

## **Report Working Group 1**

# **Capability Gaps, Knowledge Gaps, and Data Gaps in the Collaboration in Comprehensive Approaches to Operations**

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### **ABSTRACT**

*NATO-HFM-204 RWS on “Effective Collaboration in Joint Multinational Multiagency Teams and Staffs” met in Toronto, Canada on 4-6 Oct 2010 to discuss advances in understanding the comprehensive approach (CA) to operations. Our working group (Group 1) was tasked with finding gaps regarding CA. In this paper we briefly introduce the idea of CA and identify three kinds of gaps: capability gaps, knowledge gaps, and data gaps. We explore some of these areas and suggest some starting points for future work.*

### **1.0 INTRODUCTION**

NATO-HFM-204 RWS on “Effective Collaboration in Joint Multinational Multiagency Teams and Staffs” met in Toronto, Canada on 4-6 Oct 2010. Four working groups on the Comprehensive Approach (CA) were created to help define different aspects of the CA. Group 1 was tasked with defining the gaps within the CA. The goal of the discussion was to identify what is currently known about the CA, what is unknown, and consider which research areas may be consulted to further progress the knowledge and build a common understanding of what the CA entails and what challenges it produces.

There is a wide variety of working definitions and no common terminology with regards to the CA within NATO. The plethora of existing related or similar terms that incorporate some of the principles behind CA make it challenging to define and operationalize. In Oct 08, an Ad Hoc Study Group (AHSG) stood up to “identify potential opportunities for TTCP collaboration on the Comprehensive Approach and make recommendations to the TTCP Principals as to how this collaboration may be developed and managed” (DOC-AHSGS&T4CA-2-2009). The report produced by the study group summarized each participating country’s current national understanding of the CA and developed a common working definition of the CA which states that:

*A Comprehensive Approach to operations is the engagement of a diverse range of actors to assess, plan, implement, and evaluate efforts to resolve complex problems in a cross-domain, multi-disciplinary, complementary, and coherent fashion.*

Within NATO countries, there is a wide variety of concepts that address the idea of collaborative operations that include the military, other government departments (OGD), non-governmental organisations (NGOs), industry, and so on. Some of these concepts include the Whole of Government approach, Smart Power approach, Effects Based Approach to Operations, Counter Insurgency, and the Joint Interagency Multinational and Public approach. Recently, the need has been identified for a unified approach that encompasses the principles behind all of the above. The vision behind the CA is to achieve operational effectiveness by having multiple organisations work in synchrony toward a common goal through alignment of their own mandates, structures, processes and activities.

Modern operations are usually characterized by complex and volatile, constantly evolving relationships among the stakeholders. At times it is not even clear who all the stakeholders are, what they are trying to accomplish, and how. Different planning timelines, operational tempos, and geographic distance further impede communication and situational awareness, resulting in insufficient coordination of efforts. In addition, different operational environments can impose different requirements that define the goals and dictate the approach. For example, the roles of parties involved are different depending on whether the environment is permissive relative to non-permissive, or in fixed-timeline versus open-ended operations. Hence, there is an obvious need to define a robust framework that will outline how the different stakeholders can work more effectively together within volatile environments and across different operational contexts. The idea is to capitalize on the capabilities of each stakeholder by acting in a coordinated, coherent, cooperative and collaborative manner (DOC-AHSGS&T4CA-2-2009). The intent is to have multiple stakeholders acting as a single unified group with compatible goals and effective communication.

Although the intentions behind the CA and the actions required to achieve them seem valid when taken at face value, it is important to note that there is an assumption that a unified approach would be the best approach. In fact, there are certain downsides when a unified approach is taken to extremes. For example, when functioning in this manner, teams may find that they have to abandon certain goals, principles or procedures in order to function as part of the larger team. Another downside is that unified teams have certain dynamics that may be counterproductive. Some of these dynamics include groupthink, conformity, and lack of flexibility. Hence, attempting to apply CA can be extremely complex. Organisations will have to change in order to collaborate while retaining their internal goals, constraints and capabilities. For instance, in an expeditionary operation, an NGO's mandate could be to supply humanitarian aid to anyone in need, including the enemies of the coalition force. In another example, an NGO may not want to appear to be collaborating with a military force. A third example may be an OGD who might have political goals that are inconsistent with military or NGO goals. These examples not only speak to the depth of the complexities involved in the CA but also demonstrate some of the hard problems that have to be solved.

Due to the complexity of the real-life problem, a better understanding of the intricacies involved is necessary to define and implement the CA. The solution will require research in a wide variety of domains. Some of the variables to be considered are necessarily in the social, economic, ethical, religious and political realms and require a deep understanding of these areas. Like the CA itself, research in these areas will require a multidisciplinary approach.

## **2.0 TYPES OF GAPS**

Three types of gaps regarding the CA were identified: capability, knowledge and data gaps. Capability gaps refer to gaps in operational ability to attain relevant goals. Knowledge gaps refer to gaps in our collective understanding of how to attain relevant goals. Data gaps refer to our lack of empirically based practical knowledge about what works or has worked in the past.

## **2.1 CAPABILITY GAPS**

The lack of clarity about the NATO mandate is one of the main issues identified as a capability gap. There are various roles that NATO can take in any given operation, such as combat, humanitarian, training the existing security forces, or assisting in development efforts. Historically, it is not uncommon for the mission mandate to change throughout an operation, which affects the scope of the operation and may create situations where there are insufficient resources for completion of the new tasks. Similarly, insufficient coordination of national and international resources may prevent deployment of resources in an effective or timely manner. Different political agendas, incompatible objectives among stakeholders, and different organisational structures only complicate the problem (Thompson & Gill, 2010). In addition, the lack of standard measures of effectiveness and/or standardized metrics and benchmarks makes it difficult to assess operational success. It is not always clear what defines success and whether operational goals are indeed achieved. Mission effectiveness needs to be assessed in an objective manner to ensure that mission outcomes are consistent with strategic goals and objectives. Rotations cause another capability gap; the massive change in personnel requires re-establishment of procedures, relationships, and situational awareness with each rotation – and the degree of effort required to counteract this depends on the organisation’s ability to transfer knowledge and use best practices and lessons learned. An extended presence for long periods of time may be necessary to ensure that mission outcomes do not become only transient successes.

## **2.2 KNOWLEDGE GAPS**

First and foremost, there is a lack of clarity about how best to transition from one role to another, or how to transfer responsibilities among stakeholders. This can result in “mission creep” (i.e., when a group acquires additional responsibilities and their secondary taskings become their primary role). Traditionally, the common approach in any given operation is to have the military lead. Militaries are hierarchical organizations with a formalized chain of command and control, clear objectives and actions, and specific measures of effectiveness. However, these characteristics may at times make it difficult to reconcile with the needs of a CA (DOC-AHSGS&T4CA-2-2009); furthermore, other agencies with less rigid structures and processes may indeed be better positioned or better suited to take the leadership role. In addition, the choice of the leading agency would also depend on the operational context, mission goals, and the agency’s capabilities. It is conceivable that a more horizontal approach focusing on unity of effort rather than the unity of command may be more suitable to some operational contexts than others.

Another knowledge gap identified is related to the training of military personnel and/or other actors about the CA. Identifying and maintaining a database of relevant skills, developing a curriculum appropriate for their role and position, and ensuring that personnel are motivated to adopt the approach, are among some of the considerations discussed. To date, it is not clear whether there is a certain specialist skillset or a set of common skills that enables persons to perform well as “boundary spanners.” Certainly, knowledge about the stakeholder or experience in the particular field would be beneficial, but there may be personality traits that allow the person to work well in such an environment. Flexibility, adaptability, good interpersonal and conflict management skills are only some of the desirable characteristics that these personnel would likely require. Another, related issue is creating interest and demonstrating benefits of the CA approach to other stakeholders, as well as the host nation. In order to implement the CA successfully, all stakeholders need to understand and endorse the approach. This may at times be difficult to accomplish, especially in situations when there are conflicting goals, or when a solution to one problem only creates another problem in the long term (e.g., providing monetary assistance in the short term may have a negative impact on the state’s economy in the long term). Establishing effective communication channels and personal relationships, and understanding each group’s capabilities and limitations, are all necessary in order to successfully implement the CA and to achieve mission effectiveness.

Other concerns about the knowledge gaps have been raised regarding the structure of the approach itself. There is yet no agreement about whether it should be a unified framework that is adaptable to different operational contexts, or whether the approach taken should be unique to each mission (e.g., depending on the operational environment, such as permissive vs. non-permissive). Similarly, it is not clear whether a centralized or a de-centralized model would be most appropriate. It is possible that the hybrid approach would work best, one that contains some common aspects in addition to customizable components suited for a specific mission. However, it is unclear what these aspects or components would be, or how they should be defined or characterized.

## **2.3 DATA GAPS**

Generating empirically based knowledge ultimately depends on collecting and analyzing existing data. Although the goal in using CA is to have a positive impact on large populations by coordinating many complex organisations, there is no ownership from any party in particular for collecting and collating relevant data. In addition, it is not necessarily clear what needs to be recorded or how, as there is no one dedicated agency with the mandate to plan and execute the data collection strategy. As a result, the available data are sparse. Yet, there is growing recognition of the need to acquire knowledge about specific agencies and to developing a repository that can be used across operations. There is no widely shared consensus yet about what data this repository should contain, or about whether the data should be based on relevant/key individuals or the organisation's characteristics. A clear defensible approach needs to be developed to identify the leading agency in this effort and to create a plan for data collection and analysis. The acquired knowledge could also assist in developing and adopting performance measures and measures of effectiveness.

Another data gap requiring more thorough consideration is the impact that the CA may have on the host nation's culture, especially with regards to the ethical and moral dilemmas in sensitive situations. In particular, this issue pertains to cases where there is a conflict between, for instance, western democratic values and those of the host nation's. In such cases, the question is whether imposing such values as opposed to adapting them to the host nation's values would produce a more desirable outcome. More data and more research are required in such areas.

All of the above identified knowledge gaps are ultimately the result of a lack of data on the parameters and functions of a working CA environment at the strategic, operational and tactical levels. These data can only be collected through observation and from case studies, both historical and current. One promising approach is studying historical cases where nation building has been successful. For instance, the Malaysia Crisis and the rebuilding of Japan after the Second World War (see Hyrchuck & Gizewski, 2010) are excellent examples of where allies were able to successfully improve another nation's wellbeing and stability. The modern society, economy, and culture, may require a different approach to world problems today, since our militaries are relatively smaller in number and we can no longer make changes by using overwhelming force. However, it is possible that there are lessons learned from these past experiences that can be applied to the current context. Once available, these data could be used to better understand what is involved in various phases of CA, such as planning, execution, validation, and so on.

## **3.0 CONCLUSION**

We briefly described the wide variety of operations that could benefit from CA. We also noted that these operations are not straightforward and require not only rethinking how NATO operations are currently run but conducting research into what the best practices should be. We described three kinds of gaps: capability gaps, knowledge gaps and data gaps.

Capability gaps refer to problems that NATO countries have when attempting complex operations. These gaps include confusion regarding mission mandate and the roles of the various players involved, coordination among players, appropriate measures of effectiveness, and maintaining capabilities across rotations.

Knowledge gaps refer to our collective lack of knowledge about how to conduct CA. Specific issues include: how to balance responsibilities among players, what command and control structures are the most appropriate, what knowledge bases can be leveraged, and what skill sets are required for individuals involved. On an even more abstract level it is unclear what general framework should be used to understand and model the CA; we also do not know what techniques should be used to get other players to adopt the CA.

Data gaps refer to a lack of empirical information from which we can derive the appropriate knowledge. In order to produce the desired data we first need to choose an appropriate framework and data representation scheme. Appropriate measures must also be developed in order to capture data. Finally, we suggest that when the appropriate data are not available to determine best practices for current operations, historical examples be exploited.

Because the concept of the CA involves the interaction of diverse players with potentially conflicting goals in a complex dynamic environment, best practices are unclear. We support an empirical approach to research emphasizing data derived from human-in-the-loop experiments, data from operations (both current and historical), and models and frameworks that can be shown to be valid and applicable in the real world.

#### **4.0 REFERENCES**

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