often unable to be executed due to a lack of aviation support. Simply a lack of airframes made it impossible to action targets. In some instances, promised and planned lift assets were shifted to another NATO SOF or conventional unit based on commander's priorities. In other situations, the

[13] Richard D. Newton, personal e-mail correspondence with the authors, September 2017.

[14] Ayre and Hough, *Why NATO Needs Special Operations Aviation*, 2–10.

[15] Ayre and Hough, 5.

> aviation unit was unable to provide anticipated lift due to unforeseen late-emerging requirements of their own, which took precedence.[16]

In the study Ayre and Hough explain that both special operations aviation and conventional air mobility is lacking throughout NATO. This shortage is severely limiting the effectiveness of SOF in missions such as in Afghanistan. These findings are supported by Andrew M. Jett's Naval Postgraduate School thesis from 2012, in which he states:

> A shortfall exists in the North Atlantic Treaty Organization's special operations forces aviation support that has potential to be detrimental to mission success. In particular, the requirements of NATO SOF's three principal tasks—direct action, special reconnaissance and surveillance, and military assistance—are not being fulfilled.[17]

The described shortage of special operations aviation is therefore not only limiting the strategic and tactical reach of SOF but adversely affecting the chances of mission success and contributes to missed opportunities to strike at the right place at the right time. Further, Jett quotes the 2010 biannual review from NATO SOF Headquarters: "The lack of air support significantly degrades the capability to conduct Special Operations, restricting SOF units in range, stealth, and speed…. [A] recurring loss of critical assets and subsequent mission cancelation often translates to significant opportunity costs."[18]

Land and maritime SOF are continuously being deployed and due to the lack of special operations aviation, they are often forced to find other methods to compensate for this shortage. One way to mitigate the lack is the use of non-special operations aviation in special operations, but this approach also proves challenging. As an example, Ayre and Hough write:

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[16] Ayre and Hough, 5.

[17] Jett, "Out of the Blue," 2.

[18] Jett, 3.

> Reliance on non-dedicated air support, through conventional tasking authority, is equally disadvantageous due to scarcity of resources, lack of a habitual training relationship, and unfamiliarity with the SOF mission.[19]

Although general purpose aviation sometimes can be a sufficient solution, the focus of the non-special operations aviation is to support conventional forces. For example, only Denmark's maritime SOF have been granted Danish rotary wing support to conduct their anti-piracy special operations. The main reason for this might be that the SOF operated from a Navy ship that has a maritime helicopter assigned. During the several land special operations Denmark conducted in Afghanistan and Mali, only one Danish C-130 was also deployed, but it was not dedicated to support the SOF. Although the Danish land SOF requested Danish Air Force helicopter support for their operation in Mali, this request was turned down by the Danish Defence Command.[20] As Jett states, there is a crucial need for more variety and flexibility in air mobility. One single type of fixed wing aircraft is often not sufficient to fully support the SOF, and especially in the infiltration and exfiltration phases, the need for rotary wing assets is usually of paramount importance, yet these assets are often insufficient in numbers.[21] This left the Danish SOF almost fully dependent on theater assets from other nations. As a result, their requests for air mobility were often denied by the Joint SOF Commander simply due to shortage of aircraft and crew.[22]

Based on the situation previously described, it is accurate to say a quantitative increase of both special operations aviation and non-special operations aviation seems to be needed. Yet, even if budgets are increased, it will take several years to purchase and implement new air capacities. Besides the physical assets, the organization also needs to be increased, more crews need to be hired and trained, and so forth. There is, however, no

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[19] Ayre and Hough, *Why NATO Needs Special Operations Aviation*, 4.

[20] Email correspondence between the Danish Army SOF and the Royal Danish Air Force.

[21] Jett, "Out of the Blue," 1–8.

[22] Jensen, *SO - Air Capabilities*, 4; Peter Viggo Jacobsen, "Har Danmark Råd Til Nye Krige?" [Can Denmark Afford New Wars?] *Ræson*, no. 11 (May 28, 2012): 71.

guarantee that the budget will be increased or directed towards special operations aviation or non-special operations aviation, as explained in the next section.

## C. WESTERN EUROPEAN DECLINE OF AIR MOBILITY

> It is of strategic importance for the Danish Air Force that we adjust our capabilities in order to support special operations. It is most of all a development of the capabilities, which is why the Air Force must be explorative and curious about special operations.[23]
>
> —General Max A.L.T. Nielsen,
> Chief of the Royal Danish Air Force

As stated by the chief of the Royal Danish Air Force, there is a strategic desire to further develop SOF air capabilities. This desire is not limited to Denmark but is shared among the NATO countries. Despite this strategic desire, there is an ongoing decline in air mobility and subsequent shortage of aircraft and crews capable of conducting special air operations among the Western nations.[24]

Like land and maritime SOF units, most of the smaller European nations created their air forces after the Second World War and at the onset of the Cold War. Air power proved valuable during the Second World War, and the majority of air power theorists suggested that when technology finally caught up with the inherent ability of aviation, air power would be the force of choice.[25] This theoretical focus, combined with the Cold War, led aviation to become a cornerstone of European defense since the Second World War—not in support of land or maritime units, but as an independent strategic force. The focus of most of the European air forces has been defense against an external aggressor, which has led the fighter aircraft to become the core air power tool of the air force. Thus,

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[23] Max A.L.T. Nielsen, Danish Joint Command, Air Staff, "Effektive løsninger i ansvarlig balance—Chefen for Flyverstabens rammedirektiv for flyvevåbnet [Effective Solutions in a Responsible Balance—Chief of Air Staff's framework directive for the air force], VFKDIR F.121-0." Værnfælles Forsvarskommando: Karup, September 2015, 11. Translated from Danish by the authors.

[24] Jett, "Out of the Blue," 3–4.

[25] Karl Mueller, *Air Power*, RP-1412 (Santa Monica, CA: RAND, 2010), 2–10, https://www.rand.org/pubs/reprints/RP1412.html.

most European nations focus their military aviation budgets primarily on air superiority and secondarily on air mobility, such as transport planes and helicopters. However, as mentioned earlier, the military operations in Iraq and Afghanistan showed a constant shortage of air mobility, but never any lack of fighters. This situation put the focus, albeit short-lived, on air mobility capabilities. Nevertheless, with a reemerging Russia and the politically popular expeditionary use of fighters, a renewed focus on fighters is taking place all over Western Europe. As an example, Norway, Denmark, and the Netherlands, among others, have decided to buy the American F-35 Fighter, leaving little financial freedom for increased air mobility. In the larger Western European nations, air mobility is similarly neglected. The German Army Aviation has approximately disbanded nine out of its fourteen helicopter units and removed most of its light helicopters.[26] The German Air Force decided in 2011 to purchase only forty 400M transport planes instead of the planned sixty. Further, the Air Force decided to acquire forty fewer models of the NH90 transport helicopter and forty Tiger helicopters—only half of the originally planned number.[27] Similarly, Britain is also struggling with funding for the 400M transport plane and with special operations helicopters. Philip Sabin, professor of strategic studies at King's College London, states: "Most egregious of all is the case of the eight Special Forces Chinooks, where poor decisions on software catastrophically compromised the entire procurement operation."[28] He continues: "The UK [United Kingdom] does not lack international ambition, but it does lack the ability and inclination to pay for it, especially after being so hard hit by the financial crisis."[29] On NATO's easternmost European border, Poland recently decided to scrap its deal with Airbus Industries to purchase seventy transport helicopters and instead only acquired twenty-one Black

[26] Pieter Bastiaans, "Bundeswehr Reforms - German Military Aviation Restructures," Dutch Defence Press, December 8, 2011, http://www.dutchdefencepress.com/bundeswehr-reforms-%e2%80%93-german-military-aviation-restructures/.

[27] Chris Pocock, "German Defense Cuts Force Renegotiation with EADS," Aviation International News, November 4, 2011, http://www.ainonline.com/aviation-news/defense/2011-11-04/german-defense-cuts-force-renegotiation-eads.

[28] Philip Sabin, "The Future of UK Air Power," *RUSI Journal* 154, no. 5 (October 1, 2009): 6–12, https://doi.org/10.1080/03071840903411897.

[29] Sabin.

Hawks from Lockheed Martin.[30] In France, the newly elected president Emmanuel Macron is planning to cut the military budget by 2.6 percent in 2017. Overall, there are no indications that air mobility capacities are on the rise in Western European militaries.

## D. THE LACK OF SPECIAL OPERATIONS AVIATION FOCUS

Dedicated special operations aviation is also a rare commodity in the European countries, and as Jett states: "Twenty-six of the twenty-eight NATO member nations have a SOF capability, but only six have a special operations aviation capability."[31] Those countries that have special operations aviation are often of a limited unit size. This means they lack operational robustness and often face difficulties in prolonged deployments. The non-NATO member Sweden, is experiencing the same challenges with its special operations aviation. The Swedish unit is limited by numbers of aircraft and crews weakening their ability to support prolonged deployments.[32] Instead of dedicated special operations aviation most of the smaller European countries, like Norway, the Netherlands, and Denmark have SOF capable aviation units or crews embedded within the conventional air force squadrons.[33] The shortage of dedicated special operations aviation units is not due to the lack of specially selected, trained, or designated crews. Major Lars H. Ehrensvärd Jensen from the Royal Danish Defence Institute attests:

> Danish pilots are selected based on very strict criteria and have always been among the best internationally. As a result of the strict selection, our pilots' skills are at the very top, which is precisely what is required in special operations. The Air Force already has experience with special operations-like missions. The Air Force's Hercules aircraft land in provisional landing sites in Afghanistan, drop supplies to ground troops from high altitude and are used to operating in very difficult weather in Greenland. The Air Force's helicopter pilots cooperate with The Danish National Police Action Force in highly complicated helicopter operations. The Air Force trains with the Army and Navy Special Forces on a regular basis. The Air Force can therefore designate crews as special operations

[30] Tony Cross, "Airbus, France Furious as Poland Scraps Helicopter Deal," RFI, October 11, 2016, http://en.rfi.fr/economy/20161011-airbus-france-furious-poland-scraps-helicopter-deal.

[31] Jett, "Out of the Blue," 3.

[32] Fredrik Wegersjoe, personal communication, June-August 2017.

[33] Sverre Wetteland, personal communication, June-August 2017.

> crews without dropping below the international standard – on the contrary. This is the assessment of an American expert [Richard D. Newton, Joint Special Operations University] in air special operations at the Air Force's annual Air Power Seminar in 2010.[34]

According to Jensen, the reason for the lack of dedicated special operations aviation in Denmark is that Denmark historically has had only the land and the maritime SOF units. He continues: "The historical organization of the existing Danish special operations forces is one of the reasons why the potential of the Air Force in terms of special operations is not widely acknowledged, inside or outside of the Air Force."[35] Furthermore, he argues that in the cases where the Danish Air Force is conducting special operations, it is often seen, by both the SOF units and the air force itself, as only a supporting role.[36] This combination of factors often puts the decision makers in a dilemma; either support the land or maritime SOF or conduct the conventional tasks. As already mentioned, this often results in land or maritime SOF units being deployed without national aviation support.

### 1. Explaining Current Danish Perception of SOF

What Danish special operations and SOF are today is among other things a product of the doctrine, the history, the public and political perception, and the recent academic research. In the following, this study looks at those individual factors to examine whether the focus is on being elite or special. In this context, "elite" means fundamentally similar to the conventional forces just optimized through better training, selection, and equipment. Conversely, "special" means solving the task using an unconventional approach that the conventional forces typically do not use. When these alternatives and highly creative solutions are chosen, the use of task solving through an "unconventional mindset" applies, as described in AJP-3.5.[37]

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[34] Jensen, *SO - Air Capabilities*, 11.

[35] Jensen, 4.

[36] Jensen, 4–5.

[37] *Allied Joint Doctrine for Special Operations*, AJP-3.5 (Mons, Belgium: NATO Special Operations Headquarters, 2013), 1–1.

### 2. Doctrine

Within NATO SOF, there are three principal tasks: Military Assistance (also referred to as MA), Special Reconnaissance (or SR), and Direct Action (or DA).[38] All though the order of the principal tasks is not stated to indicate a priority, the order has been changed in the recent version from mentioning Military Assistance last to mentioning it first.[39] The next sections briefly explain the three principal tasks followed by a specific look at air special operations.

#### *a. Military Assistance*

Military Assistance is a broad category of measures and activities that cover the U.S. Joint Publication 3-05 terms of Unconventional Warfare, Foreign Internal Defense, and Security Force Assistance.[40] Military Assistance consists of activities with the main focus of influence, support and capability building through training, advising, and partnering/mentoring.[41] Military Assistance consists predominantly of long-term activities, but the doctrine does not exclude short-term activities, such as providing temporary guidance, coordination, and fire support, during a single or few missions.[42] These activities can be conducted throughout the full spectrum of a conflict (peace → crisis → major combat operation → stabilization → peace) and in all threat levels, including "no threat."[43] Further, these activities can be aimed at all kinds of units—military, police, governmental and civilian units—to improve capabilities or gain influence on all levels. When Military Assistance is aimed at ground security units, the effect is often multiplied by simultaneous Air Military Assistance that can increase the

[38] NATO Standardization Agency, *AJP-3.5*, 2-1.

[39] NATO Standardization Agency, *AJP-3.5*, 2-1.

[40] Joint Chiefs of Staff, *Joint Doctrine for Special Operations*, JP 3-05, vol. 16 July 2014 (Joint Chiefs of Staff, 2014), II-8-II-11, http://www.dtic.mil/docs/citations/ADA557913; NATO Standardization Agency, *AJP-3.5*, 2-1–2-2.

[41] NATO Special Operations Headquarters, *Military Assistance Handbook*, NSHQ 80-010 (Mons, Belgium: NATO Special Operations Headquarters, 2016), 10.

[42] NATO Standardization Agency, *AJP-3.5*, 2–1; NATO Special Operations Headquarters, *Military Assistance Handbook*, 8A–7.

[43] NATO Standardization Agency, *AJP-3.5*, 1–3.

ground unit's range and effectiveness through air mobility, medical evacuation, fire support, communication, and psychological operations.

Although Military Assistance typically does not require special equipment, it may include basic equipment for the host nation forces. Nevertheless, the right human characteristics constitute the most important factor for success.[44]

### *b. Special Reconnaissance*

According to AJP-3.5, Special Reconnaissance is mainly conducted in the conflict spectrum phases of crisis, major combat operations, and stabilization.[45] It involves gathering of knowledge or providing situational awareness on threats, targets, and environment. Indigenous assets may augment Special Reconnaissance missions by providing mobility, which lowers the chances of compromise, since the indigenous assets are part of the normal pattern in the region, and therefore, often move freely around without causing suspicion.[46]

To improve secrecy, the soldiers conducting Special Reconnaissance benefit from having elite military skills and special equipment to conduct their tasks either at greater distances from or hidden closer to the target. However, Special Reconnaissance can also be successfully conducted by applying creativity through an unconventional approach.[47]

### *c. Direct Action*

Direct Action is characterized by precise offensive operations that are limited in scope and time in order to "seize, destroy, disrupt, capture, exploit, recover, or damage high value or high pay-off targets."[48] When these operations occasionally are time sensitive, they benefit from a quick and flexible insertion. Due to the limited sustainability of SOF, the planning of all operations "usually incorporates a planned

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[44] NATO Special Operations Headquarters, *Military Assistance Handbook*, 41–50.

[45] *AJP-3.5*, 1-3.

[46] NATO Special Operations Headquarters, 13.

[47] NATO Standardization Agency, *AJP-3.5*, 2-2.

[48] *AJP-3.5*, 2-3.

withdrawal [extraction] from the immediate objective area."[49] In the previously mentioned cases, air mobility provides both a fast and flexible means of transportation, although some operations benefit more from other means of transportation.[50]

During Direct Action operations, the personnel benefit from elite and special skills as well as special equipment, due to the typically high degree of tactical risk. According to AJP-3.5, Direct Action operations are mainly conducted in the conflict spectrum phases of crisis, major combat operations, and stabilization.[51]

### 3. History and Recent Tasking

The majority of small Western nations formed their SOF units during the Cold War, and Denmark was no exception. The Navy SOF were formed in 1957 and the Army SOF were formed in 1961.[52] Their main focus, in case of a war, was to conduct special reconnaissance and small strikes against enemy key nodes. These tasks were expected to be conducted by SOF in a high-risk environment behind the enemy's lines and required the soldiers to have elite skills compared to the conventional forces. In addition to elite skills, special or better equipment was used to gain a tactical advantage over the enemy. In addition to the activities during war, most SOF units were also tasked to conduct hostage rescue operations during peacetime. Such operations again required elite skills and special equipment, and were conducted at an accepted high-risk level to the special operations forces.

The Global War against Terror initiated a new era for the Danish SOF and other smaller Western nations. After a long period of only smaller assignments, in 2002, the majority of the SOF community was deployed to Afghanistan. During the first years of the war, Danish SOF were mainly tasked to conduct special reconnaissance and

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[49] *AJP-3.5*, 2-3.

[50] *AJP-3.5*, 2-3.

[51] *AJP-3.5*, 1-3.

[52] "Skibe, Fly Og Frøer Markerer 60 År Med Frømandskorpset," Danish SOCOM, June 9, 2017, https://www2.forsvaret.dk/nyheder/overige_nyheder/Pages/Skibe,flyogfrøermarkerer60årmedFrømandskorpset.aspx; Danish Defence, "Jægerkorpsets Historie," Danish Defence, accessed November 1, 2017, http://forsvaret.dk/JGK/OM%20J%C3%86GERKORPSET/HISTORIE/Pages/default.aspx.

secondarily direct action. Denmark paid nearly no attention to capacity building or other kinds of military assistance. In 2011, later than most Western nations, Denmark first started an operation in Helmand, Afghanistan, with the purpose of providing long-term military assistance. Although Danish SOF have been heavily involved in anti-piracy and other maritime and land tasks for some time, in Afghanistan they marked their first true case of long-term military assistance, and thereby fulfilled AJP-3.5 by conducting all of the three principal tasks.

### 4. Public Perception

SOF units have a high impact on their own public perception. Similarly, public perception also has a high impact on the SOF. This public perception shapes the political perception, which determines both funding and possible tasks for the SOF. In addition, the public perception affects the type of people who apply for selection to the SOF units, and thereby indirectly shapes what kind of people the SOF units will consist of and how the unit will develop. These perceptions of SOF are shaped by movies and television series, which often portray SOF as people who "kill and blow things up, and that … possess almost supernatural powers of destruction."[53] Yet, the SOF units themselves also contribute to this perception. Many units have homepages explaining the full continuum of tasks they are able to conduct, but their main contributor to the perception of SOF is the military's display of its own actions, recorded by the media and used multiple times as background video in news related to special operations. The main theme among SOF military displays has been hostage rescue operations or other action-oriented operations with lots of shooting and explosions.[54] These shows promote the myth of SOF being

[53] Lars H. Ehrensvärd Jensen, *Special Operations–Myths and Facts* (Copenhagen, Denmark: Institute for Strategy, Royal Danish Defence College, 2014), 5, https://pure.fak.dk/ws/files/5944821/Special_Operations_myths_and_facts.pdf.

[54] Anna Simons, "'Scalpel' or 'Easy Button'? Neither – And Some Further Considerations," in *Interdisciplinary Perspectives on Special Operations Forces*, ed. Gitte Højstrup Christensen (Copenhagen Denmark: Royal Danish Defence College, 2017), 177–78, http://fak.dk/publikationer/Documents/Conference%20Proceedings%20No%204%20(a)%202017%20NET.pdf; Jensen, *SOF Myths and Facts*, 5.

"commando elite soldiers" rather than being special.[55] The resulting public perception of SOF and special operations is high risk, involving very kinetic assaults that use elite skills and special equipment.

### 5. Academic Research

The Royal Danish Defence College is the main contributor within the academic domain of special operations, although the University of Copenhagen and several other Danish institutions often contribute to the debate. Since 2012, the Defense College has increased its focus on changing the misconception of SOF as "elite killers" to a more nuanced view that includes military assistance, a minimal amount of damage, and support to a whole-of-government approach.[56] Despite this positive effort, a recent study showed that Danish politicians still lack knowledge about special operations, which is a problem that the Danish Defence College and the Danish Special Operations Command will continue to address.[57]

### 6. Elite or Special?

As mention, in this context "elite" means fundamentally similar to the conventional forces just optimized through better training, selection, and equipment. Conversely, "special" means solving the task using an unconventional approach that the conventional forces typically do not use.

The public and political perception of SOF remains mainly one of "elite" units operating in medium to high threat environments, even though the doctrine and academia point to SOF being used as "special" units bridging the gap between conventional military tasks and the peace tasks of the ministry of foreign affairs. Such tasks often occur in a low to no threat environment. Consequently, whether additional special

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[55] Lars H. Ehrensvärd Jensen and Anja Dalgaard-Nielsen, "Special Operations and Danish Policymakers: Priorities and Red Lines" (Copenhagen, Denmark: Royal Danish Defence College, n.d.), 12.

[56] Jensen, *SOF Myths and Facts*.

[57] Jensen and Dalgaard-Nielsen, "Special Operations and Danish Policymakers."

operations air forces should be optimized for a high- or a low-threat scenario makes a huge difference.

The trend, then, is to encourage a better understanding of Danish SOF as being special rather than elite. In 2011, Danish SOF started conducting long-term military assistance in Afghanistan. As previously mentioned, in 2012, the Royal Danish Defence College started an information campaign toward the broader use of SOF, and the Danish Special Operations Command was established in 2015, which also promotes a broader use of SOF. A broader use of SOF will most likely lead to more use in low threat environments. Therefore, the current capabilities of the Royal Danish Air Force need to be examined to identify whether a shift toward a special/unconventional approach is feasible.

## E. DANISH AIR FORCE OPERATIONAL CONTINUUM AND SPECIAL OPERATIONS CAPABILITIES

Despite the renewed focus on special operations, the European air forces cover a broad mission spectrum with very limited means in terms of aircraft. For example, the Royal Danish Air Force has the following aircraft: thirty-three F-16, four C-130J Hercules, four CL-604 Challenger, nine MH-60R Sea Hawk maritime helicopter, fourteen EH-101 Merlin helicopter, and twelve AS550-C2 Light helicopters.[58] With these assets, the Danish Air Force is participating in missions both domestically and internationally under NATO, the United Nations, or another multinational mandate. The domestic area of operations stretches from the easternmost part of the Kingdom of Denmark, the island of Bornholm in the Baltic Sea, to the westernmost tip of Greenland, including the Faroe Islands in the Atlantic Ocean, a distance of approximately 2,500 miles. The tasks vary from search and rescue, surveillance, counterterrorism, air logistical transport, and air mobility to maintaining Danish sovereignty in the air, supporting the Danish police, and assisting various Danish civil authorities. Internationally, the Danish Air Force has participated with all its subordinate units in missions ranging from

[58] Danish Defence, "The Royal Danish Air Force," The Royal Danish Air Force, May 2016, http://www2.forsvaret.dk/eng/Organisation/AirForce/Pages/RoyalDanishAirForce.aspx.

antipiracy operations off the coast of Africa to strike missions in Libya, Syria, Iraq, and Afghanistan; as well as Baltic air policing. Helicopter and transport squadrons have conducted missions in the former Yugoslavia, in addition to Iraq, Afghanistan, and Mali. The missions have been both conventional and special operations.[59]

The challenges for the Danish military in general and the Danish Air Force in particular include the large size of the kingdom and the number of international missions, combined with budget restraints. In a 2014 study, the Royal Danish Defence College states: "These challenges include, not least, defense cutbacks of DKK 2-3 billion [15 percent], which may lead to considerable changes in the use and composition of the forces."[60] This affects the robustness of both the size of a Danish Air Force deployable contingent in terms of the number of aircraft and sustainability in a lengthy international operation. The Danish Air Force deployments for both conventional and special operations are focused on aircraft, radar, air staff, or a combination thereof. Little effort has been made to conduct Military Assistance or to operate unconventionally. So far, only the recently disbanded Combat Support Wing from the Danish Air Force has deployed Operational Mentor and Liaison Teams to Afghanistan, and currently, conventional air advisors are training and advising the conventional Afghan air force. Furthermore, as mentioned, the Danish Special Operations Command is often forced to deploy its subordinate units without dedicated aviation in their missions. Like the other Scandinavian countries, Denmark has established a national Special Operations Command, which suggests a national willingness to enhance and conduct special operations. Denmark has also established a SOATG subordinate to the Royal Danish Air Force Expeditionary Air Staff, which further argues that the motivation for special operations is present.[61]

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[59] Danish Defence.

[60] Jensen, *SO - Air Capabilities*, 3.

[61] Lars H. Ehrensvärd Jensen, "Danish Special Operations. Comprehensive Reorganization and Innovation Are Necessary" (Copenhagen, Denmark: Institute for Strategy, Royal Danish Defence College, 2014), 2–10.

### 1. Royal Danish Air Force SOATG Capabilities

When focusing specifically on air operations, AJP-3.5 distinguishes between air operations conducted by special operations air forces and other air missions in direct support of special operations forces.[62] "Special operations air forces [both] conduct and support each of the SOF principal tasks [Military Assistance, Special Reconnaissance, and Direct Action]."[63]

> In MA [Military Assistance], their primary mission is to build friendly nation air capabilities by employing air advisors. In SR [Special Reconnaissance], their primary mission is conducting intelligence, surveillance, and reconnaissance using aerial platforms. The primary mission for DA [Direct Action] is providing enhanced air transport to land and maritime SOF, but may also provide specialized ground attack air platforms not available in the conventional forces. Special air operations, like land and maritime special operations, are not defined only by the equipment utilized, but rather by the unconventional and innovative ways that aircrews employ whatever they have at their disposal.[64]

According to AJP-3.5, non-qualified SOF air units "augment the airlift, fire support, and JISR [Joint Intelligence, Surveillance and Reconnaissance] capabilities,"[65] and are "an important additional capability that helps the NATO SOF commander address the range of threats, environments, and requirements."[66] AJP-3.5 does not describe the role or tasks of conventional air units specifically trained to conduct and support special operations, and whether these are tasked as SOF air or other units. However, since the Danish Defence has assigned some of the Danish helicopters as SOF assets within NATO's reaction forces, this study considers the units trained for special operations as "special operations air forces" and compares the total air capability to the guidelines for special operations task groups within AJP-3.5.

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[62] NATO Standardization Agency, *AJP-3.5*, 2-6.

[63] *AJP-3.5*, 2-5.

[64] *AJP-3.5*, 2-5.

[65] *AJP-3.5*, 2-6.

[66] *AJP-3.5*, 2-6.

In annex A, AJP-3.5 provides guidelines on balanced Special Operations Task Group (SOTG) capability levels for air, land, or maritime units ranging from level 1, as the basic level, to level 3, as the most capable level.[67] Within these levels, the doctrine specifies in broad terms the recommended capabilities within Special Reconnaissance, Direct Action, and Military Assistance. The Danish Defence is capable of establishing both a level 3 land and a level 3 maritime task group. In the following paragraphs, this capstone examines the Danish SOATG capabilities within the three levels.[68]

### *a. Level 1*

In Figure 3, the SOATG capability requirements to reach level 1 in Special Reconnaissance, Direct Action, and Military Assistance are described.

| SPECIAL OPERATIONS AIR TASK GROUP (SOATG) | |
|---|---|
| **LEVEL 1** | **General:** Capable of providing C2 [Command and Control] to plan, coordinate, support, and direct the activities of multiple SOATUs [Special Operations Air Task Units] with differing capabilities and integrate them into theater air, land, and maritime operations.<br>**SR [Special Reconnaissance]:** Capable of covert infiltration/resupply/exfiltration of SOF, through habitual working relationships, to austere/unprepared locations in militarily and politically sensitive environments, using low prominence techniques.<br>**DA [Direct Action]:** Capable of infiltration and exfiltration of SOF, through habitual working relationships, to austere/unprepared/opposed locations/vessels in militarily and politically sensitive environments, using low prominence techniques.<br>**MA [Military Assistance]:** Capable of providing the full range of DA and SR Aviation operations, through habitual working relationships, in support of other SOF units providing MA to indigenous host nation security forces. |

Figure 3. SOATG Level 1 AJP-3.5 Definition[69]

**General:** With the existing SOATG, Denmark has the capabilities to reach level 1. Biannually, the SOATG is being tested in the international special operations exercise "Night Hawk" hosted by Denmark. Here several special operation air task units, both

[67] *AJP-3.5*, Annex A.

[68] *AJP-3.5*, A-5–A-6.

[69] *AJP-3.5*, A-5–A-6.

fixed wing and rotary wing, are being coordinated and supported by the Danish SOATG combined with integration of air, maritime, and land operations.

**Special Reconnaissance:** The habitual relationship among land, maritime, and aviation units is prioritized and part of the units' annual training matrix. The Danish Air Force squadrons are all training together with the land and maritime units to support Special Reconnaissance. All Danish Air Force squadrons from fixed wings to rotary wings are qualified to fly using night vision goggles, flying according to instrument flight rules as well as flying and operating in mountainous terrain. The transport planes are qualified to land on poorly prepared short runways and beaches and are able to infiltrate land SOF by either high-altitude-high-opening or high-altitude-low-opening parachuting. Furthermore, all helicopter types can operate from the Danish Navy ships.

**Direct Action:** The habitual relationship between land, maritime, and aviation units is prioritized and part of the units' annual training matrix. The Danish Air Force squadrons are all training together with the land and maritime units to conduct Direct Action. All Danish Air Force squadrons from fixed wings to rotary wings are qualified to fly using night vision goggles, flying according to instrument flight rules as well as flying and operating in mountainous terrain. Furthermore, all helicopter types can operate from the navy ships. The SOF-capable helicopter air crews are qualified in techniques such as Fast Rope, abseiling, and land-on insertion.

**Military Assistance:** The Danish Air Force SOATG has a flexible mindset and is capable of supporting other units' Military Assistance operations with minimal operational friction.

### *b. Level 2*

In Figure 4, the SOATG capability requirements to reach level 2 in Special Reconnaissance, Direct Action, and Military Assistance are described.

| | |
|---|---|
| **LEVEL 2** | **General:** As a prerequisite to reach level 2, the minimum capabilities of level 1 have to be accomplished.<br>Capable of providing Liaison Officers for CJFACC [Combined Joint Forces Air Component Command].<br>**SR [Special Reconnaissance]:** Capable of utilizing airborne ISR [Intelligence, Surveillance, and Reconnaissance] assets in aviation platforms not dedicated to ISR.<br>**DA [Direct Action]:** Capable of providing limited fire support to SOF from airborne platforms. This may include airborne sniper operations or small caliber weapons up to .50 cal.<br>**MA [Military Assistance]:** Capable of providing specialized SOF Aviation MA to friendly/partnered aviation assets in both flying and activities in support of flying operations. |

Figure 4. SOATG Level 2 AJP-3.5 Definition[70]

**General:** The Danish SOATG is capable of providing Liaison Officers for a Combined Joint Forces Air Component Command (CJFACC).

**Special Reconnaissance:** The SOATG is capable of utilizing nontraditional ISR platforms. The Danish Air Force has sensors on all three helicopter types, the F-16s and the CL-604 Challengers. All platforms have downlink capabilities to the SOATG. On a weekly basis, several of the nontraditional ISR platforms are inserted to support the Danish police in domestic operations, and also used in international operations and on exercises.

**Direct Action:** All the SOF-capable helicopter crews are qualified to conduct close combat attack with snipers or door-gunners with up to and including caliber .50.

**Military Assistance:** The Danish Air Force SOATG, together with the squadrons, is to a degree capable of conducting Air Military Assistance. However, this is not utilized in the Danish Air Force. The various Danish Air Force squadrons are often participating

[70] *AJP-3.5*, A-5–A-6.

in international exercises where they teach and support other NATO air forces how to employ their assets more effectively. In the NATO exercise Real Thaw in Portugal, Danish helicopter squadrons are assisting their Portuguese counterparts in conducting special air operations, and in the SOF exercise Night Hawk, other NATO air units are embedded into Danish special operation air task units. However, it is not regarded or operationalized within the Danish Air Force as Air Military Assistance. The focus is most often on the air crews and not on logistical and maintenance aspects.

The Danish Air Force SOATG needs to enable and strengthen this capability in order to reach level 2.

### *c. Level 3*

In Figure 5, the SOATG capability requirements to reach level 3 in Special Reconnaissance, Direct Action, and Military Assistance are described.

| | |
|---|---|
| **LEVEL 3** | **General:** As a prerequisite to reach level 3, the minimum capabilities of level 2 have to be accomplished.<br>Capable of acting as core of CJSOAC [Combined Joined Special Operations Air Component] in addition to level 1 and 2 capabilities.<br>**SR [Special Reconnaissance]:** Capable of having dedicated ISR [Intelligence, Surveillance, and Reconnaissance] platforms for SOF with ground controllers with habitual relationships with other Special Operations Ground/Air/Maritime forces.<br>**DA [Direct Action]:** Capable of providing full spectrum fire support to SOF. This includes all stages of Find, Fix, Finish with weapon systems exceeding .50 cal.<br>**MA [Military Assistance]:** Capable of having dedicated MA airmen with foreign language skills, capable of providing SOF Aviation MA to friendly/partnered aviation assets in both flying and activities in support of flying operations. |

Figure 5. SOATG Level 3 AJP-3.5 Definition[71]

**General:** The Danish SOATG is capable but has not operationalized the ability to conduct Air Military Assistance.

**Special Reconnaissance:** The Danish Air Force SOATG does not have dedicated ISR.

[71] *AJP-3.5*, A-5–A-6.

**Direct Action:** The Danish Air Force does not have dedicated special aviation fire support.

**Military Assistance:** The Danish Air Force does not have SOF-dedicated air men with foreign language skills to conduct Air Military Assistance to friendly/partnered nations.

It is evident that, within the Danish military, there is an imbalance in SOF focus within the land, maritime, and air domains. Where the land and maritime special operations task groups are capable of reaching a level 3, the SOATG is currently only able to reach an overall level 1, as depicted in Figure 6.

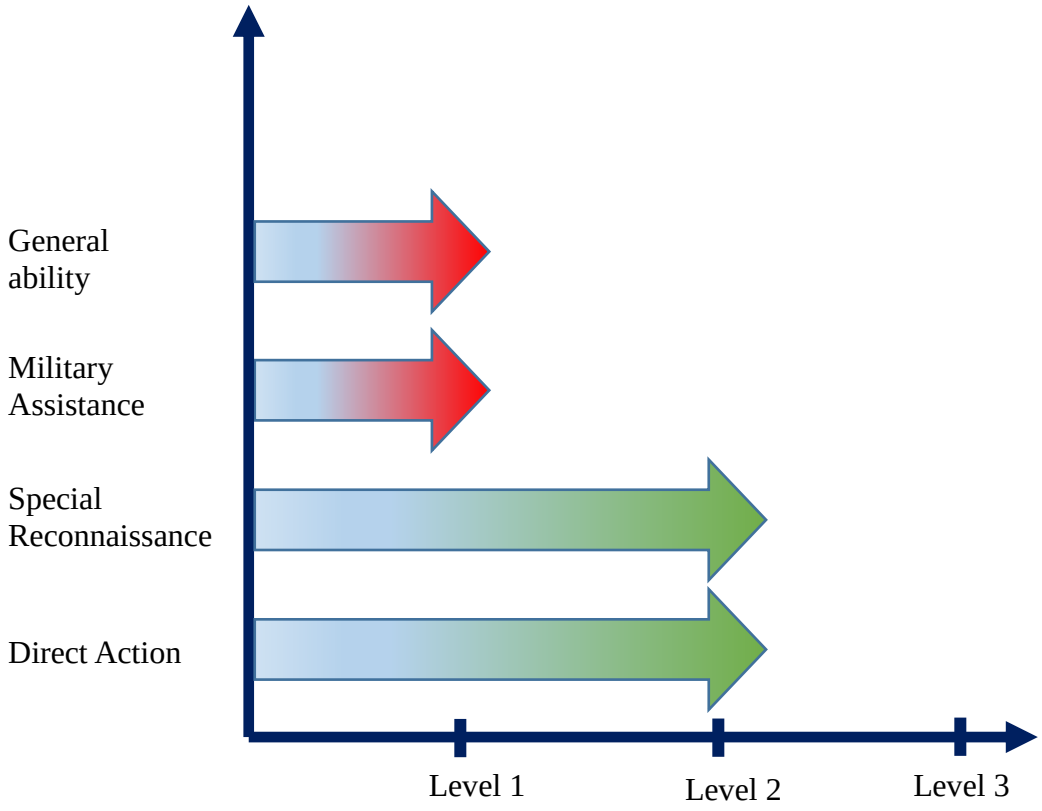


Figure 6. Danish SOATG Levels as per AJP-3.5

The elite focus has enabled the Danish Air Force to reach SOATG level 2 within Special Reconnaissance and Direct Action, but it is falling short on Military Assistance. This shortfall illustrates why the further development of a "special mindset" and capabilities is needed. The SOATG has the potential to reach level 2 in general ability,

but in order to do so, Military Assistance has to be operationalized in the organization and focused training must be provided. With the current prioritization, it does not seem a realistically achievable goal to reach SOATG level 3 on all parameters in the near future. On the other hand, a focus on reaching an overall level 2 for the Danish SOATG, by strengthening the Military Assistance effort, will achieve balance in the Danish Air Force air SOF capabilities.

# III. CURRENT SOLUTIONS TO MITIGATE THE SHORTAGE OF SOA

Within the smaller Western nations, long-term Military Assistance has gotten a steady and increased focus since the campaign in Afghanistan started in 2001.[72] Yet, as previously described, the air domain has not yet fully enjoyed the same Military Assistance focus. In addition, there has been little emphasis on short-term Military Assistance, where indigenous or other friendly military forces are temporarily enabled to conduct critical missions. The NATO Special Operations Headquarters Air Warfare Center argues that by conducting Air Military Assistance, the following can be achieved to improve non-dedicated aviation elements' support to Special Operations:

- "Conduct local or regional assessments of foreign aviation forces' capabilities to employ and sustain aviation resources.
- Working through the special operations liaison element (SOLE), CAAs [Combat Air Advisors] make recommendations to the JFACC [Joint Forces Air Component Command] regarding capability of foreign aviation units to support combined air operations plan objectives.
- Promote safety and interoperability between U.S. forces and coalition partners.
- Act as an air and space power force multiplier by developing and executing tailored training programs to increase the tactical effectiveness of HN [host nation] aviation resources in support of the combatant commander's objectives.
- Provide assistance to aviation forces in direct participation of FID [Foreign Internal Defense], CS [Counterinsurgency], UW [Unconventional Warfare], humanitarian relief/assistance, and disaster relief."[73]

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[72] Austin Long et al., *Building Special Operations Partnerships in Afghanistan and Beyond*, RR-713 (Santa Monica, CA: RAND 2015), 1–25, http://www.rand.org/pubs/research_reports/RR713.html; Eivind Johansen, "'Smart Defence Concept' - Why Norway Should Adopt Military Assistance as a Mission for the Royal Norwegian Air Force" (Montgomery, AL: Air Command and Staff College Air University, 2015), 9–11.

[73] Ayre and Hough, *Why NATO Needs Special Operations Aviation*, 6–8.

These tasks all support the overall mission goal, but the authors do not analyze what the effects these tasks will have on a short-term basis and how the Military Assistance/Foreign Internal Defense can improve the support to their own special operations.

Major Eivind Johansen concluded in 2015 that the Royal Norwegian Air Force would benefit from adopting the ability to conduct Air Military Assistance in a SOF context.[74] Johansen has argued that the NATO Defense and Related Security Capacity Building Initiative aims to "project stability without deploying large combat forces."[75] As mentioned earlier, prolonged deployments of large, highly specialized aviation units are difficult to sustain for small nations' air forces. This NATO initiative is a change in operational focus from a more kinetic, Direct Action approach to a Military Assistance and unconventionally focused approach. As Johansen writes, the initiative "builds upon NATO's extensive expertise in supporting, advising and assisting nations with defense and related security capacity building."[76] Neither Johansen nor the "Smart Defense Approach" analyzes the possibilities of conducting short-term Military Assistance and neither of them examines the possibility of using other external means to accomplish own special operations.

As per AJP-3.5, short-term Military Assistance solutions can temporarily enable a friendly actor to achieve its goal through *combined operations*; however, the main focus in AJP-3.5 is still on long-term solutions or capacity building by *training, advising, mentoring, and partnering*. The NATO Special Operations Headquarters' *Military Assistance Handbook* and the *SOF Air Military Assistance Handbook Addendum* focus almost exclusively on long-term solutions.[77]

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[74] Johansen, "Why Norway Should Adopt Air Military Assistance," 1–3.

[75] Johansen, 1.

[76] Johansen, 1.

[77] NATO Special Operations Headquarters, *Military Assistance Handbook*; NATO Special Operations School, *SOF Air Military Assistance - Handbook Addendum* (Mons, Belgium: NATO Special Operations Headquarters, September 2016).

There are several successful examples of long-term Military Assistance. Notably, the training of Mujahedeen to counter the Russian invasion of Afghanistan reveals not only the potential to defeat a superpower with limited means, but also highlights the paradox about training and equipping an actor who potentially can become a future adversary. The recent capacity building in Afghanistan is also criticized for educating Taliban insiders within the Afghan security forces.[78] Overall, the outcome of long-term Military Assistance is sometimes difficult to predict, which underlines the importance of examining the short-term Military Assistance possibilities.

One example of successful short-term military assistance is how the United States supported the Northern alliance to initially defeat the Taliban government troops in Afghanistan. Although the Northern alliance later had difficulties with the subsequent insurgency, this case shows the effectiveness of temporarily enabling a friendly unit with intelligence and fire support to defeat its opponent. Still, long-term capacity building seems to be the trend within both the doctrines and the literature. Despite some criticism, the majority agree on the positive potential of capacity building compared to a full-scale military campaign.

## A. AIR MILITARY ASSISTANCE—A CHANGE OF MINDSET?

Despite the fact that maritime and land SOF have conducted Military Assistance for several years, it is not always easy to change the mindset from a more Direct Action/Counter Terrorism focus. In the RAND publication *Building Special Operations Partnerships in Afghanistan and Beyond. Challenges and Best Practices from Afghanistan, Iraq, and Colombia,* an interviewed SEAL states:

> In one instance, a SEAL platoon leader reported that his Provisional Monitoring Team (PMT) was purely about direct action, and, when it came time to train their Iraqi partners, they were at a disadvantage.[79]

[78] Long et al., *Building Special Operations Partnerships in Afghanistan and Beyond*, 56.

[79] Long et al., *Building Special Operations Partnerships in Afghanistan and Beyond*, 81–95.

This mentality does not arguably differ much from small nation air forces where the focus is on the technology and how to perfect the deployment and utilization of the aviation assets. But is Air Military Assistance a special operation? According to Dr. Richard Newton from the Joint Special Operations University, the critics claim Military Assistance that is not concentrated on Direct Action, Counter Terrorism, and Special Reconnaissance, but instead focused on basic Air Mobility and planning process capabilities, is not to be regarded as special operations. Newton continues:

> The SOF Airmen, just like their land and maritime counterparts must, have the ability and maturity to execute low-signature, low-footprint operations. What if there is not time to teach the indigenous airmen or their support teams (maintenance, armorers, crewmen) English or French or something else? Again, SOF airmen should have the language skills to deploy and get the assistance going until the conventional force is able to pick up the load.[80]

Air Military Assistance can serve to get the indigenous or other friendly military air forces or civilian contractors in the fight (e.g., enabling the indigenous air force to operate at night, plan and integrate more thoroughly, fly more precisely, deliver their munition more accurately in order to avoid collateral damage, and improve casualty evacuation capabilities).[81] Similar to the land and maritime SOF train the indigenous counterparts in the most basic soldiering and still define it as a special operation, so should the SOF airmen be able to conduct similar Military Assistance in the air domain.[82]

A RAND report describes the Military Assistance effort in Colombia (1998–2006) where the American focus was on all levels of the Colombian SOF units, including that of Colombian aviation: "Aviation Brigade (Brigada Aviación; BA), which was

[80] Richard D. Newton, email correspondence with the authors, February 2017.

[81] Richard D. Newton, email correspondence with the authors, February 2017; Evan Andrews, "6 Legendary Mercenary Armies," HISTORY.com, June 29, 2015, http://www.history.com/news/history-lists/6-legendary-mercenary-armies-from-history.

[82] Richard D. Newton, email correspondence with the authors, February 2017; Long et al., *Building Special Operations Partnerships in Afghanistan and Beyond*, 15–65.

tasked with providing air support to the Jungle Commandos and Colombian Armed Forces."[83]

The aviation units did not turn into elite units like the U.S. 160th Special Operations Aviation Regiment or similar, but was lifted to a level that was much higher than before and was now able to conduct operations during the hours of darkness. This was a tremendous upgrade of SOF capabilities because prior to gaining night flying capabilities the ground SOF refrained from conducting night operations.

Against this background, our capstone examines how the Danish Air Force can utilize Military Assistance and an unconventional approach as a force multiplier in a special operations context and why "SOF air men" are arguably more than the elite crews specially selected, highly trained, and often equipped better or differently than their conventional counterparts.[84]

Consequently, it is important to look for additional special operations aviation solutions in special operations, where no indigenous or allied military aviation are present. It is common to use civilian aviation for non-combat operations, but within combat operations, the use of third-party air power has barely been researched in the smaller Western nations. This suggests the need for further examination of incorporating non-special operations aviation and third-party air power to maximize the use of available aviation in order to improve the effectiveness of special operations forces.

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[83] Long et al., *Building Special Operations Partnerships in Afghanistan and Beyond,* 65–67.

[84] Richard D. Newton, *Special Operation Aviation in NATO. A Vector to the Future*, JSOU Report 06-8 (Hurlburt, Florida: Joint Special Operations University, 2006), 1–10, http://jsou.libguides.com/ld.php?content_id=2876986.

## B. THE UNCONVENTIONAL APPROACH

> Special operations are military activities conducted by specially designated, organized, trained, and equipped forces, manned with selected personnel, using **unconventional** tactics, techniques, and **modes of employment**.[85]

When AJP-3.5 uses the word unconventional, it should be understood as uncommon or the *opposite* of conventional. In this case, a *conventional* mode of employment would be using vehicles or craft typically owned by the conventional forces. On the other hand, examples of *unconventional* modes of employment could be craft/vehicles specialized or highly optimized to be stealthier, less visible, and faster or something else, depending on what provides a major advantage for a specific mission set that would otherwise be difficult to solve. Another example of an unconventional mode of employment is the use of civilian assets instead of military ones. The use of civilian assets is common in certain types of land and maritime special operations, where they provide a low profile and function as flexible solutions either alone or as add-on to military assets. Moreover, their effectiveness and flexibility are matched by their low cost. In Figure 7, the correlation between cost and capabilities is depicted.

[85] NATO Standardization Agency, *Allied Joint Doctrine for Special Operations,* AJP-3.5," 1-1.

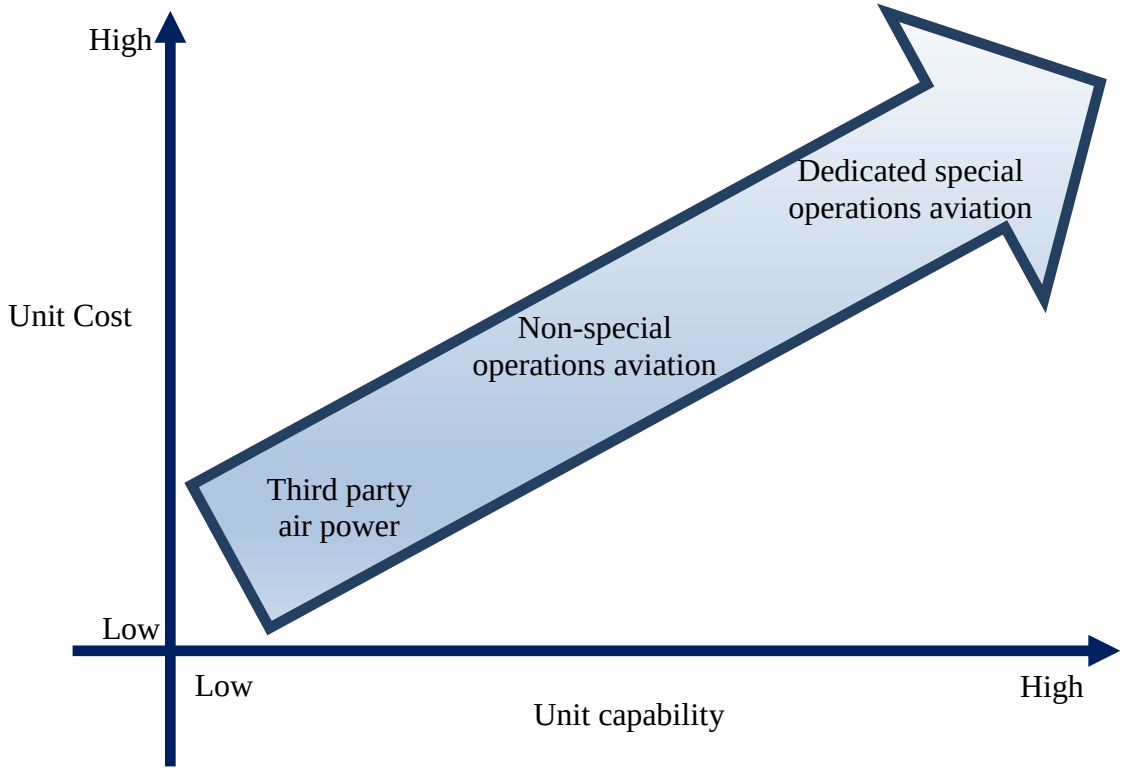


Figure 7. The Correlation between Unit Cost and Capabilities

Smaller Western nations rarely use civilian air assets for tactical employment, although they are commonly used to solve logistic issues. As an example, the Danish Air Force is using civilian contractors for its logistical air lifts to Afghanistan and Iraq, and within Greenland. There are several studies on the logistical benefits of this idea, but within Danish defense very limited research exits on contracted tactical air capacities.[86] The U.S. Special Forces, however, are heavily dependent on contractors flying for them in Africa.[87] As such, the use of civilian assets has been a means to mitigate the U.S. shortage of special operations aviation and illustrates why it is important to examine whether this approach could be a feasible solution for smaller Western nations, including Denmark.

[86] Anna Leander, *Commercializing Security in Europe: Political Consequences for Peace Operations* (London and New York: Routledge Taylor & Francis Group, 2013), 6–17.

[87] Axe, "'Blackwater Air' Is Back, and Flying for U.S. Special Forces."

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# IV. CASE STUDIES

This chapter conducts case studies on the U.S. support to the Afghan Special Mission Wing (SMW) and the use of contract air in Uganda. The Special Mission Wing is selected because it is both recent and it highlights different approaches to conducting Aviation Foreign Internal Defense. The Uganda case is chosen because it is both recent and an operation in which the aviation support was delivered from both contracted and military aviation, making it possible to compare the different solutions. Furthermore, both cases took place in areas important to Danish foreign policy. By using these cases as a reference, this study will determine which types of missions the Danish Air Force would be capable of conducting in the short-term and which capacities are needed to enable long-term possibilities discussed in the forthcoming chapters.

## A. CASE STUDY 1: LONG-TERM AIR MILITARY ASSISTANCE, SPECIAL MISSION WING AFGHANISTAN

### 1. U.S. Use of Combat Aviation Advisors

As described in Chapter II, the NATO term Air Military Assistance corresponds to the U.S. term of Aviation Foreign Internal Defense (AvFID), where combat aviation advisors are commonly used. The use of combat aviation advisors goes far back although they were not called combat aviation advisors in the early years. As Lieutenant Colonel Jerry Klingaman notes,

> An early example of foreign training and advisory actions might be a small Army Air Corps contingent operating in China—shortly after America's entry into the war [Second World War] in the Pacific and the departure of Chennault's flying Tigers—to build and sustain a Chinese Nationalist P-40 fighter force.[88]

After the Second World War, the use of combat aviation advisors intensified as the United States became involved in several Southeast Asia conflicts until 1973, when the "[U.S.] special operations forces were drastically downsized" and "AFSOF [Air

[88] Jerry Klingaman, "CAA - The Origins and Concept of Train-Advise-Assist," *Air Commando Journal* 5, no. 1 (June 2016): 10.

Force Special Operations Forces] was almost entirely eliminated."[89] Following this, the United States had two decades with almost no focus on aviation advising. This left the army Special Forces without the possibility for air mobility when working with indigenous forces. Lt. Col. Klingaman explains that

> Throughout the 1973–1993 timeframe, Army SF [Special Forces] personnel were training and advising foreign combat forces in irregular warfare tactics, but no one was training their counterpart aviation support units. So, the host-nation ground guys had no ride to the target. And no one in the Air Force or AFSOF [Air Force Special Operations Forces] cared except for a very small group of officers in Headquarters AFSOF who were focused on rebuilding a train-advise-assist capability.[90]

However, along with the general renewed SOF focus following the Goldwater-Nichols Act of 1986, the use of combat aviation advisors was reborn. Lt. Col. Klingaman recounts the following:

> In the spring of 1991 … an aviation-FID concept of operations study was published. In July 1992, the organization conducted a "proof-of-concept" deployment to Ecuador with the US Army 7th Special Forces Group. The success of the deployment led to a Commander, USSOCOM [United States Special Operations Command] request for an early unit stand-up. In August 1993, the organization became Detachment 7, Special Operations Combat Operations Staff.[91]

Since then, combat aviation advisors have increased in use. Currently, the main U.S. unit responsible for this role, named the 6th Special Operations Squadron, has doubled in size several times, as described on a U.S. Air Force fact sheet:

> In March 1994, the first major aviation-FID deployment was conducted in Ecuador, and in April 1994, the organization was renamed the 6th Special Operations Flight and realigned under the 16th Operations Group of the 16th Special Operations Wing. The unit was upgraded to squadron status in October 1994 to reflect its growth in mission and personnel. In 2006, and then again in 2010, the Department of Defense Quadrennial Defense

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[89] Klingaman, 10–13.

[90] Klingaman, 13.

[91] "Combat Aviation Advisor > U.S. Air Force > Fact Sheet Display," U.S. Air Force, September 14, 2011, http://www.af.mil/About-Us/Fact-Sheets/Display/Article/104605/combat-aviation-advisor/.

> Review directed the doubling in size and capability of AFSOCs [Air Force Special Operations Command's] Combat Aviation Advisory force.[92]

The 6th Special Operations Squadron has been deployed to a multitude of areas. Although the unit was already involved in several missions, it deployed the necessary teams to Afghanistan as the need for a capable air ISR capacity emerged.

### 2. U.S. AvFID Support to the Afghan Special Mission Wing

In October 2001, President George W. Bush initiated Operation Enduring Freedom in Afghanistan (OEF-A) to defeat Al-Qaeda and overthrow the Taliban government.[93] Two months later, the Taliban lost their last stronghold, and the United Nations authorized the International Security Assistance Force (ISAF) to help and train the new Afghan security forces.[94] The purpose of this approach was to build a stable government that could prevent the Taliban from retaking power. The mission has lasted more than a decade, and although the main "combat operations" ended in 2014, the training of the Afghan security forces has continued.[95] Since the expected duration of this program was several years and the alliance wished to build a permanent indigenous security capacity, Afghanistan was an obvious place to conduct long-term military assistance by training the local security forces.

In the special air domain, U.S. forces have supported the Afghan Special Mission Wing.

> SMW [Special Mission Wing] was built upon the work of British and American teams that assembled an experienced core of Mi-17 rotary wing pilots. Formally organized in 2006, the Kabul-based unit was originally the MoI's air interdiction unit. As drawdown efforts in Afghanistan were announced, leaders quickly realized an increased requirement for Afghan air assault capabilities. In 2012, the unit reflagged as the SMW and its

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92 "CAA Fact Sheet."

93 "Operation Enduring Freedom Fast Facts," CNN, October 5, 2016, http://www.cnn.com/2013/10/28/world/operation-enduring-freedom-fast-facts/index.html.

94 "Operation Enduring Freedom Fast Facts."

95 Andrew Tilghman, "Afghanistan War Officially Ends," Military Times, December 29, 2014, https://www.militarytimes.com/2014/12/29/afghanistan-war-officially-ends/.

> mandate expanded to support all Afghan Special Security Forces units. In four years, SMW grew from a handful of crews to nearly 30 Afghan independent Mi-17 crews, all while continuously supporting combat operations. The wing incorporated a PC-12NG program for ISR in 2014 and produced Afghan independent crews a year later.[96]

Although limited by numbers, the creation of the Special Mission Wing positively affected the operational range of the indigenous forces by providing air mobility. In addition, the Special Mission Wing increased the safety and the effectiveness of the ground forces by providing ISR and casualty evacuation during their operations.[97] In addition, the ISR assets of the Special Mission Wing have conducted their own tasks providing actionable intelligence to the overall OEF/ISAF missions.[98]

Several U.S. units, including the 160th Special Operations Aviation Regiment and the 6th Special Operations Squadron, and various army aviators among others trained the Special Mission Wing. This case study mainly focusses on the 6th Special Operations Squadron training of the PC-12NG program for ISR. The 6th Special Operations Squadron is the only U.S. unit fully dedicated to special operations aviation capacity building and thereby represents the most ambitious approach to special operations air military assistance. This unit arrived in the theater in February 2014 to receive the PC-12NG aircraft. In 2015, the first Afghan aircrews conducted unilateral missions, and in January 2016, the U.S. combat aviation advisors began transferring the training and qualification responsibilities to an Afghan created instructor cadre, and Lt. Col. Bryan Raridon remarks: "This has all occurred during almost constant combat."[99] He continues:

> Since 2014, CAAs [combat aviation advisors] have flown almost 1,900 combat sorties alongside Afghan crews totaling over 4,000 flight hours during which CAAs qualified over 20 pilots, 18 sensor operators, and 10

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[96] Donald G. Fallin and Lisa Becker, "The Afghanistan Special Mission Wing," accessed August 27, 2017, http://www.armyaviationmagazine.com/index.php/archive/not-so-current/748-the-afghanistan-special-mission-wing.

[97] Sverre S. Wetteland, personal communication, January-November 2017.

[98] Ryan Olish, 6th Special Operations Squadron, email correspondence with the authors, October 2017.

[99] Bryan Raridon, "Observations from the Field: CAA Operation Afghan Special Mission Wing," *Air Commando Journal* 5, no. 1 (June 2016): 39.

> aircraft commanders, six of which have completed NVG [Night Vision Goggle] qualification. In addition, CAAs have completed system integration and operational test and evaluation on 17 new PC-12 aircraft.[100]

By the end of 2017, the PC-12NG air crews became self-sufficient to not only solve their missions but also to educate and qualify new members to keep the unit continuously manned.[101]

### 3. DOTMLPF-I

This section analyzes the Special Mission Wing as a capacity describing the most essential elements of DOTMLPF-I.

#### *a. Doctrine: How Tasks Are Accomplished According to Doctrines, Procedures, Tactics, and Legal Considerations*

> If a HN [Host Nation] has limited air capabilities it is usually because there are powerful and deeply entrenched constraints in the areas of budget and finance, human capacity, domestic and bureaucratic politics, and/or social and economic capacity. It is rarely the case that all the conditions for improved air capabilities are in place with the exception of a limited dose of external assistance. More often the odds are stacked against those seeking to develop further air capabilities. As a result more MA operations fail than succeed, and where success occurs, it is often limited in scale and scope.[102]

One should see the creation and success of the Afghan Special Mission Wing in the light of the overall mission. The alliance did not only train the military units, but they also trained the majority of the Afghan government. In addition, Afghanistan was the largest receiving country of U.S. aid in 2016 and in several of the previous years.[103] While the 6th Special Operations Squadron has succeeded with developing capable air assets, a broad approach to improve the Afghan government provided a crucial

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[100] Raridon, 39.

[101] Ryan Olish, email correspondence with the authors, October 2017.

[102] NATO Special Operations School, *SOF Air Military Assistance - Handbook Addendum,* 5.

[103] "Map of Foreign Assistance Worldwide," U.S. government, accessed November 1, 2017, http://www.foreignassistance.gov/explore.

foundation to succeed. This approach was in accordance with the U.S. Joint Publication 3-22 doctrine for foreign internal defense.[104]

Within the Special Mission Wing, U.S. personnel on one-year tours mentored all of the organizational branches; in addition, the aircraft maintenance was supported by contractors funded by the United States.[105] This provided a good foundation for the air crews, allowing them to focus on aviation without friction from a dysfunctional indigenous organization. Within the Special Mission Wing, the 6th Special Operations Squadron was tasked to develop capable Afghan ISR assets based on PC-12NG aircraft.[106] They approached the task in accordance Joint Publications 3-22 and 3-05,[107] and following the doctrine, the Afghan pilots were trained not only in flying and tactics, but also on air/ground integration and general synchronization with the rest of the organization.

A key element to success was that all of the U.S. personnel of the 6th Special Operations Squadron had an advising background and knew each other before they met in the theater. From their prior experience, they knew that the indigenous air crews could learn to solve their tasks, and the most effective approach was to let them use their own methods to the greatest degree possible. As Maj. Ryan Olish from the 6th Special Operations Squadron explains:

> We had the belief that the Afghans absolutely had the ability to achieve the goals of the PC12 program. We sought common ground as opposed to fixating on the cultural differences. We did not try to create a mini 6th SOS [Special Operations Squadron] or USAF [United States Air Force] ISR unit.[108]

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[104] *Joint Doctrine for Foreign Internal Defense*, JP 3-22 (Joint Chiefs of Staff, 2010), I-5-I-10, http://www.dtic.mil/doctrine/new_pubs/jp3_22.pdf.

[105] Ryan Olish, email correspondence with the authors, October 2017.

[106] Ryan Olish, email correspondence with the authors, October 2017.

[107] *JP 3-22*, chap. V.; *JP 3-05*.

[108] Ryan Olish, email correspondence with the authors, October 2017.

The 6th Special Operations Squadron is the most experienced unit within AvFID. As such, they were used to working with long-term goals and focused on creating a self-sufficient Afghan unit. As Maj. Olish explains:

> When I took over as MC [Mission Commander], I pivoted our team to be process oriented, to focus on the functions that grow aviators and hold us accountable. Further, we developed measurable lines of effort so we could see progress/regression from week to week. We just upgraded the first aircraft commander, so started focusing on creating an instructor and in the end an evaluator, with all processes in place by that time.[109]

According to Olish, the mission assignment of units to the Afghan ground operations was also fully conducted within the Afghan chain of command.

> The tasking would occur in Afghan meetings where the Afghan PC12 leader would advise SMW [Special Mission Wing] leadership on how much support they could give, and leadership would decide which units to support.[110]

To solve AvFID mission, the U.S. personnel had to fly Afghan missions in Afghan aircraft flown by Afghan air crews following their own methods and standards in a conflict zone. Obviously, it was a necessity the U.S. chain of command gave the 6th Special Operations Squadron the trust and authority to conduct these types of missions although they did not comply with many of the U.S. standards and procedures. As Lt. Col. Bryan Raridon (Air Force Special Operations Command/A3V) explains:

> SMW operations additionally highlight that, to achieve desired end states, CAAs must be granted authorities that match the required level of involvement with the partnered force and that allow integration with surface SOF Advisors. Initially, authorities permitting direct combat participation with Afghan partners allowed CAAs to aggressively and immediately generate joint combat effects in support of Afghan SOF partnered with U.S. ground SOF Advisors.[111]

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[109] Ryan Olish, email correspondence with the authors, October 2017.

[110] Ryan Olish, email correspondence with the authors, October 2017.

[111] Raridon, "Observations from the Field," 40.

Being granted the necessary authorities was not only a direct necessity. As explained by Lt. Col Raridon, it also indirectly increased effectiveness by providing credit and respect to the U.S. personnel:

> At the relational level, CAAs' ability and willingness to fly and fight aggressively alongside Afghans lent immediate credibility to CAAs across Afghan Commandos, US SOF, and SMW aircrews. With this influence, CAAs deliberately moved above-and-beyond developing Afghan skillsets, and put added and consistent emphasis on developing combat leadership, decision-making, and fostering an "assault mentality" in the PC-12 aircrews.[112]

With the right authorities in place, another critical aspect for success to achieve long-term goals was political and military persistence. According to Lt. Col. Raridon:

> Persistence in the context of CAA operations is best defined as "the determination to remain engaged with a partnered force for the time and with the level of involvement required to achieve a desired end state." Persistence should not be mistaken for "staying somewhere" or "stagnation." Rather, it suggests a "continual moving toward" a desired end state.[113]

And, he continues:

> Persistence to a clearly defined end state is also beneficial in that it allows CAAs to develop measurable milestones, and to conduct objective assessments while applying approaches that include subjective elements.[114]

### *b. Organization: How Forces Are Organized and Integrated to Accomplish the Tasks during the Mission and When Not Deployed*

During the mission, the U.S. organization mirrored the Afghan organization to a great degree. For each Afghan air crew member, there was roughly a corresponding U.S. member. In total, the Special Mission Wing had around thirty pilots and twenty sensor operators, the 6th Special Operations Squadron only sent advisors to the PC-12NG crews, while the Mi-17 crews were advised by aviation personnel individually assigned by the

[112] Raridon, 40.

[113] Raridon, 40.

[114] Raridon, 40.

U.S. Army.[115] The United States was also represented in the Afghan staff and support with an almost 1:1 ratio.[116]

The 6th Special Operations Squadron was the only unit fully dedicated to this type of task. As such, it was the only unit where the U.S. organization was optimized for knowledge sharing between former, current, and future deployed personnel to either the Special Mission Wing or other similar missions. With this organizational advantage, the Special Mission Wing was far more experienced in advising and cultural understanding than the majority of the remaining advisors who primarily were individuals taken from other organizations without AvFID as the main focus. In addition, the 6th Special Operations Squadron generally sent full advisor air crew who already knew each other. This meant that the U.S. personnel from 6th Special Operations Squadron only had to focus on developing relations with their Afghan counterparts.

#### *c. Training: How Forces Train, Exercise, and Prepare in Order to Accomplish the Tasks with the Right Mindset*

The 6th Special Operations Squadron recruits experienced personnel from the armed forces with a relevant aviation instructor (or equivalent) background. Initially, the personnel have to pass a ten-week combat aviation advisor mission qualification course, including tactical ground skills, basic culture and advising skills, and an advising exercise. Following the qualification course, the personnel receive fourteen to twenty-eight weeks of language and culture training depending on the language and their prior skills. Finally, the personnel receive specific job qualification training, which varies from weeks to months.[117] It is not uncommon for civilian companies to provide the final job qualification training if the U.S. armed forces do not offer the required education and training.[118] Prior to deployment, the personnel will receive repetition and training to

[115] Ryan Olish, email correspondence with the authors, October 2017.

[116] Ryan Olish, email correspondence with the authors, October 2017.

[117] Robert Horton, "6SOS CAA Mission Qualification Course," *Air Commando Journal* 5, no. 1 (June 2016): 33–35.

[118] Ryan Olish, email correspondence with the authors, October 2017.

regain certification based on the individual's needs in addition to the regular pre-deployment training.

#### *d. Materiel: What Equipment Is Needed to Accomplish the Tasks (Weapons, Sensors, Spares, Etc.) so Forces Can Operate Effectively*

Although Military Assistance missions are typically inexpensive to conduct due to the use of host nation assets, this has not been the case with the Special Mission Wing as described in a Special Inspector General for Afghanistan Reconstruction (SIGAR) report:

> From FY 2010 to May 17, 2017, just over $2.2 billion has been obligated for the SMW [Special Mission Wing] ... The vast majority of the funding obligated since FY [fiscal year] 2010 has been designated for sustainment items (46.1%) and equipment and aircraft (45.8%).[119]

Since the Afghan government did not possess a sufficient fleet of aircraft, the United States needed to fund the purchase of it. As such, the United States has paid for both the PC-12NG fixed wing and the Mi-17 helicopters, which further are planned to be replaced by refurbished U.S. stock UH-60 helicopters.[120] Furthermore, the United States funds the majority of the maintenance and updates of the aircraft.[121]

#### *e. Leadership: How the Leaders Are Educated and Prepared to Accomplish the Task, Including Those Directly Participating in the Task Solution, and the Leadership/Organization That Dedicates the Personnel to the Tasks*

As mentioned in the organization section of this this chapter, the combat aviation advisors to the PC-12NG program came from a dedicated AvFID unit. Therefore, they only needed a short mission preparation program to be ready to solve their tasks.

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[119] John F. Sopko, *Special Inspector General for Afghanistan Reconstruction Quarterly Report to the United States Congress*, July 2017 (Arlington, VA: Special Inspector General for Afghanistan Reconstruction, 2017), 114.

[120] John F. Sopko, *Special Inspector General for Afghanistan Reconstruction Quarterly Report to the United States Congress*, May 2013 (Arlington, VA: Special Inspector General for Afghanistan Reconstruction, n.d.), II; Sopko, *Special Inspector General for Afghanistan Reconstruction, July 2017*, 111–12.

[121] Sopko, *Special Inspector General for Afghanistan Reconstruction, May 2013*, II.

Concerning the leadership on higher echelons assigning the mission, they need general knowledge of the conditions and challenges to achieve success when conducting AvFID. It is critical that they understand, that all of the organization needs to be addressed and that some areas need substantial funding.

In addition, the higher echelons should know the importance of long-term persistence and the need to grant the necessary authorities to enable the achievement of the desired end state. If the combat aviation advisors cannot participate in all of the operations, or cannot promise that they will stay until the task is finished, they will have a hard time earning the necessary credibility from the host nation forces and will not be able to work efficiently.

#### *f. Personnel: How to Manage the Availability of Qualified Personnel for Peacetime, Wartime, and Various Contingency Operations*

As mentioned in the organization section of this chapter, only the 6th Special Operations Squadron mentoring the PC-12NG came from a designated AvFID unit. The remaining forces were drawn from various units from the U.S. armed forces. Concerning the specific task of AvFID, it would have been optimal with only dedicated personnel, but the 6th Special Operations Squadron did not have the necessary number of personnel to support all of the Special Mission Wing alone. Therefore, the possibility to draw personnel from the rest of the U.S. armed forces was needed. Short-term contingency operations are less relevant to consider in this scenario, since these effects are only achievable though long-term persistence.

#### *g. Facilities: What Real Property; Installations and Industrial Facilities (Government-Owned Ammunition Production Facilities) Are Required to Accomplish the Tasks*

Within the United States, a unit like the 6th Special Operations Squadron obviously needs to be placed on an air base with facilities to support a few aircraft of the most commonly used types in which they advise. When deployed, a task like this typically does not require more than modest accommodations and a few offices since most of the work is done using the host-nation facilities. However, in the case of the Special Mission Wing, the United States has been heavily involved in developing and

maintaining most of the Afghan facilities as part of the overall whole-of-government approach. Although this effort has not been a part of the AvFID mission, it has been a crucial precondition to not hamper the effectiveness of the Special Mission Wing.

#### *h. Interoperability: How to Integrate with Allied and Own Forces*

The Afghan aircrews were responsible to coordinate and deconflict with other Afghan units, including the ground forces they supported. The Afghans used their own equipment and followed their own standards. One of the main tasks for the advisors was to improve this coordination. Since most of the supported Afghan ground units had advisors, the combat aviation advisors could use these as backchannels to understand and influence the supported units in order to improve interoperability.

### 4. Conclusion

The case of the Special Mission Wing shows two different approaches to combat aviation advisors. Individually appointed airmen from several units, who did not have advising as their main focus, advised the Mi-17 helicopters. In contrast, the PC-12NG program was advised by the 6th Special Operations Squadron, which had advising as their main focus. Although the variance in tasks makes the comparison difficult, it is interesting that the PC-12NG program made the Afghan air crews self-sufficient in four years while the training effort of the Mi-17 crews is an ongoing process in its eleventh year. Despite the commonalities of the two approaches and the differences in tasks, organizational factors may be most significant in accounting for these outcomes.

The authority to join the host nation on their combat missions and the U.S. persistence to continue until they were no longer needed were common for the two approaches. These two factors greatly improved effectiveness in the short-term and will be crucial to finally achieve the end state of self-sufficient Afghan units in the long term. In addition, the whole-of-government approach was needed in this case to get the organization around the Special Mission Wing to work and be able to use the Special Mission Wing effectively. While Military Assistance typically is a relatively inexpensive mission to conduct, this example of AvFID required substantial funding since the host nation assets needed to be created rather than just improved.

The main difference between the two approaches within the Special Mission Wing was the use of individually sent personnel without an advising background or the use of advisors from a dedicated advisor unit (6th Special Operations Squadron). The use of the dedicated advisor unit provided several benefits. First, the personnel from the 6th Special Operations Squadron had more training, education, and experience in advising compared to their counterparts from U.S. Army aviation. Second, the 6th Special Operations Squadron mainly sent teams that already knew each other as opposed to individuals who had not worked together before. Third, the 6th Special Operations Squadron organization made it easier to improve the knowledge sharing between the rotating combat aviation advisor crews. Overall, these differences made it easier for the 6th Special Operations Squadron to adapt to Afghan solutions rather than applying U.S. standards and procedures to the Afghan crews.

Although the organizational aspects were not favorable in the Mi-17 helicopter program, the effort has still greatly improved the effectiveness of the ground forces by providing air mobility. This effect would not have been achieved without the U.S. Army aviators as advisors. The case proves that even though military aviators do not have advising as their main focus, they are still able to make the difference between having air mobility or not, using only host nation assets. In both approaches, the use of advisors to both ground and air units functioned as a back channel to influence and understand the host nation's units, which improved their cooperation and effectiveness.

## B. CASE STUDY 2: U.S. SOF IN UGANDA USING CIVILIAN AIRCRAFT

There are numerous ways to mitigate the shortage of special operations aviation. One of the least known and least used is the use of contracted air. This chapter conducts a case study on the U.S. SOF operation in Uganda using contracted civilian aircraft. It examines whether the contracted air provided sufficient, safe, and usable air support to the U.S. SOF mission. The case study is conducted by interviewing two U.S. SOF operators who have worked in Uganda and extensively used contracted air. For reasons of anonymity they are referred to as SF1 and SF2.

### 1. Military Use of Civilian Contractors

Military use of civilian contractors in both peace time and wartime operations is not a new phenomenon. However, as depicted in Figure 8, the last twenty years has seen a notable increase in the use of contractors in support of military operations. According to the Capstone Concept for Joint Operations: Joint Force 2020, the American military's use of contractors in Afghanistan was a 1:1 ratio of contractors per soldier compared to a 1:60 ratio in the Gulf War.[122]

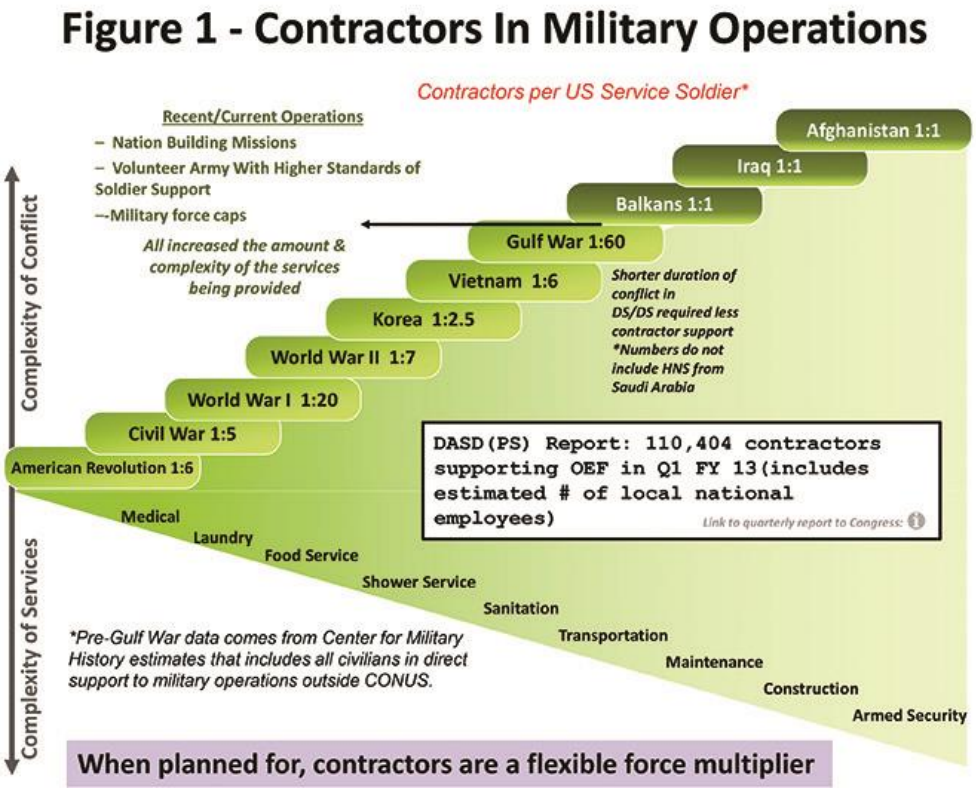


Figure 8. Increased Use of Contractors per Soldier in U.S. Military Operations[123]

[122] Tony Yanero, "Operational Contract Support and the Joint Force in 2020," *Navy Supply Corps Newsletter*, June 5, 2014, http://scnewsltr.dodlive.mil/2014/06/05/operational-contract-support-and-the-joint-force-in-2020/.

[123] Source: Yanero, "Operational Contract Support and the Joint Force in 2020."

The Danish military similarly uses civilian contractors to support the Danish military effort. The tasks range from establishing and running military camps in Iraq and Afghanistan to providing the strategic airlifts of military supplies and equipment such as the Danish Army Leopard 2A5 Main Battle Tanks to the Helmand province (shown in Figure 9) and the Danish Air Force Merlin Helicopters to Northern Afghanistan.

Figure 9. Danish Army Leopard 2A5 Main Battle Tank Being Loaded onto a Civilian AN124 Transport Plane[124]

Typically, the use of civilian contractors in support operations raises little to no public or political concern. However, when civilian contractors are used to support direct military actions, or they are substituting for military forces, it often generates concern and debate. The use of the civilian company Blackwater in Iraq caused numerous problems for both the United States and the Iraqi administration, and also for Blackwater itself,

[124] "Kampvogne på Vej til Afghanistan" [Tanks Enroute Afghanistan], *Berlingske*, October 23, 2007, https://www.b.dk/danmark/kampvogne-paa-vej-til-afghanistan-0.

when legal concerns were raised over their use of force.[125] The controversy regarding Blackwater's code of conduct in Iraq and the legal challenges involved did not, however, greatly impact the use of civilian contractors in support of U.S. operations. In fact, more civilian contractors than U.S. soldiers have died in Afghanistan as of May 2016.[126]

### 2. U.S. SOF Employment of Contract Air in Uganda

The use of civilian contractors is not limited to conventional military operations. Contractors are extensively used to mitigate the previous described shortage of special operations aviation. In the following, this study examines how U.S. SOF successfully employed contract air to support their special operations in Uganda and neighboring Congo, the Central African Republic, and South Sudan, in efforts to degrade and destroy the Lord's Resistance Army led by Joseph Kony. This case study is based on reports from the Congressional Research Service, news articles, and interviews with two American Special Forces operators who were deployed to Uganda and the larger area of operations, which extensively utilized contract air.[127]

Since the 1990s, the Ugandan military has waged a counterinsurgency campaign against the Lord's Resistance Army. This conflict, marked by numerous human rights violations including attacks and atrocities spanning northern Uganda, northeastern Congo and into the Central African Republic, was deemed a regional destabilizing factor. The United States has supported this counterinsurgency effort for more than a decade. Initially the U.S. effort was humanitarian aid, but since 2008, the United States has been directly involved in the capture or kill operations against the Lord's Resistance Army. The military effort culminated in 2011 when the Obama administration deployed 100

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[125] Jeremy Scahill and Cole Matthew, "Inside Erik Prince's Treacherous Drive to Build a Private Air Force," The Intercept, April 11, 2016, https://theintercept.com/2016/04/11/blackwater-founder-erik-prince-drive-to-build-private-air-force/.

[126] Micah Zenko, "Mercenaries Are the Silent Majority of Obama's Military," *Foreign Policy*, May 18, 2016, http://foreignpolicy.com/2016/05/18/private-contractors-are-the-silent-majority-of-obamas-military-mercenaries-iraq-afghanistan/.

[127] Alexis Arieff, Lauren Ploch Blanchard, and Tomas F. Husted, *The Lord's Resistance Army: The U.S. Response*, CRS Report No. R42094 (Washington, DC, U.S.: Congressional Research Service, 2015), https://fas.org/sgp/crs/row/R42094.pdf.

American soldiers, mostly U.S. SOF, to Uganda.[128] In 2017, the operation was deemed a success because the support base for Joseph Kony had dwindled to approximately 100 followers who are no longer considered a regional threat.[129]

### 3. DOTMLPF-I

The following subsections correspond to principles of DOTMLPF-I to analyze the U.S. use of contract air in the hunt for the Lord's Resistance Army.

#### *a. Doctrine: How Tasks Are Accomplished According to Doctrines, Procedures, Tactics, and Legal Considerations*

The American effort in Uganda was a two-pronged operation. The initial operation was a logistical support operation focused on supplying and strengthening the Ugandan military effort in their fight against the Lord's Resistance Army. Later, the operation involved U.S. military advisors training and assisting Ugandan forces to improve their counterinsurgency operations, this operation was called Operation Observant Compass.[130] When the American effort was at its highest level, approximately 280 U.S. military personnel were deployed to Uganda. In fiscal year (FY) 2013, the cost was $78 million rising to $98 million in FY 2014.[131] The American operations were a whole-of-government approach where both the short-term military objectives were combined with long-term foreign assistance and U.S. Department of State goals for the region. In the Consolidated Appropriations Act, 2012 (P.L. 112-74, December 23, 2011) it is stated:

> Funds appropriated for the Department of State and foreign assistance "should be made available for programs and activities affected by the Lord's Resistance Army. . .up to $10,000,000 be made available for peace and security in the affected region to address these issues, including

[128] Arieff, Blanchard, and Husted, 1–7.

[129] Ryan Browne, "US Military Ending Role in Hunt for Elusive African Warlord Joseph Kony," CNN, accessed September 7, 2017, http://www.cnn.com/2017/05/02/politics/us-military-quits-hunt-joseph-kony/index.html.

[130] Arieff, Blanchard, and Husted, *The Lord's Resistance Army: The U.S. Response*.

[131] Arieff, Blanchard, and Husted, 10.

> programs to improve physical access, telecommunications infrastructure and early-warning mechanisms and to support the disarmament, demobilization, and reintegration of former Lord's Resistance Army's combatants, especially child soldiers.[132]

This legislation indicates that the U.S. SOF operated in the gray zone between military objectives and foreign policy. Furthermore, the U.S. SOF were ordered not to directly participate in any direct actions against the Lord's Resistance Army. According to Alexis Arieff, Lauren Ploch Blanchard, and Tomas F. Husted: "Although some U.S. forces are combat-equipped, their rules of engagement state that they will not directly engage the Lord's Resistance Army unless necessary for self-defense."[133] Operation Observant Compass was a textbook Military Assistance/Foreign Internal Defense operation, providing the necessary level of expertise to the Ugandan military forces engaging the Lord's Resistance Army. It was an armed conflict that involved very few kinetic engagements, and years of continuous dismounted patrolling through hundreds of thousands of square kilometers of jungle, forest, and savanna. The nature of the conflict necessitated a continuous supply of food, water, and other health supplies (class I), with occasional rotation of personnel (class VI). There was limited need for petroleum, oil, and lubricants (class III), construction materials (class IV), or ammunition (class V) to be flown in because ground transport was possible in two to three weeks if the supplies were not time sensitive.[134] The first company, *Air Serve,* was the company that provided most of the logistic non-tactical mobility lift and the second company was Tusker Sand, a manned single-engine aircraft.[135] According to Global Security:

> The proposed Tusker Sand team would consist of at least 14 personnel. The sensor package would include electro-optical and infrared full motion video components, laser range finder, as well as, Light Detection and Ranging (LIDAR), Hyperspectral (HSI), Synthetic-Aperture Radar (SAR), and other sensors as appropriate. Data transfer and related systems would be provided, along with a ground control/intelligence fusion element. The

[132] Arieff, Blanchard, and Husted, 13.

[133] Arieff, Blanchard, and Husted, 10.

[134] SF1, email correspondence with the authors, September-October 2017.

[135] SF1, email correspondence with the authors, September-October 2017.

> system was to be mounted on a manned aircraft, and the contract stated that AFRICOM [U.S. Africa Command] preferred the Pilatus PC-12/47 aircraft. The platform would be contractor-owned/contractor operated.[136]

Tusker Sand was the primary ISR platform for the first several years of the Operation Observant Compass. Due to the aircraft limitations and the terrain this platform was better than nothing, but it was far from ideal.[137] The third contract was with a Kenyan based company to provide rotary wing medical evacuation for the tactical units at the out stations. The medical evacuation capability is a very important force multiplier in any operation. The psychological effect it has on the soldiers knowing that they can be evacuated in case of a medical emergency is of paramount importance. Especially in remote areas where the Operation Observant Compass took place it could take days, if not weeks, to be evacuated, but with a medical evacuation helicopter that wait could be limited to a maximum 36 hours.[138] This is still a very long time compared to medical evacuation efforts in Afghanistan, for example, where the aim is the so-called "Golden Hour," which means that the patient should be under comprehensive medical treatment within one hour. Nevertheless, the maximum of 36 hours was still a significant improvement in Operation Observant Compass. SF1 explains a contributing factor to the delay was one drawback with the medical evacuation helicopter: "Generally there was a lack of rotary wing capacities and due to contract limitations, the MEDEVAC [medical evacuation] bird could not be duel used for logistics movement as well. This challenge was restricting and expensive."[139]

There were no U.S. contracted light strike platforms throughout Operation Observant Compass and close air support was limited to the U.S. Air Force or Uganda Air Force.[140]

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[136] "Tusker Sand," GlobalSecurity.org, accessed September 10, 2017, https://www.globalsecurity.org/intell/systems/tusker-sand.htm.

[137] SF1 and SF2, personal communication, September 2009.

[138] SF1, personal communication, September 2009.

[139] SF1, personal communication, September 2009.

[140] SF2, personal communication, September 2009.

In addition to the areas previously described, contracted aviation was used to conduct psychological operations. This was achieved either with loudspeakers attached to the helicopters or with leaflets dropped from the aircraft. The availability of aircraft made it possible for the U.S. SOF to dramatically extend their psychological operations range.[141]

The mindset required throughout the American organization was not only molded by the adversary, but equally shaped by the enormous distances and lack of infrastructure between American and Ugandan bases and the area were the Lord's Resistance Army was operating. The U.S. SOF mitigated these challenges by contracting air support from various suppliers.[142] Due to the crucible of distance experienced during Operation Observant Compass and the nonexistence of organic military lift assets, the contractors were the lifeline for the forward deployed Operational Detachment Alphas. The dates for logistics flights had to be planned at least seven days out due to the contract guidelines. There was, however, some flexibility to flights in regard to adverse weather and field landing strip conditions.[143] Central Africa receives large amounts of rain between May and October, which can severely impact field landing strips and flight patterns.[144] Because there were limited contract options U.S. SOF designed logistics and operations around the capability of the available contracted air. As organic military aircraft became available for short durations they were used to support specific combat operations or provide large logistics deliveries to bolster the on-hand supplies at each outstation.[145]

A crucial aspect of any military operation and, in particular, special operations is the ability to maintain a high level of operational security (OPSEC). When operating with foreign military forces and civilian contractors it requires a special mindset and flexibility to operate safely and securely. Operation Observant Compass was a widely-publicized

[141] SF2, personal communication, September 2009.

[142] SF1, email correspondence with the authors, September-October 2017.

[143] SF1, email correspondence with the authors, September-October 2017.

[144] SF1, personal communication, September 2009.

[145] SF2, personal communication, September 2009.

operation from the onset of U.S. SOF personnel getting on the ground. The Ugandan military furnished the U.S. advisors a hangar at the main military air strip in Entebbe, and local compounds were rented to provide the living space and operation center facilities.[146] The contract for Air was an open bid to the limited available providers, and the flight plans were filed with the Ugandan military air controllers. Operational security focused on the specific individuals moving to specific locations, and the specific payloads being moved. The contractor provided general guidelines about what it could and could not move, and the SOF personnel accommodated these requests. There were no customs or immigration inspections upon departure from Entebbe because the entire U.S. effort was in support of the Ugandan forces.[147] Due to the limited governance in the eastern Central African Republic and Congo, there were also no customs or immigration controls to pass through in those countries. Furthermore, the use of nonmilitary planes and helicopters provided a passive and indirect operational security due to the low signature profile the civilian air frames presented. Throughout central Africa, civilian planes and helicopters are part of the normal pattern of life.[148]

The use of nonmilitary contract air support can challenge the standardized and well-rehearsed cooperation between air and ground capabilities. The lack of a habitual relationship between the SOF and aircrews combined with a lack of understanding of the special operations created friction between air and ground operations.[149] There were no SOF airmen deployed to Operation Observant Compass to build habitual relationships or synchronize mission planning and foster a deeper understanding of special operations among the civilian contractors. These issues had to be taken into consideration when operating with contract air and what types of missions they could perform. The civilians with the logistic lift contract were not part of the military planning process, which sometimes resulted in misunderstandings and lack of communication that ultimately led

[146] SF1, personal communication, September 2009.

[147] SF1, email correspondence with the authors, September-October 2017.

[148] SF1, email correspondence with the authors, September-October 2017.

[149] SF1, email correspondence with the authors, September-October 2017.

to the cancellation or delay of planned missions.[150] The military liaison would coordinate the scheduled flights for each week so the civilian company could assign pilots. The ISR and Medevac crews were more integrated into the planning, and received daily briefs of operations to ensure a common operating picture. In the remote outstations, the civilian pilots would live and eat with the SOF personnel because there were limited food or lodging options. This close living proximity assisted in building a cohesive team with the contractors and created the necessary habitual relationship.[151]

U.S. personnel were able to fly in the contracted aircraft with no issues, because airworthiness inspections and reports were part of the contracting process and were carried out well in advance by specially designated American assessment teams. Legally the issues with operating contract air in a potential hazardous and hostile environment had been sorted out by the U.S. Africa Command (AFRICOM) in Stuttgart, Germany, before employment of the civilian contractors.[152] The U.S. forces did, however, encounter challenges in gaining approval to fly with the Ugandan leaders in their MI-8 helicopters. The American assessment teams deemed the Ugandan Air Force in need of an extra effort for the maintenance of their aircraft before it was safe enough to let U.S. SOF fly with them.[153]

Throughout the Operation Observant Compass, the U.S. Air Force deployed various air assets, such as C-130 transport plane and the tiltrotor CV-22/MV-22, to support the operations. Because of the air-to-air refueling capabilities and larger cargo carrying capacity, these assets were initially a very valuable tool to support Operation Observant Compass. Yet, according to both SF1 and SF2: "The larger and much heavier Air Force air frames damaged or destroyed the already fragile infrastructure around the field landing strip." Furthermore, SF1 explains: "these airplanes were not part of the pattern of life in central Africa, and they would therefore attract unnecessary attention."

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[150] SF1, email correspondence with the authors, September-October 2017.

[151] SF1, email correspondence with the authors, September-October 2017.

[152] SF1 and SF2, personal communication, September 2009.

[153] SF1, personal communication, September 2009.

This limited the use and effectiveness of U.S. Air Force support to Operation Observant Compass.

### *b. Organization: How Forces Are Organized and Integrated to Accomplish the Tasks uring the Mission and When Not Deployed*

The command structure was organized in a manner such that the SOF logisticians personally managed the logistic pilots, the current operations cell (J2) worked with the ISR crews, and the SOF medics coordinated medical evacuation with medical evacuation crews. Generally, there was one point-of-contact person for each of the contracts who managed them.[154]

Administratively, Operation Observant Compass was supported by the U.S. Africa Command's contracting office with assistance from the embassy in Kampala contracting office.[155]

With regard to aviation safety, it was coordinated by U.S. Africa Command to ensure the appropriate U.S. Air Force inspection teams were deployed in order to approve the airworthiness of the contracted platforms. Tusker Sand, the ISR platform, was an American flagged aircraft so it had to meet all the federal aviation regulations for the United States.[156]

There was no qualification done in regard to the air tactics used by the civilian pilots. As SF1 operator explains: "The pilots would be briefed on the desired mission, and if they raised an issue with the task we negotiated so both sides would be comfortable."[157] He continues: "There were no SOF Air Men or conventional military pilots deployed to conduct any type of tactical assessment of the tactics deployed by the civilian pilots." None of the U.S. SOF operators were pilots although some of them were Joint Terminal Attack Controllers (JTAC) with knowledge of air operations. Despite the

[154] SF2, personal communication, September 2009.

[155] SF1, personal communication, September 2009.

[156] SF1, email correspondence with the authors, September-October 2017.

[157] SF1, personal communication, September 2009.

lack of a tactical assessment, the U.S. SOF operators were comfortable operating with the civilian contractors. In some cases, the contractors were even more willing to operate in poor weather conditions than their U.S. military counterparts. SF1 explains:

> The logistic contract pilots were far more comfortable flying in low clouds and landing on wet muddy FLSs [field landing strips] than the air force pilots with military aircraft. The U.S. Air Force would not land on an FLS with a cloud ceiling below 2,000 ft. but the contracted pilots would land when it was lower than 1,000 ft.[158]

The willingness to support the U.S. SOF was evident on numerous occasions and in very few instances did the civilian pilots turn down the mission. Sometimes, however, there was friction arising from what the U.S. SOF needed and what the civilian pilots were able or willing to deliver. As SF2 explains: "There were numerous instances where the civilian pilots would not fly hazardous cargo like ammunition and explosives. We didn't have these issues with the U.S. Air Force crews."[159] Another aspect was that the civilian contractors lacked expertise, compared with the U.S. Air Force, operating during the hours of darkness. This inability severely hampered nighttime operations due to lack of ISR and medical evacuation.

#### *c. Training: How Forces Train, Exercise, and Prepare in Order to Accomplish the Tasks with the Right Mindset*

Before deployment of U.S. SOF there was very limited additional training to prepare the operators to cooperate with contract air. They did receive some introduction to the various air frames, their load, and their limitations. But mostly the SOF operators were asked to make the most of what they had at their disposal. All the contracted pilots spoke English so there was no need for pre-deployment language training in regards to the pilots and aircrews.[160]

During Operation Observant Compass there were training flights with the medical evacuation helicopter to ensure that the hoist operations were rehearsed. According to

[158] SF1, email correspondence with the authors, September-October 2017.

[159] SF2, personal communication, September 2009.

[160] SF2, personal communication, September 2009.

SF2 there were similar trainings and rehearsals conducted in order to enable the contracted helicopters to conduct fast-rope operations. None of this, though, had the oversight of qualified U.S. Air Force or U.S. Army aviation aircrews.[161]

#### *d. Materiel: What Equipment Is Needed to Accomplish the Tasks (Weapons, Sensors, Spares, Etc.) so Forces Can Operate Effectively*

The Tusker Sands ISR platform was aware of the requirements for how to operate and care for all their equipment. They would additionally make operational security adjustments when foreign soldiers would ride on the aircraft. Generally speaking, all logistics regarding local materiel issues was the responsibility of the civilian contractors. According to SF1, the U.S. SOF used roll-on/roll-off equipment. Among other items, these included loudspeakers for psychological operations, sensor packages enabling ISR to be conducted from a civilian plane not fitted with sensors, and radios allowing the civilian plane to function as a relay platform or platform for the mission commander.[162]

#### *e. Leadership: How the Leaders Are Educated and Prepared to Accomplish the Task, Including Those Directly Participating in the Task Solution, and the Leadership/Organization That Dedicates the Personnel to the Tasks*

For a small charter company to win a U.S. Department of Defense contract, the company's top leadership must be adequately experienced in supporting military operations and must have flexible aircrews flying the missions. SF1 explains:

> The most important person on the contracting side was the pilots. The Pilots had to balance the legal restrictions their boss had for the company with the operational requirements on the ground. The pilots were the ones who loaded each aircraft correctly and decided whether or not they were comfortable attempting a landing if the weather was not clear. Some pilots were very strict with all rules, and others were more willing to make limited exceptions if the operational requirements demanded it.[163]

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[161] SF2, personal communication, September 2009.

[162] SF2, personal communication, September 2009.

[163] SF1, personal communication, September 2009.

As explained by SF1, getting the operation underway often depended on which contractor pilot the armed forces partnered with. Normally cooperation between the SOF and the civilian pilots was good, but sometimes their expectations could vary, resulting in delays or canceled missions.[164]

Military leadership needs a willingness to integrate civilian companies into the operation. At the same time, they also need to acknowledge the limitations of what type of support the civilian contractors are capable of providing and what can be done in order to mitigate the discrepancies between civilian contractors and military units.[165]

### *f. Personnel: How to Manage the Availability of Qualified Personnel for Peacetime, Wartime, and Various Contingency Operations*

As mentioned earlier, all the international pilots spoke English. Some of the ground crews, however, did not speak English. Fortunately, because the pilots were also the load masters for their aircraft, the U.S. SOF never experienced any issues in regard to language.[166]

The U.S. Africa Command had no influence on the selection procedure of civilian pilots and crews. SF1 says that: "I had no influence on selection, but most of the times we did have a very good cooperation with the civilian air crews and we got to know them really well; this made working together so much easier."[167]

The Tusker Sands ISR platform was an American company with an American crew, which was necessary due to the sensitive equipment onboard. The medical evacuation helicopter and logistic contracts were local companies that provided service to the military during the contract period. Both the Tusker Sand and the local aircrews were very proficient airmen, but according to SF1, there was one particular recurring issue with the civilian aircrews: "Due to the austere living conditions in outstations, several of

[164] SF1, personal communication, September 2009.

[165] SF2, personal communication, September 2009.

[166] SF2, personal communication, September 2009.

[167] SF1, personal communication, September 2009.

the pilots would make an effort to avoid flying for the SOF missions."[168] This hampered a good working relationship and illustrated that military aviation cannot be substituted in a 1:1 ratio by civilian contractors. On the other hand, as SF1 explains: "the pilots who developed the best relationships with the SOF personnel would also choose to fly the special operations missions and allow the other pilots to fly the non-special operations."[169]

#### *g. Facilities: Real Property; Installations and Industrial Facilities (Government-Owned Ammunition Production Facilities) Are Required to Accomplish the Tasks*

Contractors were generally responsible for all their own facilities, but when they were in the remote outstations they shared the U.S. SOF personnel's facilities depending on how austere the environment was.

Each civilian company had its own individual security protocol and procedures in place. This would sometimes create extra work for the U.S. SOF, as SF1 explains: "When they [civilian aircrews] would remain overnight (RON) at the outstations, either planned or unplanned due to inclement weather, their aircraft would be secured on the airfield and watched by armed guards from the partner force. The enemy did not pose any substantial threat to grounded aircraft due to the limited resources they possessed."[170]

The contracts crafted by the U.S. military were written in such a way that if an aircraft had to go down for maintenance it would be replaced by another aircraft provided by the company.[171]

#### *h. Interoperability: How to Integrate with Allied and Own Forces*

There were no U.S. SOF airmen deployed to synchronize and plan with the civilian contractors. Each civilian contractor had his respective "Special Forces handler"

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[168] SF1, personal communication, September 2009.

[169] SF1, personal communication, September 2009.

[170] SF1, email correspondence with the authors, September-October 2017.

[171] SF2, personal communication, September 2009.

who would ensure clear communication. Logistic flights would coordinate with S/J4, the ISR platform would coordinate with the J2, and the medical evacuation helicopter would coordinate with the medical personnel.[172]

In regard to planning equipment, the contractors had their own maps as well as onboard global positioning systems (GPS). The planning would normally be done without the integration of the civilian aircrews. As SF1 states: "We would brief off of our maps, and they [civilian aircrews] were able to make any adjustments to theirs to ensure a common operating picture."[173] As mentioned, there were no U.S. SOF airmen deployed to synchronize the planning cycle and mission mindset between the contracted air and U.S. SOF. Sometimes this created friction, like in the operation where SF2 was supposed to air lift 20,000 pounds of steel to a remote area to erect a radio tower. SF2 explains the discrepancy between what he believed was planned and coordinated for the day's mission and what the civilian pilot believed: "When I met the pilot on the ramp he got very surprised about the amount of steel that had to be air lifted. He initially said he could not do it, but after a while we found a solution, but the whole mission got delayed."[174] No clear synchronization of planning, except for ordering the airplane to be ready, was conducted and that eventually caused some delay in mission execution.

Coordination between the contract air and the ground troops was conducted through satellite phone or local GSM as the primary means of air-to-ground coordination. During specific large missions U.S. SOF with radios were placed in the ISR platform to provide oversight and coordination. Radios taken onboard the aircraft would also serve as a relay station so that locals could speak to other locals via line-of-sight tactical radios. All communications were done in the clear due to the operational security assessment.[175]

In regard to air traffic radio communication and situational awareness, the contractors used standard aviation frequencies. They would communicate with local air

[172] SF1, email correspondence with the authors, September-October 2017.

[173] SF1, email correspondence with the authors, September-October 2017.

[174] SF2, personal communication, September 2009.

[175] SF1, personal communication, September 2009.

traffic controllers (ATC) or joint terminal attack controllers (JTAC) in remote areas with no air traffic controller. When communicating with ground forces, contractors were given specified non-secure frequencies. To ensure deconfliction, standard aeronautical procedures applied due to the limited number of assets in the air at any given time. In more complex operations a joint terminal attack controller would control the air space.[176]

There was no use of blue force tracking in regard to the civilian companies. Satellite phone or local GSM were the primary means of air-to-ground coordination. Regularly the aircraft would have to divert due to thunderstorms and muddy field landing strips. This coordination was done via phone as stated previously. The ground elements would also notify all outstations of the wheels-up time and estimated time of arrivals to the next location.[177]

In the event of emergencies, U.S. SOF were not responsible for the civilian contract pilots with respect to personal recovery. Despite this, the U.S. SOF would often take a pragmatic approach to the problem to safeguard the civilian pilots. SF1 explains: "I would imagine that we would have assisted had there been a problem; however, I never witnessed any issues."[178]

### 4. Conclusion

The U.S. Africa Command's use of contracted air support in the Operation Observant Compass shows that military use of contractors does not need to be controversial as with Blackwater's operations in Iraq. For low visibility operations with a desired small footprint, contracted air is affordable, and reduces signature, especially in extremely remote areas that only receive two to three aircraft a month. The contracted airplanes are recognized and do not raise suspicion among the local population. Contracted air mitigated the shortage of special operations aviation and gave U.S. SOF the ability to reach and cover large remote areas.

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[176] SF2, personal communication, September 2009.

[177] SF1, personal communication, September 2009.

[178] SF1, personal communication, September 2009.

As a civilian company works through its own organization it is tantamount to a "plug and play" solution for the military forces employing the contractors. The integration of civilian companies into a military operation, however, requires a military organization that is used to dealing with civilian contractors and that knows what is available on the civilian market. The military organization needs sound and thorough legal contracts in order to outline all expectations to the civilian company, yet the contracts must be flexible enough to respond to operational requirements.

The case study also identifies areas where military aviation excels compared to civilian aviation, such as understanding the SOF mission, conducting nighttime operations, having flexibility, and employing pragmatism in dealing with hazardous cargo and longer ranges with more cargo. The case study also uncovers areas and types of operations where military aviation is vulnerable. Large and heavy military airplanes, tiltrotor, and helicopters are rough on fragile and vulnerable infrastructure. Furthermore, military aviation can be conspicuous and intimidating to the local population.

The Operation Observant Compass uncovers areas where the civilian pilots lacked a clear understanding of or willingness to conduct the planned mission. This could be due to legal constraints, lack of planning synchronization, or simply not understanding the concept of special operations. A way to improve this could be dedicated SOF airmen operating together with the contracted pilots in order to mitigate the friction experienced in both the planning synchronization and in understanding the special operation.

The use of civilian planes would never be able to replace military aviation entirely, but there are operations where the military SOF airmen could be used more effectively as a force multiplier, not flying their own aircraft but assisting others in getting synchronized and familiarized with the SOF on the ground.

# V. SHORT- AND LONG-TERM POSSIBILITIES FOR ROYAL DANISH AIR FORCE

Based on the current Danish special operations capabilities and the two former case studies, this chapter looks into the general short- and long-term possibilities for the Royal Danish Air Force within Air Military Assistance and the use of contracted air.

## A. DANISH AIR FORCE POSSIBILITIES WITHIN AIR MILITARY ASSISTANCE DOMAIN

The case the Special Mission Wing is probably one of the most ambitious cases within AvFID/Air Military Assistance. When the Northern alliance took control of Afghanistan, they had nearly no capabilities within the air domain. Basically, all of the Special Mission Wing needed to be funded and raised from nothing while it continuously conducted combat operations to the fullest extent possible. This considerable amount of funding to a single mission does not seem realistic in the Danish context for the short or the long term. If Denmark should participate in a task similar to the Special Mission Wing, it will be through an alliance where the economic cost and manning could be shared among the members.

**Doctrine:** Within the SOF community, Denmark follows the NATO doctrines and typically does not have national doctrines covering the same topic. In this case, the NATO doctrine and handbooks will be sufficient, although they seem to be heavily focused on long-term solutions and barely cover short-term ones. Since any larger tasks can only be solved through an alliance, doctrinal agreement is essential to improve cooperation. In case the doctrines need to be updated, Denmark should focus on adding to NATO doctrines and handbooks rather than developing own substitutes.

To develop the necessary Air Military Assistance procedures and tactics, the Danish Air Force will benefit from help and inspiration from the 6th Special Operations Squadron. For the doctrines to be effective, they need to be implemented by a broad approach covering all of the DOTMLPF-I.

If the Danish Air Force chooses to start conducting Air Military Assistance, the initial step will be to understand the typical issues about non-functioning air forces and learn the boundaries of what is possible and what is not. In the short term, the Danish Air Force will be able to send assessment teams who judge whether it is safe for ground SOF to use the host nation air craft when looking at their capability compared to the expected threat. In the case it is safe, the Danish Air Force will be able to send teams with a habitual relationship and understanding of ground special operations to improve the air ground liaison. There will be cases where the short-term possibilities can make the difference between host nation security forces having air mobility or not using their own aircraft.

In the long term, in addition to the short-term possibilities, the Danish Air Force will be able to address issues preventing air units from being safe. Danish Air Force advisor teams will be able to improve the skills of the host nation pilots, enabling them to better exploit their potential for air mobility and air support in general. When participating in alliances with shared manning and expenses, the Danish Air Force can contribute to a non-/low capable host nation air force and improve its level to be a self-sufficient capable air force.

**Organization:** When deployed, an Air Military Assistance task often requires mentoring not only the air crew but several parts, if not all, of the organization—as seen in the case of the Special Mission Wing. Most of the staff mentors in that case were individually appointed personnel drawn from various organizations within the U.S. armed forces. In the Danish context, the task could be solved in a similar way, although manning issues due to the lessor number of personnel might occur depending on the duration and size of the mission. This would be a feasible solution in both the short and long term. A dedicated staff advisor unit seems unlikely to be established, since not even the U.S. Armed Forces have chosen to do so.

For air crews and mechanics, the Danish Air Force initially this can rely on individually appointed personnel as demonstrated in the example of the Special Mission Wing's Mi-17 program. In the short term, a unit could be tasked additionally to conduct Air Military Assistance and function as subject matter experts within the Danish Air

Force. This could be further improved in the long term by assigning more personnel to the assigned unit, thus increasing its robustness. Depending on Danish ambitions for Air Military Assistance, even the optimal solution of a designated Air Military Assistance unit could be within reach. Obviously the effectiveness of Air Military Assistance conducted by the Danish Air Force will be heavily dependent on future organizational prioritization.

**Training:** The Mi-17 combat aviation advisors were not specifically trained to conduct AvFID, but they did manage to make the difference in having host nation air mobility. The 6th Special Operations Squadron reveals several assets to improve effectiveness by having a dedicated training program. In the short term, the Danish Air Force could participate in Military Assistance exercises and send individuals to the 6th Special Operations Squadron to gain knowledge. Further, when the need to operate in hostile areas arises, the air crew could additionally be trained in ground tactics and survival by the Danish Special Operations Forces. In the long term, the most cost-efficient way to get high quality training would be to join parts of the 6th Special Operations Squadron's training program.

**Materiel:** Neither the Danish Air Force nor the Danish government will likely be able to purchase and fund a unit like the Special Mission Wing unilaterally. Depending on the political willingness to assist a specific mission, spare parts or fuel might be funded. Effects beyond that will most likely only be achievable through an alliance.

Initially Air Military Assistance missions can be deployed with no special equipment. In the long term, it might be beneficial with some "plug and play" equipment, such as sensors and communication equipment, to better support and integrate with the ground troops of both own and the host nation.

When not deployed, initially there will be no major requirement for equipment. If ambitions increase, though, combat aviation advisors will need to be certified on one or more air frames. Initially it will be sufficient to rent flight hours at a civilian company or a foreign air force similar to the method used by the 6th Special Operations Squadron. If

the need continues to increase, a possible solution might be to lease a specific airframe relevant to the ongoing missions to get the required flight hours.

**Leadership:** As mentioned in the Special Mission Wing case study, Air Military Assistance cannot be conducted without the authority to join the host nation air crews flying their missions using their own air craft. In addition, persistence is also critical for the combat aviation advisors to be credible in the eyes of the host nation's air crews. Both the military and political leadership need to commit to the mission and accept the risk and cost for the duration needed. For this to happen they need to be provided the general knowledge of the possibilities, conditions, and risk specific to Air Military Assistance.

For the initial exercises and training, the military leadership needs to establish teams able to judge and approve the safety of foreign aircraft and crews. In the long term these teams should further be granted the approval authority to allow air crews to participate in conflict zone operation.

**Interoperability:** Adding combat aviation advisors will greatly improve the air/ground liaison. Due to the small size of the Danish SOF community, a habitual relationship already exists to a great degree; however, it will further improve assuming the Danish Air Force will send the same combat aviation advisor air crews to the exercises and the potential missions. In addition, the possibility to add NATO communication equipment and having Danish advisor crew in the host nation aircraft will decrease the number of misunderstandings during missions.

**Initial, short-term, and long-term possibilities:** As soon as the host nation aircraft and air crew safety can be approved and the Danish combat aviation advisor teams are granted the authority join in at least exercises and training, Air Military Assistance will make the difference in host nation security forces having air mobility during some exercises. If the concept is proved in the eye of the host nation, this alone might be the necessary precondition for using air mobility during missions. As the Danish Air Force combat aviation advisors get a better understanding of the Military Assistance task through education and experience, they will be able to achieve more in a shorter time frame. Their effectiveness will be even more improved if the combat aviation advisors

get authorized to join the host nation's air crews on all operations. This effectiveness will be further enhanced, if the Danish Government shows commitment and persistence to continue until combat aviation advisors are no longer needed, as indicated in Figure 10.

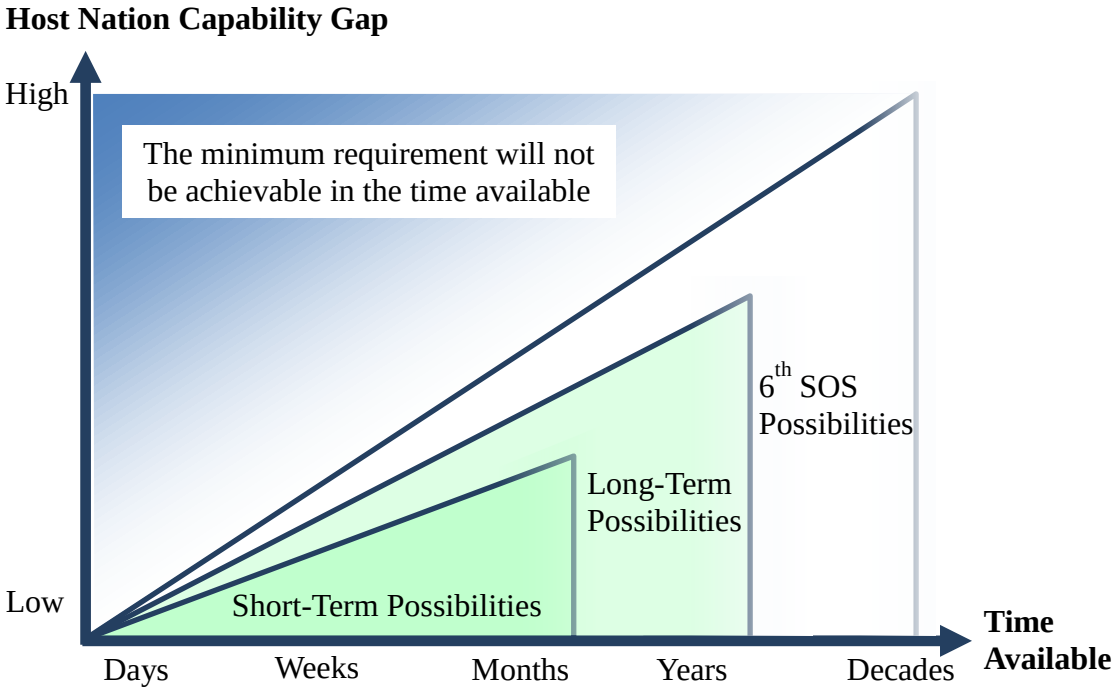


Figure 10. Danish Possibilities in the Short- and Long-Term, Depending on the Time Available and the Host Nation Capability Gap for The Specific Task/Mission

## B. DANISH AIR FORCE POSSIBILITIES TO USE CONTRACT AIR

**Doctrine:** Strategically, the use of contracted air could give Denmark an extended reach when operating in low-intensity conflicts where the deployment of organic air assets is politically unwanted, sensitive, or counterproductive to the tactical effort. As experienced in the Uganda case study, the contracted air gave the U.S. SOF flexibility, a small military footprint, and a less conspicuous presence. Denmark has limited aircraft available, and the use of contracted air could strengthen land and maritime special operations.

Denmark is already using contracted air and other civilian companies in support of the Danish military effort. In direct or indirect support of combat operations, the case is somewhat different, and Denmark has almost no experience with contracting private security companies. After Danish defense allegedly tried to contact Blackwater in Iraq to establish emergency procedures, it created problems for the Danish government. The Danish online news website, Thelocal.dk, reports:

> Jyllands-Posten [a Danish newspaper] published a document that it said proves that the Danish military was attempting to hide its arrangement with Blackwater, which called for the private firm to come to Danish troops' defence in the case of emergency. According to the newspaper, an internal military memorandum said that the cooperation with Blackwater should not be made public and that parliament should instead be told that Danish military personnel only "had a conversation" with Blackwater representatives. "What's serious about this case is that there has apparently been one form or another of misrepresentation to parliament," Martin Lidegaard, Denmark's recently-replaced foreign minister, told Politiken [another Danish newspaper].[179]

This enquiry into the Danish attempt to use contractors indicates that the challenges for the Danish defense in using contractors are most likely focused on the legal aspect and the public perception of using "mercenaries" to support the Danish military effort. In Uganda, the contracted air did not carry out any strike missions or deliver any kinetic attacks on behalf of the U.S. SOF. There are contractors available that deliver kinetic attack capabilities, but with reference to the polemic regarding the Danish communication with Blackwater, it is premature to discuss whether this would be feasible option for the Danish Air Force to consider.

Further studies of the legal aspects of using contracted air are necessary in order to establish smooth and swift procedures when using civilian companies. It is important to determine the types of Danish defense missions or conflicts for which the use of contracted air could be relevant and desirable.

[179] "Denmark's Role in Iraq War Faces New Scrutiny," TheLocal.dk, July 6, 2015, https://www.thelocal.dk/20150706/denmarks-involvement-in-iraq-war-faces-new-questions.

Contracted air seems to be a quick and cheap add-on compared to the creation of additional special operations aviation units. Nevertheless, a price tag of $98 million in FY 2014 for the entire Operation Observant Compass demands a business case examining the exact cost benefits of using contracted air.

**Organization and training:** For contract air to be a quick and cheap add-on, streamlined legal and procurement procedures must be established and tested before the need arises. If the Danish SOF units are used to train and work with contracted air less friction will be experienced when deployed together. As identified in the Uganda case study, the U.S. SOF did not have any U.S. pilots or combat aviation advisors with them in order to streamline the planning procedures and strengthen the contracted aviators' understanding of the special operation. Denmark would benefit by letting the Danish Air Force conduct missions together with the contracted air to mitigate future friction.

The Danish Air Force participates in the EU ATLAS antiterrorism police corporation's biannual maritime SOF exercise with both fixed and rotary wing units.[180] In the exercise, the Danish Air Force operates closely together with other EU member states' police aviation. But when contracted air is introduced, it is kept separate from the police and military aviation groups and answers directly to the land and maritime SOF. This often creates friction and a lack of mutual understanding between military/police aviation and contracted air. Consequently, the overall effectiveness of the available aviation is limited. Integration of the contracted air with the military mitigates friction and heightens the contracted aviators' understanding of the special air operation.

**Materiel:** Using contracted air does not necessarily require extra materiel or equipment. Using high-end contractors like Tusker Sand and their ISR platforms would limit the need for materiel provided by Danish defense. However, if contractors flying fixed or rotary wing aircraft are not equipped for military missions, extra materiel provided by Danish defense could work as a force multiplier. In Uganda, for example, the U.S. SOF have used roll-on/roll-off equipment to enable the contracted platforms to

[180] The Council of the European Union, "Council Decision 2008/617/JHA," L 210/73 § (2008), http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32008D0617.

function as ISR platforms with electro-optical sensors, psychological operations platforms with loudspeakers, and as airborne radio relay stations equipped with roll-on/roll-off radio stacks. This would also be feasible for the Danish Air Force. When, for example, the Danish military in the future is changing electro optical sensors on the AS550 Fennec Helicopter, the old ones could be made into a roll-on/roll-off equipment that could work out of an open cargo door on a contracted fixed or rotary wing aircraft, thus easily increasing the number of available nontraditional ISR platforms.

As noted in the case study, the contracted aircraft are not expected to be equipped with secure radios. The U.S. SOF in Uganda decided to communicate on non-secure radios but could also have decided to provide handheld secure radios for the contracted aircrews. To conduct Signal intelligence (SIGINT), it would also be possible for contracted aviation to carry roll-on/roll-off signal intelligence materiel. Due to the sensitive nature of the data collected, however, it should be a Danish military service member flying along and handling and distributing the collected data.

Furthermore, the civilian company providing the aircraft is responsible for all maintenance and handling of their aircraft. This means that the Danish military has no extra obligations or need for specialized equipment to work with civilian aircraft.

**Leadership:** Throughout the Danish defense organization in general and the SOF community, including the Danish Air Force in particular, there is generally a very innovative spirit and desire to create better ways for solving the mission. Using contracted aviation more directly and aggressively in order to support the mission needs acceptance from both military and political leadership. Due to budget cuts and outsourcing there is a danger that the military leadership will feel threatened by the use of contracted air in special operations. It is therefore of paramount importance to inform and train the leadership on the value of contracted air. Moreover, training should emphasize that contracted air is not going to replace military aviation, but that it can be used as a relatively inexpensive add-on or as a force multiplier in special operations. The leaders also need to learn that, based on the Uganda case study, combat aviation advisors must work closely with contracted air. If aviation is to be used in the safest and most secure way, it is necessary that it is not only linked up with the maritime or land SOF.

**Personnel:** For the contracted aviation and Danish SOF to work as a force multiplier, it is important for Danish defense to learn from the American experience in Uganda. Danish defense would benefit from having combat aviation advisors to liaise with contracted aviation in order to increase the effectiveness and flexibility. The Danish combat aviation advisors also need to include aviation technicians and maintenance leadership who can deploy and survey a civilian aviation company to make sure it is living up to safety and maintenance regulations required by Danish defense, federal aviation regulations, European Aviation Safety Agency (EASA), and so forth. The Danish defense ministry does not currently possess any combat aviation advisors. This does not deny the possibility of employing contracted air, but Danish defense must be aware of which limitations in mission execution are associated with this shortcoming.

**Facilities:** Using contract aviation does not require any extra facilities domestically. It is normally the responsibility of the providers of aviation to establish needed facilities to support their own operations. The Danish defense ministry possesses deployable F-16 hangar tents that could be used when extra hangar facilities are needed on a given operation.

**Interoperability:** Logistically, the civilian companies are responsible for their own support. For planning procedures and a common understanding of the special operation, the U.S. SOF experiences in Uganda show that cooperation between contractors and SOF could be strengthened by having combat aviation advisors teaming up with the contractors.

Operational security is another key issue when working together with people from outside the military organization. Vetting of the companies involved must take place prior to deployment. Furthermore, the use of combat aviation advisors would lessen the operational security friction between contracted air and SOF.

One of the main issues related to working with contracted air versus using organic military aviation assets is the lack of a habitual relationship and common military-cultural background. This can lead to differences in method that may put operational security at risk. The U.S. contracted aviation in Uganda, for example, used the same infiltration and

exfiltration routes repeatedly and did not take their acoustic signatures into account. To increase operational security and minimize operational and tactical risk the use of combat aviation advisors could strengthen the contractors' understanding of which tactics to use in a given situation.

The Danish defense ministry would in the short term be ready to use contracted air in the least complicated operations just to get additional air mobility, thus strengthening the overall SOF impact. If contracted aviation is to be used in more complex operations with a high degree of air and land integration, the need for combat aviation advisors working as liaisons and advisors for the contracted aviation is present. The Danish defense ministry does currently not possess the needed combat aviation advisors, which is why the use of contracted aviation in more complex operations is a future solution.

## C. SYNERGY—COMBAT AVIATION ADVISOR TEAMS

We chose the case of the Special Mission Wing to mark the extreme end and possibilities within Air Military Assistance. It is important to note that not everything has to be built from the ground up. Sometimes the host nation aircraft and crews are already able to conduct the most common tasks but just need to be improved in order to solve a specific set of tasks. These kinds of tasks do not necessarily require a whole-of-organization approach. They may, in fact, be solved by only one to two airborne advisors per host nation aircraft, improving the tactical air skills, air/ground liaison, and a general understanding of special operations. In these cases, the combat aviation advisors' set of tasks is very similar to the set of tasks required to better integrate and use contracted air in special operations as described in the previous chapter. If Denmark builds a combat aviation advisor capacity meant for Air Military Assistance to solve special operations, the same personnel can improve contracted air crews to better support special operations and thereby remove most of the friction identified in the Uganda case study.

Furthermore, if Denmark's ambition within Air Military Assistance reaches a level where the combat aviation advisors are educated and keep status on a host nation's aircraft types, then implicitly the combat aviation advisor crews will be able to fly the

specific types of aircraft themselves. While this has potential within the Air Military Assistance to solve specific missions that the host nation air crews are not yet ready for, it has even further potential concerning contracted aircraft. With certified and experienced combat aviation advisors in a certain type of aircraft, Denmark can lease this type for a short duration without air crews and instead let the combat aviation advisors fly a specific special operation. This solution could minimize friction in coordination with the ground forces. By following this unconventional approach, the Danish Air Force combat aviation advisors would be able to achieve similar tactical benefits as when land or maritime forces rent or lease civilian vehicles to achieve a "low profile" and provide "cheap and flexible solutions either alone or as add-on to military assets," as described in Chapter III.B, referring to AJP-3.5.

While Air Military Assistance and the use of contracted air may be two very different approaches to mitigate the shortage of special operations aviation, the required capabilities and tasks of the combat aviation advisors have a lot in common. If Denmark, in order to balance its SOF effort, establishes the capacity to conduct Air Military Assistance according to AJP-3.5 SOATG level 2 or 3, as described in Chapter II.E.1, then the combat aviation advisors will also be able to facilitate effective teamwork using contracted air by either advising civilian crews or maybe even flying the aircraft themselves.

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# VI. VIGNETTES

This chapter describes how a special operation might be carried out by implementing the previously identified possibilities. It is a series of fictional vignettes based on either actual events or Danish interests. Common for all the vignettes is that they are based on where the Ministry of Foreign Affairs of Denmark has its focus. The vignettes show how the use of SOF airmen and combat aviation advisors combined with land/maritime SOF can be a force multiplier and can limit the obstacles presented by operating together with non-SOF aviation in the form of either allies, indigenous, or third-party air powers.

## A. HOSTAGE RESCUE OPERATION IN SOMALIA

The following scenario is motivated by a real hostage crisis from 2011 in which the Danish cargo ship *Leopard* was hijacked by Somali pirates. Six merchant sailors, two Danish and four Filipinos, were taken hostage. The cargo ship was damaged in the violent hijack, so all the Somali pirates had left to bargain with was the hostages.[181] The hostages were taken ashore and the Somali pirates started negotiating with the Danish shipping company. No military solution was chosen to solve the crisis, and after a staggering 839 days, the Danish company agreed to pay $6.8 million to the Somali pirates. After 839 days of captivity the hostages were extremely ill, both mentally and physically.[182] In contrast to the *Leopard* hostage crisis, there was another hostage crisis in Somalia, in the village of Gaalkacyo, in 2011/12. Two foreign aid workers, one American and one Danish, were taken hostage by Somali pirates. The Danish aid worker's luck was that he was captured together with an American hostage. After four

[181] Loretta Napoleoni, *Merchants of Men: How Jihadists and ISIS Turned Kidnapping and Refugee Trafficking into a Multi-Billion Dollar Business* (New York: Seven Stories Press, 2016), chap. 5.

[182] Napoleoni, chap. 5.

months of captivity the U.S. Navy SEALS launched a successful hostage rescue operation.[183]

Within the Danish military, it has been discussed whether it would have been possible to conduct a hostage rescue operation in Somalia. The critics of such an operation often point to the distance from Denmark and the number of helicopters needed to carry out the air extraction with helicopters ready for both emergency situations and redundancy. The Danish air mobility capabilities do not possess the ability to air-to-air refuel, which of course limits the flying distance and requires forward arming and refueling points (FARP).

This capstone does not debate whether a military operation is the best choice of action in a hostage crisis or whether negotiations should be the preferred choice. The capstone does, however, point out that the crew from the *Leopard* was held hostage for 839 days and are today still struggling with severe illnesses from their ordeal. It is also important to note that a hostage rescue operation is a national responsibility and that no nation can be guaranteed the assistance of other nations' military power. The following section, without going into classified details, describes how a similar hostage rescue operation could be conducted with the use of Danish forces in an unconventional way. The scenario only deals with the military aspect of the operation and not the diplomacy that needs to take place before, during, and after the hostage rescue operation.

### 1. Situation

Six Danish aid workers have been taken hostage and are kept in Somalia. The area where they are kept is west of the city of Gaalkacyo. Gaalkacyo is located approximately 150 miles from the coastline and 50 miles from the Ethiopian border. All negotiations with the hostage takers have failed and because there is a genuine concern for the lives of the hostages, the Danish Government decides to carry out a hostage release operation. The hostages are believed to be guarded by six to twelve men, and a

[183] Jeffrey Gettleman, Eric Schmitt, and Thom Shanker, "U.S. Commandos Free 2 Hostages From Somali Pirates," *New York Times*, January 25, 2012, sec. Africa, https://www.nytimes.com/2012/01/26/world/africa/us-raid-frees-2-hostages-from-somali-pirates.html.

possible enemy quick reaction force would be more than 30 minutes away. Due to the 150-mile proximity to the sea, it is decided to use two Danish Absalon Class support ships capable of carrying helicopters as a staging area for the helicopter extraction force that consists of three EH101 Merlin helicopters and one MH-60R Sea Hawk. Since navy ships often are present in the area, the support ships are unlikely to attract attention.[184] Two Danish F-16s and one CL-604 Challenger can provide top-cover, command and control, and ISR, operating from the U.S. Air Force base in Djibouti. In addition, there is one Danish C-130 that can both serve as parachute insertion platform and provide long-distance lift capacity.

The insertion of the assault force can be done either by parachuting, using the C-130, or by clandestine means, depending on the intelligence and possibilities in the area. After the assault team has secured the hostages, the two EH-101 helicopters are able to extract the assault team with the hostages, while the MH-60R and third EH-101 carries an airborne quick reaction force. At this point, though, there is little redundancy in case any of the helicopters breaks down. Furthermore, a delay on the target may cause the helicopters to run out of fuel. To solve these challenges, a number of contracted helicopters are hired to create the needed redundancy.

The contracted helicopters establish a FARP in a remote and safe area just distant enough from the target to not compromise the mission, as shown on Figure 11. This enables the Danish Air Force helicopters to refuel in case it is needed and provide several other benefits.

184 "Absalon Class Combat / Flexible Support Ship," Naval Technology, accessed November 1, 2017, http://www.naval-technology.com/projects/absalon/.

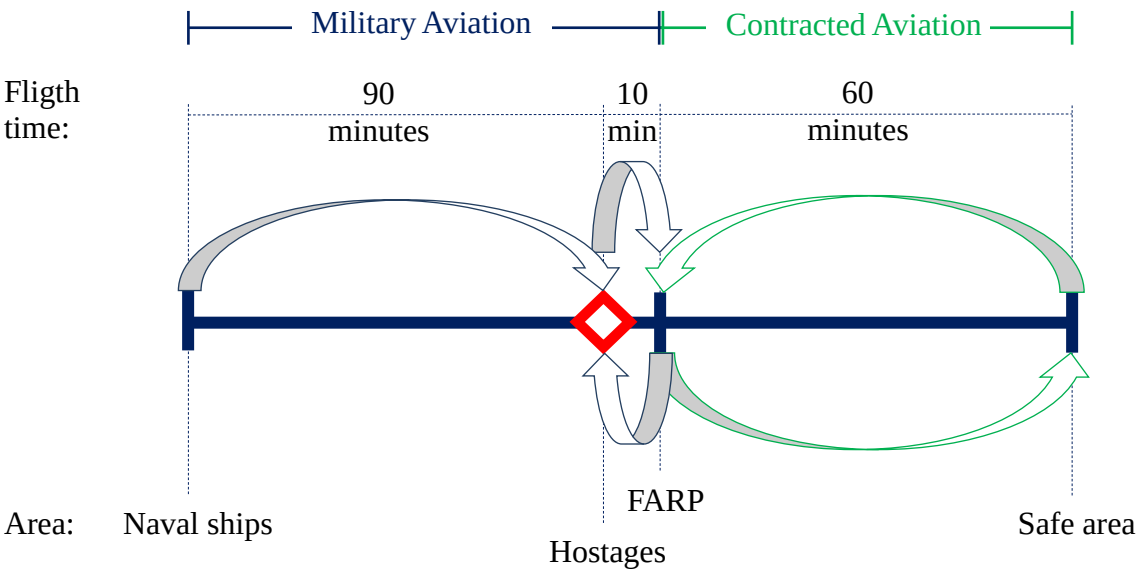


Figure 11. Simplified Overview of the Hostage Rescue Operation

If any of the Danish Air Force helicopters breaks down before the mission, and the assault team with the hostages cannot be carried out in one lift, the time between the lifts can be greatly reduced by only flying to the forward arming and refueling point and letting the contracted helicopters handle the further transport to the C-130. If the breakdown of a Danish Air Force helicopter occurs during the mission, one or two contracted helicopters can assist it and carry its crew and passengers, if needed.

To further increase the medical/casualty evacuation capacity, one dedicated contracted helicopter will either stay at the forward arming and refueling point or remain airborne in close proximity during the critical stages of the operation.

In case the Danish Air Force C-130s are grounded due to technical issues, the contracted helicopters can transport the assault team and the hostages all the way to Djibouti refueling point at either local air strips or by establishing further forward arming and refueling points depending on what is possible.

If everything goes exactly according to the plan, the contracted helicopters might not be involved in the mission at all. If they need to be used, on the other hand, they will primarily be used to solve tasks with the least amount of danger. Even though they only conduct safe tasks, coordination and precision will be critical to reduce overall risk. This

is why all of the helicopters will be assisted by Danish Air Force combat aviation advisors with communication to the Air Mission Commander. In addition, several of the tasks conducted by the contracted helicopters will require training and preparation that will need to be conducted prior to the operation.

The preceding vignette illustrates how a tactically and logistically demanding operation can be solved by letting contracted helicopters handle most of the logistical issues, enabling the military helicopters to almost solely focus on the tactical challenges. Further, the contracted helicopters can operate in the area prior to the mission causing much less suspicion compared to a similar number of military helicopters. If the Danish Air Force fully exploits the potential of combat aviation advisors by having these qualified to pilot the local helicopters, even greater efficiency can be achieved by letting Danish Air Force pilots fly a few of the civilian helicopters in conducting the most critical and demanding tasks.

## B. FICTIONAL NON-KINETIC CASE STUDY – AFRICA

> Denmark is at the forefront of the fight for an international set of laws and universal human rights. Denmark takes responsibility for contributing towards global peace and stability with humanitarian efforts, international military operations – also at the tip of the spear – in the prevention of terrorism and radicalization and as support to fragile states.
>
> — Ministry of Foreign Affairs of Denmark[185]

The Ministry of Foreign Affairs of Denmark is represented throughout the world through the Danish International Development Agency (DANIDA) Open Aid program depicted in Figure 12. This allows Denmark to strengthen and influence several countries in different regions of the world, ranging from Asia to the Americas, and Africa. Danish aid is an important Danish strategic tool to help ensure that the developing countries continue their development, thus creating more stable regions.

185 "Official Development Aid," Ministry of Foreign Affairs of Denmark, accessed November 1, 2017, http://openaid.um.dk/en/oda.

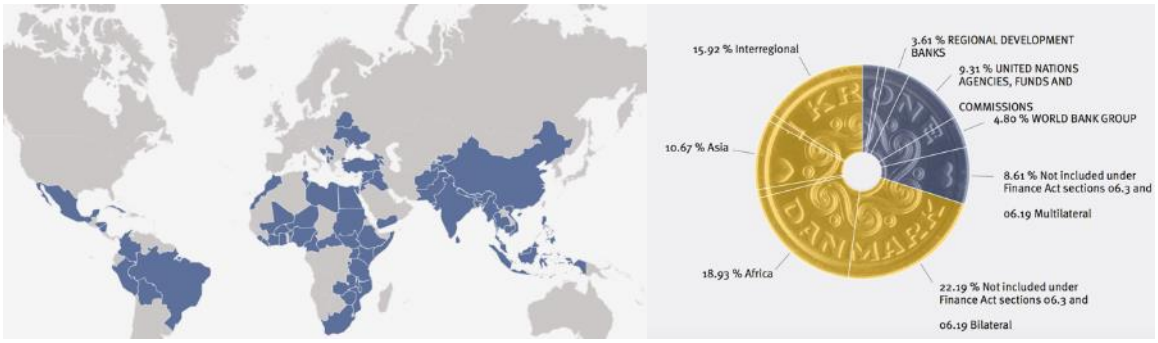


Figure 12. Countries where Danish International Development Agency (DANIDA) Open Aid Is Present[186]

Danish employees from the Ministry of Foreign Affairs require a relatively acceptable safety situation in order to operate in any given country. If the security situation deteriorates they will either require protection from security forces or be pulled out of the country. The following case demonstrates how an unconventional approach can safeguard the Danish strategic reach and ensure Danish influence in countries with a deteriorating security situation.

### 1. Situation

The Ministry of Foreign Affairs of Denmark is present in the African country XX. Here they are aiding the local government in establishing a well-functioning country with a focus on effective agriculture, distribution of humanitarian aid, energy generation, and the civil society. The country XX is extremely important for the stability and future development in the region. It has previously fallen victim to civil unrest and smaller insurgencies sponsored by more unstable neighboring countries. Nonetheless, the country is not deemed to be in need of a larger military intervention. One of XX's main challenges is access to clean water and food for its growing population. To combat these challenges Denmark decides to focus on water, agriculture, and humanitarian aid.

Unfortunately, and due to unforeseen external events, the security situation deteriorates throughout the country. In large parts of the country, bands of dissatisfied

186 "Official Development Aid."

farmers block the roads connecting the larger cities. They are dissatisfied with the slow process of getting food and clean water. The blockades only aggravate the situation since Danish supplies, machinery, and officials cannot get to the desired destination or are getting looted at the road blocks.

As the humanitarian situation worsens instances of violence ensue and are often aimed at government officials or nongovernmental organizations. Danish officials can therefore no longer operate safely throughout the country, and without the officials' ability to meet with the local elders and decision makers to request them to calm the dissatisfied groups, there is a real risk of the country ending in total chaos and violence.

In Denmark, the situation is analyzed and it is decided that the Danish officials from the Ministry of Foreign Affairs need military support in order to continue their work in relative safety. The task is given to the Danish Special Operations Command.

The freedom of movement is of the essence if the Danish officials are to be successful in reaching the far corners of this huge African country. The political leadership in both Denmark and XX will only support a small group of security personnel and advisors since the presence of a foreign air force or larger contingent of armed forces is believed likely to escalate the already worsened situation in XX.

Danish Defence decides that in order for the Danish officials and their security personnel to safely travel the country, they need at least two transport helicopters. One helicopter for the primary team and an additional helicopter for the quick reaction force/backup team. The air force of XX has a few old transport helicopters, but they are all used for transporting humanitarian aid.

Therefore, Danish Defence decides to lease two MI-17 helicopters with crews from a helicopter company in a neighboring African nation. This helicopter company has no previous experience in operating with SOF but has no limitations as to what the Danish forces can use them for. To secure common planning, operational security, and a habitual relationship, the Danish Air Force deploys a small group of SOF airmen/combat aviation advisors together with the ground SOF from the Danish Special Operations Command. The combat aviation advisor team is co-located and embedded with the SOF

and consists of two pilots, two navigators, and one flight technician. The job for the combat aviation advisors is to make sure the ground SOF gets air mobility at the right time at the right place and that tactical military aviation considerations are taken into account. Furthermore, the Danish combat aviation advisors will fly jump-seat in order to monitor and command the air operation.

The Danish officials and their security detachment are now capable of training, planning, executing, and sustaining continued Danish presence and influence in the country of XX.

The scenario will not be discussed further but serves as an example of how third-party air power coupled with a team of SOF airmen/combat aviation advisors can be used as a force multiplier and increase and sustain the Danish strategical reach.

## C. BOLIVIA CASE STUDY- COUNTER NARCOTICS

> The overall vision for Denmark's partnership with Bolivia over the next five years is to contribute to a democratic and inclusive sustainable development that reduces poverty and promotes human rights. Through collaboration with the Bolivian Government, civil society and the private sector this will happen by promoting a broad set of human rights focusing directly on economic rights related to growth and job creation as well as civil and political rights. . . Although coca production is falling, due to Bolivia's own efforts and international cooperation, the fact that cocaine production and transit trade is increasing is a major regional and international concern.
>
> — Ministry of Foreign Affairs of Denmark[187]

Denmark is seeking influence and presence in South America in order to stabilize and develop the region. Since the relationship between Bolivia and the United States deteriorated, the EU has entered the scene.

[187] "Challenges Opportunities and Risks," Ministry of Foreign Affairs of Denmark, accessed November 1, 2017, http://um.dk/en/danida-en/goals/country-policies/bolivia/challenges-opportunities-and-risks/.

Danish aid and assistance is primarily aimed at economic development and promotion of human rights in Bolivia.[188] It is acknowledged that the manufacture and trafficking of illegal drugs and its negative effect on regional stability and development is still of international concern.

In the following scenario, the Danish Government has agreed to aid the Bolivian police and Special Forces in their continued counternarcotics effort. This capstone does not take diplomatic implications into account but is using Bolivia as an example due to its distance from Denmark. Denmark also has an aid and development strategy on Bolivia, but the example could apply to any country in any of the regions that Denmark seeks to develop and assist.

Since operation *Snowcap* (1987–1994) where the United States provided extensive military assistance to the Latin American counternarcotics effort, the Bolivian military and police have improved their skills—especially in air operations flying with night vision goggles.[189] Even so, there is still a need for continued training and development of tactics.

The Danish helicopter SOF capable crews are all cooperating extensively with the Danish SOF and special police. This habitual relationship and joint tactics is what the Bolivian Special forces are interested in.

### 1. Situation

The Danish Air Force is given the task of creating a small team of advisors in order to assess the Bolivian capabilities and develop future Military Assistance to Bolivia.

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188 "Challenges Opportunities and Risks."

189 *Operation Snowcap: Past, Present, and Future: Hearing before the Committee on Foreign Affairs*, House of Representatives, 101st Cong., 2nd sess., May 23, 1990, 4–11, http://hdl.handle.net/2027/pur1.32754077266819.

The Danish Air Military Assistance team consists of two pilots, one navigator, one loadmaster, one flight technician, 1one Air Mission planner, and one logistical expert. The duration of the mission will be six to twelve months.

The counter-narcotics effort is performed using of the country's own air capabilities and with no direct involvement of Danish military personnel. The task for the Danish Military Assistance team is training of the Bolivian Air Force to maintain their capabilities in order to be mission ready, and to synchronize land and air special operations planning and allocation cycles. The efforts should also continue the Bolivian training on conducting night missions flying with night vision goggles, focusing on close combat attack, air interdiction, personal recovery, ISR, and casualty evacuation. The Danish Military Assistance team will also train the Bolivian forces on how to incorporate the use of drones in their missions and how to de-conflict with other air assets. Another important task for the Danish Military Assistance team and part of the overall Danish strategy is the focus on human rights and their implementation in military operations.

By continued Military Assistance to Bolivia, Denmark has the ability to strengthen the battle against drugs and assist the Bolivian armed forces to focus on human rights, which will strengthen the legitimacy of the Bolivian government. Moreover, through the use of Danish combat aviation advisors Denmark has extended its strategic reach without deploying any military hardware.

# VII. CONCLUSION

If the Royal Danish Air Force is to be seen as an integrated part of special operations within the Danish Special Operations Command, the SOF units, and especially within the Air Force itself, a comprehensive and joint approach is needed. In the Air Force, it is particularly important not to focus solely on extremely expensive units and technology, but to embrace the SOF truth: "Humans are more important than hardware."[190] It is important to acknowledge that it is not simply a matter of whether the Air Force is using highly specialized and extremely expensive aircraft in order for the mission or operation to be "special." Throughout history airmen have conducted special operations in conventional aircraft and thereby proven that it is not only a matter of high-end technology or a question of the size of the military budget.[191] It is not only a parochial debate about more flight hours, better electro-optical sensors, and better performing aircraft. Instead what is needed is a change of mindset, to one that understands how to create the special or the unexpected, and how to complete the task with limited resources and capabilities.[192] This capstone, among others, argues that being "special" does not necessarily require increased spending.

In order for the Danish Air Force to effectively cover all aspects of the special operations continuum and special operations doctrine, it requires an increased focus on Military Assistance. The successful establishment of the Afghan Special Mission Wing provides an instructive example of Military Assistance, it is most likely too big and too expensive an operation for Denmark to carry out alone. Nevertheless, Denmark could participate in similar operations, such as the one led by the 6th Special Operations Squadron or its counterparts, thereby contributing to mitigate the shortage of special operations aviation.

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[190] "SOF Truths," USSOCOM.mil, accessed November 1, 2017, http://www.socom.mil/about/sof-truths.

[191] Newton, *Special Operation Aviation in NATO. A Vector to the Future*, VII.

[192] Richard D. Newton, email correspondence with the authors, February 2017.

In addition, the Danish Air Force needs to further exploit the unconventional means of transportation as mentioned in AJP-3.5. One approach is the use of contracted air either alone or in support of other assets. While combat aviation advisors' main focus is on military aircrews, their skills are also beneficial when using contracted air, as indicated in Figure 13.

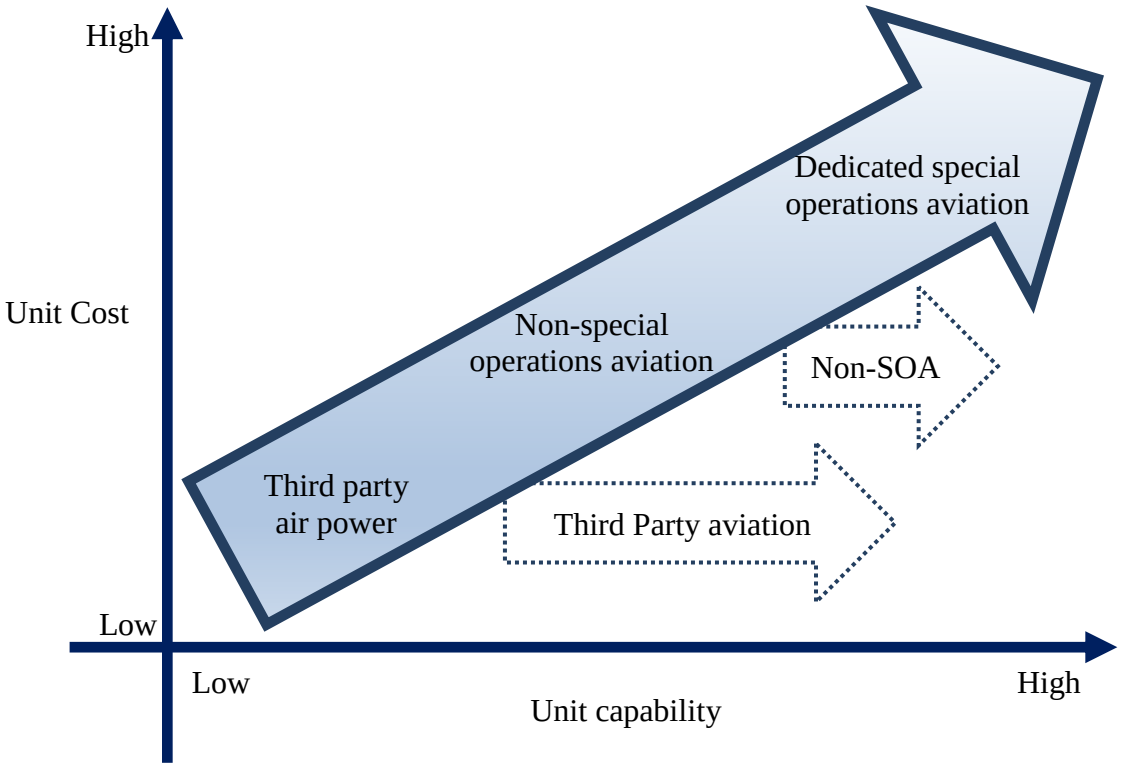


Figure 13. Mitigating the Shortage of Special Operations Aviation

The vignettes invite the reader to see what potential lies unused within the Royal Danish Air Force. With a change of mindset and more focused training, Danish Combat Aviation Advisors will be able to carry out Military Assistance to non-special operations aviation units or contracted aviation in order to heighten the quality of these capabilities such that they can be used in Danish Special Operations.

The establishment of Danish combat aviation advisors will not only mitigate the shortage of special operations aviation and increase the Danish Defence SOF potential, but also increase Denmark's strategic reach.

## A. SUGGESTIONS FOR IMPLEMENTATION

Implementing combat aviation advisors within the Danish defense organization requires a military leadership-centric debate. Furthermore, it requires a business case to examine where the Danish defense structure would benefit most from the placement of this capability. The following section discusses a possible future implementation and the pros and cons of the different options.

### 1. Special Operations Command

Placing a unit of combat aviation advisors under the Danish Special Operations Command would create synergy among the land, maritime, and air SOF. On the other hand, the lack of connection to the Danish Air Force could possibly create friction and distance the combat aviation advisors from their field of expertise. Instead this study suggests that Special Operations Command should focus on strengthening their staff's air expertise. As of now, only one officer with a transport pilot background is serving in the Special Operations Command staff. Allowing more officers with flying background to serve in the Special Operations Command would increase knowledge and acceptance of special air operations, decrease compartmentalization, and would most likely increase the Special Operations Command's ability to conduct multi domain special operations.

### 2. Danish Air Force Expeditionary Air Staff

The Expeditionary Air Staff is the Danish Air Force's air operations center of knowledge. It trains and deploys personnel to international operations and exercises. The Expeditionary Air Staff has a special operations section that cooperates with the Special Operations Command and the Danish and international SOF units in order to enable management and integration of aviation in special operations. Furthermore, it is responsible for setting up the SOATG.

The special operations section is very important for the future debate and implementation of the combat aviation advisors into the Danish defense organization. Ideally the section would consist of both fixed and rotary wing experts and it would be able to connect the air SOF expertise with the Special Operations Command.

It does, however, require a change of mindset in the Expeditionary Air Staff in order to fully embrace the unconventional approach. So far, the section focuses on managing and integrating existing aviation capabilities into special operations via the SOATG that is trained to manage special operations air task units. By embracing the unconventional approach, the special operations section could function as a driver and coordinator of the future debate and implementation of combat aviation advisors within the Danish defense structure.

### 3. Royal Danish Air Force Wings

All wings within the Danish Air Force are supporting the Danish special operations. Specifically, the Transport Wing and the Helicopter Wing are focused on special operations and have SOF-capable air crews embedded in their squadrons.

In the short term, it would be possible to take the SOF-capable crews from the squadrons and train them to be combat aviation advisors on specific missions that require limited training in advance and sustainability in terms of time. The air crews are already face an enormous workload, though, and adding combat aviation advisor responsibilities to their operational continuum seems unrealistic. In the long term, it would be possible to strengthen the squadrons with extra crews that could enable the squadrons to participate in combat aviation advisor missions led, for instance, by the U.S. 6th Special Operations Squadron.

As an example, the 724 Squadron in the Helicopter Wing could be tasked with creating combat aviation advisors. It is already focused on special operations and has its own flight instructors that are SOF capable. On a short-term basis, the squadron is not deemed robust enough in terms of air crews and technicians, and due to new domestic counterterrorist tasks. However, on a long-term basis it would be possible to strengthen the squadron with extra personnel in order to enable the establishment of rotary wing combat aviation advisors. The air crews have all at least flown five to six months on fixed wing, as well as several years of rotary wing flying on at least three different types of helicopters, including the UH-72 Lakota/TH 67 Creek, the UH-60 Black Hawk, and the AS550 C2 Fennec helicopter. This means they are used to, and capable of, adapting to

new airframes. Several of the instructor pilots have additional fixed wing jet experience. Both the navigators and pilots go through NATO Special Operations Headquarters aviation planning courses.

A squadron of this type would be ideal to stand up a combat aviation advisor flight if it is given the sustainability in terms of extra crews. Furthermore, a combat aviation advisor flight would be able to attract seasoned airmen that otherwise would seek jobs away from flying. As combat aviation advisors, they could still bring their expertise to play training and advising others.

### 4. Royal Danish Air Force Flying School

The Royal Danish Air Force Flying School is a special and interesting construct. It is tasked with a five to six month selection course of student pilots before the selected ones are sent to the United States to continue their training. The school is also tasked with the training of crewmen who are going to fly on C-130s or helicopters. The pool of instructors comes from helicopters, transport planes, and fighters. They all fly the T-17 Saab Supporter fixed wing trainer aircraft. This pilot diversity makes this unit very interesting from a combat aviation advisor perspective. All pilots are instructors, and they come with a lot of flying experience and have been trained on several aircraft already. This could make them ideal for combat aviation advisor missions given the extra training.

As with the other units, the Royal Danish Air Force Flying School would need extra personnel in order to be able to sustain the training and deployment of aircrews in the combat aviation advisor role.

### 5. Robustness and Training

Overall, the Royal Danish Air Force contains the units, the manpower, and the expertise to create a combat aviation advisor capability. Common for all the units is the need for additional robustness in terms of crews to sustain the training and deployment of combat aviation advisors. Concerning training and education, it is important to note that the Mi-16 combat aviation advisors in the Special Mission Wing were experienced pilots. But they were not necessarily instructors, nor did they have specific combat aviation

advisor education or come from the same unit. Despite this, they still made it possible to use the Afghan Mi-17's in combat operations. The optimal solution, however, is the use of already experienced instructors coming from the same dedicated unit as seen in the 6th Special Operations Squadron case. In addition, dedicated combat aviation advisor education and training would be beneficial. This could partly be conducted in Denmark and partly within the 6th Special Operations Squadron to increase knowledge sharing and establish a relationship that would be beneficial when working in alliances.

# VIII. DISCUSSION

During the research, the authors met several counter-arguments to the use of Air Military Assistance and contracted air. These have been summarized into five overall arguments, and each of them will be addressed in this chapter.

## A. WILL DANISH POLITICIANS COMMIT TO THE LONG DURATION OF AIR MILITARY ASSISTANCE?

As mentioned in both the Special Mission Wing case study in Chapter IV and in Chapter V in the section about the Royal Danish Air Force short- and long-term possibilities, commitment and persistence are critical to achieve success when conducting Air Military Assistance. Critics may argue that Danish politicians would never commit to an Air Military Assistance task since the case of the Special Mission Wing has shown that ten years of commitment might not even be enough. Instead, Danish politicians prefer short-term approaches where they can shift focus quickly to maintain flexibility.

While this argument illustrates that there are areas not suitable for Denmark, it does not consider the cases that could be appropriate for Denmark. In the case of the Special Mission Wing, an air force had to be established almost from the ground up. As mentioned, this is not a task that can be solved unilaterally by Denmark. However, to counter the argument, Denmark could participate in alliances solving similar tasks. Further, not all cases are as demanding as that of the Special Mission Wing. There might be examples where the host nation's air force pays more attention to flying with VIPs that determine their funding and promotions rather than supporting the ground troops fighting the problems of the nation. In these cases, the combat aviation advisors and staff personnel addressing the host nation's organization might be enough to shift their focus, improve the necessary tactical air skills, and liaise with the ground troops. Here, the combat aviation advisors might achieve a measurable effect in only a few months.

In cases where relatively well-functioning air units already exist and the capability gap to conduct the requested tasks is relatively small and specific, the combat

aviation advisors might be able to achieve measurable effects within only a weeks, by addressing the host nation's capability gap, as illustrated in Figure 14.

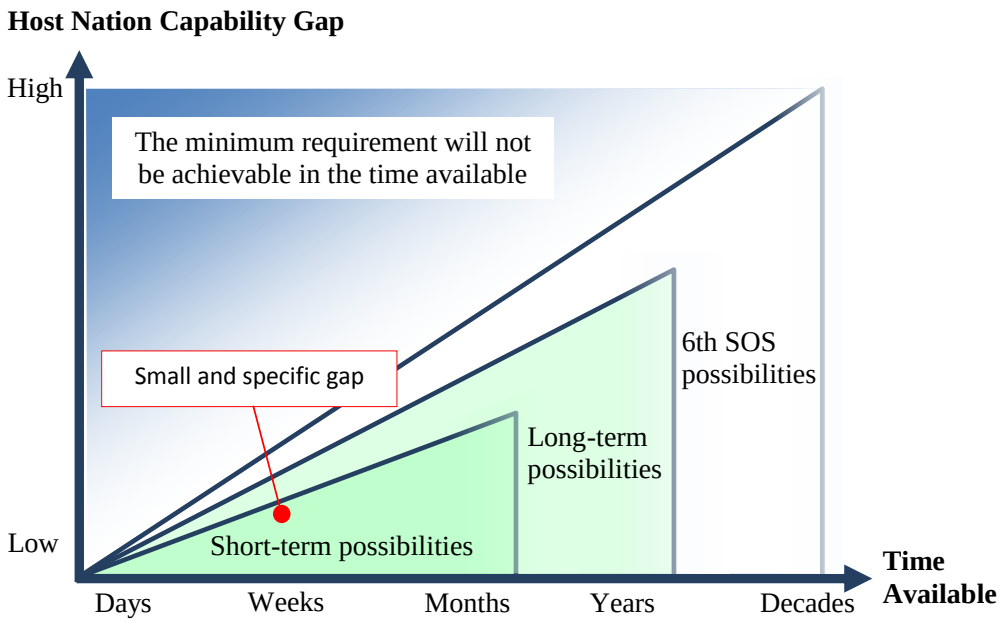


Figure 14. Danish Possibilities in the Short- and Long-Term, Depending on the Time Available and the Host Nation Capability Gap for the Specific Task/Mission

In many cases, on the other hand, the needed duration will be either months or years. In these examples the "Time Available," as indicated on the graph in Figure 14, should take the political commitment into account when comparing the estimated capability gap. If the estimated gap requires several years to address and thereby passes a government election, the political commitment to the mission should preferably exist in both political left and right wings before the mission is initiated. Alternatively, it will only get as good as the time available permits.

Danish military missions lasting several years and even decades have not been uncommon. There is a difference, however, between actively showing several years of commitment before the mission starts and passively staying several years because the end state has not been achieved or has changed during the mission. But the recent ground

Military Assistance mission in Afghanistan does indicate a political willingness to commit to missions knowing they will last several years.

To conclude the counterargument, political willingness to start long duration missions has occurred before, and it is important to remember that not all Air Military Assistance missions need last several years or even decades. There will be cases where combat aviation advisors cannot fill the capability gap within the duration of the political commitment, but there will also be cases where the political commitment exceeds the minimum time required, making Air Military Assistance a feasible solution.

## B. CAN AIR MILITARY ASSISTANCE PROVIDE A FAST-ENOUGH EFFECT?

Crises often occur faster than security capabilities can adapt. Critics may argue that the effect combat aviation advisors can produce is too slow and will therefore seldom be able to address the evolving need before it is too late.

Unless facing a small and specific problem, it will take time to achieve an effect through Military Assistance. There are two ways to mitigate this. The first way is to start earlier. Since the combat aviation advisors and Military Assistance in general have a small political footprint and, in most cases, are relatively inexpensive to conduct, it will be easier to commit to the task earlier. The second way to mitigate the issue is to bridge the gap by using own (or alliance) units for air support until the needed host nation capacity has been established, as illustrated in Figure 15.

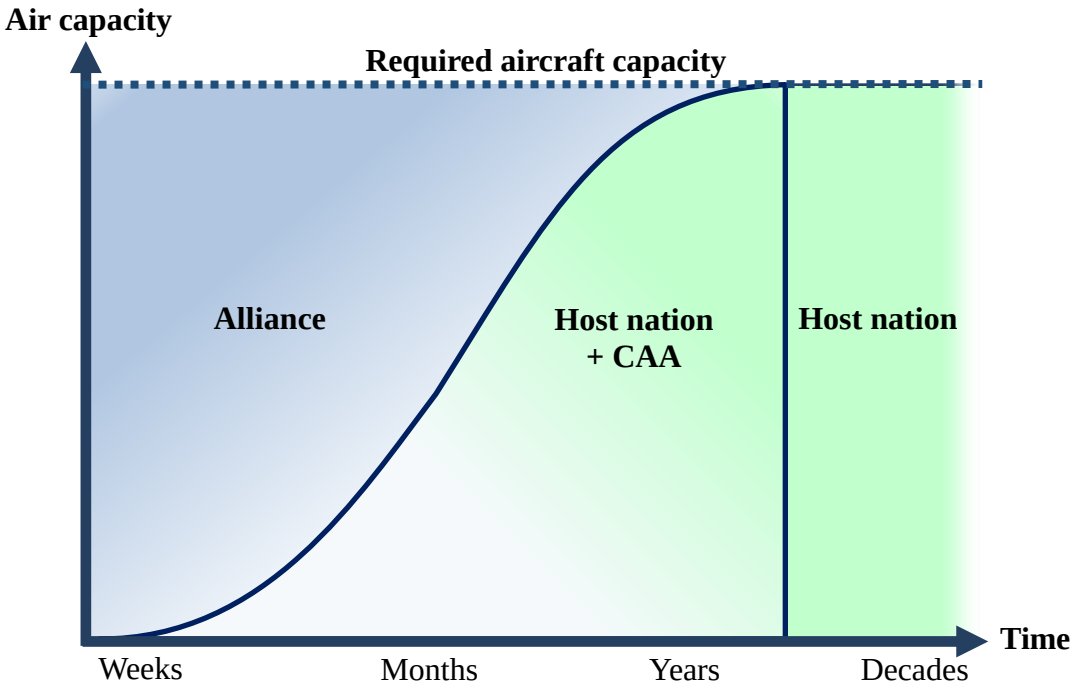


Figure 15. Using Alliance Assets to Bridge the Initial Gap

To conclude the counterargument, it is true that the combat aviation advisors provide a slowly increasing effect rather than an instant effect. If this does not address the required need, additional alliance or contracted aircraft can bridge the gap until the host nation's aircraft are capable on their own. When the host nation aircraft take over after a while, they provide an exit possibility for the alliance aircraft. Even though the combat aviation advisors and host nation aircraft cannot alone address the initial need, the Air Military Assistance mission is absolutely relevant to start as soon as possible.

## C. WILL HOST-NATION AIR BE SUFFICIENT TO SOLVE HIGH-RISK MISSIONS?

When a Western nation supports a country dealing with an internal or external threat, the stakes of the two parties are different. The local government's continued existence might depend on success while the Western government most likely will only experience minor setbacks in case of a failure. Due to these differences, the willingness to accept risk to each's own troops will be lower in the Western nation compared to the

local country. Critics may argue that the difference in risk willingness will make it impossible for Western personnel to join the missions.

Conversely, while it is correct that the local forces' overall willingness to accept risk might be higher than that of the Danish forces, their willingness to accept loss of aircraft is much lower. Since aircraft are expensive assets in low numbers and provide huge tactical benefits, it is unlikely that the local leadership would risk the aircraft by letting them conduct tasks they are not capable of. This means that the Danish willingness to accept loss of the combat aviation advisors will not vary significantly to the host nation's willingness to accept loss of aircraft. It also means that the host nation's aircraft most likely will not conduct the high-risk missions before they are capable of it.

To sum up, the combat aviation advisors will be able to join the host nation aircraft in almost every mission, but the host nation aircraft will most likely not be able to solve the high-risk missions if their capabilities do not allow it. If this gap is to be filled, alliance aircraft will be needed until the host nation's aircraft have the sufficient capabilities.

## D. WHY NOT CREATE MORE MILITARY UNITS INSTEAD?

Both the use of contracted air and establishment of combat aviation advisors will require resources and contributes cost. None of these approaches, it should be pointed out, provides deterrence to an external existential threat against Denmark. Critics may argue that the resources would be better spent by creating more military units instead that could both mitigate the shortage of special operations aviation and provide deterrence at the same time.

Undoubtedly, having one's own organic special operations aviation capabilities would be preferable in most special operations. But as pointed out in the Uganda case study, the U.S. SOF experienced negative side effects when using U.S. special operations aviation units. The U.S. aircraft were often too large and had a negative impact on the fragile local infrastructure. Furthermore, they were too conspicuous and got unwanted attention from the local population. This was mitigated by the use of smaller and less conspicuous civilian aircraft.

Even the U.S. military, which has an extraordinarily higher percentage of gross domestic product spent on it in comparison to what European militaries receive from their respective nations, is experiencing a shortage of special operations aviation. In addition to this shortage, the U.S. military did not have suitable aircraft for the fragile local infrastructure in Uganda. This indicates that it is not a question of extra funding. European military budgets do not need to be unrealistically increased in order to mitigate the shortage and nor do they have to create additional aviation units to provide the needed diversity. It is important to acknowledge that contracted aviation contributes cost, but these costs are event driven compared to the continued cost of creating new military aviation units.

Concerning the deterrence aspect, it is correct that the suggested approaches of this study will not provide any substantial effect in case of a full-scale war. However, in the prior phases of a conflict with lower intensity, these approaches are very applicable and may contribute to avoiding a full-scale war. Many special operations do not take place in high intensity and high threat environments, but air mobility and ISR are still required to strengthen the SOF effort. Most often these types of operations are not granted generic Royal Danish Air Force air support, thus creating a need for additional solutions to mitigate the lack of air support. This study suggests that contracted air supported by combat aviation advisors can serve as an almost plug and play solution to increase reach, increase robustness, and more importantly, limit the risk for the ground SOF.

## E. WILL THE NEGATIVE DANISH PERCEPTION OF MERCENARIES DENY THE USE OF CONTRACTORS?

Critics may argue that the Danish public perception of using contractors or "mercenaries" is mainly negative and will possibly prohibit the Danish defense organization from using contractors.

With reference to the previously mentioned problems encountered by the Danish government in communicating with Blackwater, we acknowledgeable that the use of contractors can be very controversial in countries like Denmark. This makes a military and political leadership centric debate and further studies of the strategic and tactical

possibilities all the more important. Our capstone aims to serve as a platform for further debate and further studies. Our capstone has pointed to areas of special operations where contracted aviation could strengthen the Danish military effort and increase the Danish strategic reach. Not every special operation is taking place in a high intensity and high threat environment. In these types of operations, contracted aviation combined with combat aviation advisors can provide extended reach and robustness to the operation. This further points to the necessity of creating procedures for and training with contracted aviation before the need arises. This would streamline the acquisition process, mitigate negative press coverage, and minimize delay.

In particular, there are companies currently offering kinetic options, but these options are proving to be challenging from a legal perspective. In support of U.S. operations not covered in detail by this capstone, the contracted ISR platforms have not been allowed to conduct target designation. This has sometimes been mitigated by allowing U.S. military personnel to operate in the contracted platforms and thereby give the operation the necessary military authority. Through conversation with Danish legal advisors from the Royal Danish Air Force and the Special Operations Command it has also been made clear that kinetic operations present a very difficult case and would require a separate study focused on this issue. Therefore, this capstone found an analysis of contracted kinetic capabilities premature in a Danish context. On the other hand, through the vignettes this study shows that contracted air can still provide a substantial contribution to possible Danish special operations without being kinetic.

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