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Managing military involvement in emergency preparedness in developed countries

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Abstract

Purpose – The study analysed Supply Chain Network Management (SCNM) in the context of Emergency Preparedness Management (EPM). The study revealed that civil-military relations are essential for EPM to function, as an overall approach to safety and security is responding to complex emergencies and changed threats to developed countries. Civil-military relations are still a concerning problem regarding communication, the exercise of authority and the coordination of Emergency Supplies (ES) to emergency operations.

Design/methodology/approach – This qualitative study is based on field observations, with attention focused on the EPM of Sweden, Finland, and Poland. The analysis of a broader SCNM through EPM was supported by semi-structured interviews among civil-military actors in Sweden, information collected from informal conversations known as “hanging out”, and secondary materials. Empirically, the analysis included a variety of civil-military relationships and identified implications for management, policy, and planning that are applicable to developed countries.

Findings – The management of civil-military relations is a meaningful resource used as an overall approach for safety and security. The integration of civil-military relations in EPM in the planning of ES is a long-standing and a complex matter. The management of Swedish civil-military relations in EPM is recognizing that implications for management are imbedded in continuous policy changes in, for example, the Swedish policy history. Civil-military relational complications that arise in the field of operations are impossible to anticipate during emergency planning, as those complications are grounded in policy changes.

Conclusions – Escalating threats to developed countries are highlighted. The study underlines the main measures used in studying military involvement in emergency preparedness management. An understanding of SCNM as a choice for management can be obtained in future research that focuses on a broader role of the military in EPM. Sweden has emphasized a clearer role for the military by reactivating Total Defence planning and by evolving common practices and processes with civil actors in Civil Defence. Meanwhile, Poland and Finland are increasing their focus on supporting the management of civil-military policies on safety and security regarding communication, authority and developing coordination.

Originality/value – Consistent with findings from previous reports on SCNM, civil-military relations are essential for EPM. This study confirmed the importance of civil-military coordination, the management and practice of authority, and shared forms of communication.

Keywords - Supply Chain Network Management, Emergency Preparedness Management, Civil-Military Coordination, Emergency Supply, Complex Emergencies, and Changed Threats

Paper type – Research paper

1 Introduction

Many critics argue that a profound restructuring of Emergency Preparedness Management (EPM) is occurring (Cao, *et al.*, 2017). EPM provides Emergency Supplies (ES) in complex emergencies and in response to changing threats to civil society (Landon and Hayes, 2003). The level of ES has been linked to the institutionalized leadership of the public sector (Kapucu *et al.*, 2010). This leadership has provided motivation to individuals who claim that EPM has been rearranged around significant emergency actors in the fields of safety and security (Young and Leveson, 2014). EPM has both positive and negative impacts on communication, the exercise of authority, and coordination (Quarantelli, 2000). In Sweden, EPM has led to a decreasing understanding of the benefits and limits of the civil and military relations to efficient response to emergencies (Balcik *et al.*, 2009). Thus, because the concept of EPM is grounded in humanitarian terminology, this terminology will be retained in this study to reflect the broader Supply Chain Network Management (SCNM) scheme drawn above.

SCNM reflects the ability of EPM to encounter, resolve, adapt to and even exploit on new, different, unexpected or changing requirements of civil and military relations (Quarantelli, 2000). According to Vorosmarty *et al.*, (2010), Handling arrangements related to ES are fundamental for successful choices in supply chain planning. In contrast to regular forms of planning, ES are concerned with emergency demands and are implemented in relational coordinated planning, *e.g.*, food, water, energy, medicine, evacuation centres, emergency actors, and organizations (Tatham and Houghton, 2011; Yoho *et al.*, 2013). In this case, planning concerns relations that are related to communication, the exercise of authority, and coordination during emergency operations (Quarantelli, 2000, p. 18). Although consensus has been reached that planning does not completely mitigate actors' relational difficulties (Altay, 2006). The urgent issue of understanding these difficulties is linked to actors inter-dependencies and has not been widely discussed in the humanitarian literature (Kuikka *et al.*, 2015). Thus, civil, and military actors want to institute a broader SCNM through EPM by considering that problems arise and are imbedded in civil-military relations. Relations need to be understood as they are vital to EPM and have impact on the processes and activities related to emergency planning (Cross, 2012; Nielsen and Snider, 2009; Quarantelli, 2000; Rota *et al.*, 2008; Van Wassenhove, 2006; Yoho *et al.*, 2013).

Planning the civil-military relations to safety and security policies, a model for civil-military relations does not necessarily imply different actors' properties, but rather a suitable governance of the military involvement and a model for the civilian control of the military (Nielsen and Snider, 2009; Young and Leveson, 2014). Military actors are often absent from emergency planning processes (Kaneberg *et al.*, 2016), which may be a reason why civil-military relations are still a concerning problem (Nielsen and Snider, 2009). As an illustration, in the study by Keskinen and Simola (2015) of Finnish peacekeepers involved in ISAF (Afghanistan) and UNIFIL (Lebanon) operations between 2012 and 2014, the military experienced less support and more job-related stress due to a weaker sense of comprehensible planning. However, emergency managers tend to underestimate the military's availability in the operational field and civil and military actors continue to plan in isolation (Waugh and Streib, 2006; Young and Leveson, 2014). One can argue that safety can exist without security and that security does not

necessary lead to safety or vice versa. Therefore, safety experts view their roles as being involved in EPM, and security experts see their roles as being involved in strategies focused on physical threats and war. Thus, more studies are required to address the civil-military tensions to ensure that they foster the required productive relations.

Some of the causes of civil-military tensions are thought to be structural, codified in the policy rulings of defence departments. However, the principal causes have recently been reported to stem from changes in security and defence conditions (Liff, 2015). For Sweden, this concern represents the military involvement in emergency preparedness at the European level. For example, Sweden and Finland are non-militarily aligned, i.e., although they do not participate in military alliances, they coordinate with each other through the Nordic Defence Co-operation (Lehtonen, 2015). Another example is Poland, which has embraced a national security strategy within the North Atlantic Treaty Organization (NATO). In NATO, ES planning is the task of the EPM within processes of NATO (National Security Bureau, 2014). On the other hand, The Swedish Armed Forces (SAF) are required to provide Sweden with resources and to support Swedish civil society in major emergencies (The SAF, 2016). Thus, an example concerning The Swedish Defence Material Administration (FMV) is a civil actor who provides the SAF with military logistics in terms of equipment, materials, and services. The role of the FMV in EPM, however, is still uncertain (FMV, 2016). This limitation appears to be related to an obsolete form of response to humanitarian emergencies, new and changing threats or a combination of both, such as terror attacks, wars, infrastructure breakdown, and natural disasters (Kuikka *et al.*, 2015).

While the previous literature addressing SCNM in the broader framework of EPM, are not systematically carried out, or only focus on few academic debates related to the managing of civil-military relations. This study contributes to this gap by illuminating the management of communication, the exercise of authority, and the coordination associated with civil-military involvement in response to operations, all of which need to be understood in the humanitarian context.

The purpose of the study is to analyse the SCNM by reflecting the ability of EPM regarding the civil-military relations to respond to complex emergencies and changing threats in developed countries.

RQ1: *What is the current role of the military in supporting EPM in response to complex emergencies and changing threats in developed countries (such as Sweden, Finland, and Poland)?*

RQ2: *How and in what ways can the planning of ES be supported by SAF and, specifically, the FMV (a civil actor that exclusively provides military logistics) to develop and improve their involvement in emergency preparedness?*

The paper is organized into seven sections. Section 2 provides a literature review of SCNM in relation to complex threats in developed countries and EPM in relation to the civil-military provision of ES. Section 3 describes the methodology used. Section 4 provides a review of the empirical findings regarding military involvement in EPM. Section 5 provides an analysis. The 6 section presents the final conclusions, and section 7 discusses future research.

1.1 Definitions of key topics

This paper is based on a literature review and empirical data related to the approaches used by developed countries in humanitarian and military fields. Civil-military relations are linked to EPM and a broader SCNM. The involvement of military actors in EPM is essential for the planning of ES provisions. Here, some key topics are briefly addressed, as they are relevant to establishing the framework of the study.

1.1.1 Civil society: The medium through which one or many social contracts between individuals and the political centres of power are recognized and reproduced (*e.g.*, non-governmental organizations (NGOS), authorities, commercial organizations, military, volunteers). The concept has always been associated with the formation of political authority (Kaldor, 2013, p. 45).

1.1.2 Civil society actors: These actors are determined by a variety of stakeholders, including organizations, staff, directors, funders, members, volunteers and military (after the Cold War), because they contribute to the breakdown of the sharp distinction between civil and military (Kaldor, 2013, p. 79)

1.1.3 Complex emergencies: These emergencies are defined as a humanitarian crisis in a country, region, or society with total or considerable breakdown of authority resulting from internal or external conflict that requires an international response. For example, deaths among the civilian population substantially increase, either because of the direct effects of war or indirectly through the increased prevalence of malnutrition and transmission of communicable diseases, particularly if the latter results from deliberate political and military policies and strategies (Spiegel *et al.*, 2007, p. 1-2)

1.1.4 Civil defence: Civil defence is concerned with plans to reallocate the civilian population in the event of or threat of war. Civil defence is administered by a combination of military and civil forces (such as police and civil authorities) acting under military regulations (Alexander, 2002, p. 210)

1.1.5 Total defence: Total defence is concerned with the activities of military and civil defence agencies to prepare for violent confrontations and war. In this situation, the military plans are the extent to which all resources (civil and military) are involved in securing a society, a powerful economy, and building a strong military capability committed to the Defence and Security policy (Balakrishnan and Matthews, 2009, p. 342).

2 Literature review

The effects of complex threats on developed nations and the global safety and security situation have changed dramatically over the past twenty years. Civil-military relations are required to manage such threats. EPM is a recognized concept for managing problems in communication, the exercise of authority and coordination of actors' activities. Civil and military actors are involved in the provision of ES through planning processes. This study seeks to analyse the SCNM reflecting on the ability of the emergency management regarding civil-military relations to respond to complex emergencies and changing threats in developed countries. This section considers the SCNM as broader approach to EPM, complex emergencies and changing threats to developed countries, the planning management of ES, and a summary.

2.1 SCNM approach to emergency management

SCNM and EPM literature seems to have been missing a link in the management literature. It has been either prone to a variety of vaguely defined terminology used interchangeable or confused with supply chain management, and risk management. Therefore, its subcomponents of have lost their fit within the framework of EPM in developed countries. A reason might be the different perceptions of SCNM and EPM among scholars from different backgrounds (Halldórsson, Larson, & Poist, 2008). Therefore, it is noteworthy to precisely define the boundaries of SCNM and how it fits within EPM. A systematic approach is used in this research study. Systematic literature has its roots in evidence-based approaches that are widely used in fields and disciplines favouring a qualitative tradition (Bryman, 2015). However, the systematic contribution seems to have been lagging for decades. In this regard, a simple search in the major academic databases -ABI, EBSCO, Elsevier, Emerald, Wiley, Springer, and Google Scholar- with “SCNM in developed countries” and “EPM in developed countries” revealed that, except for few academic articles that are purely social science-oriented (e.g., Delacroix, Nielsen, 2001), most of the contributions seems to be empirically-oriented to less developed countries (e.g., Tatham and Houghton, 2011; Yoho *et al.*, 2013; Van Wassenhove, 2006)). Furthermore, none of the available results follows a systematic structure. As a result, the literature on SCNM and EPM in developed countries, either lack comprehensiveness, and the fact that there is a need for such literature due to contemporary practices in the developed countries environments.

SCNM research has grown out supply chain management, physical distribution, and the management of emergency planning flows (Kaneberg, *et.al.*, 2016). This broad concept, can be discussed within three major categories. The first includes research on factors that establish the civilian control of the military in EPM by analysing core attributes of civil-military relations. The second includes humanitarian supply chain notions of changing threats to developed nations and responses to complex emergencies connected to the planning of ES. In this category, solutions cannot be fully tested, and the relational problems cannot be generalized due to the ambiguity regarding the causes of the problems. For example, civil-military relations are embedded in problems with communication, authority, and coordination. The third category concerns an overall approach to safety and security, as new, more powerful safety and security analysis techniques are currently being developed and successfully used for a large variety of systems (*e.g.*, aircraft, spacecraft, nuclear power plants, medical devices, etc.) (Caunhye *et al.*, 2011; Charles *et al.*, 2010; Nielsen and Snider, 2009; Rota *et al.*, 2008; Yoho *et al.*, 2013; Young and Leveson, 2014).

Focusing initially on civilian control, Nielsen and Snider (2009) acknowledged two significant aspects. First, civil-military relations have concerned disobedience to orders, in addition to a military coup (*e.g.*, the post-Cold War environment of reduced civilian control of the U.S. military increases the risk of the military seizing power). The military are likely to become openly insubordinate and disobey direct orders. The use of the principal agent framework implicitly assumes “that the military conceives of itself as a servant of the government” (Nielsen, 2002, p. 62), meaning that the model works best in democracies that, by definition, identify the government as the legal principal with the authority to delegate (and not to delegate) responsibility (Feaver, 2003, p. 421). This belief in a lack of direct military disobedience does not make the question of the quality of civilian control (*e.g.*, in the United States) insignificant to the EPM. However, since extreme problems of a loss of control are excluded, other aspects of the civil-military relationships can be analysed. This analysis leads

to the second significant aspect of the focus on civilian control, namely, this concern has tended to overshadow the study of other important outcomes.

Second, according to Yoho *et al.* (2013) and Tuttle (2005), humanitarian supply chain notions are linked to military logistics that are often intertwined with ongoing changes in security. By constantly working in environments with a high degree of uncertainty, humanitarian organizations become specialists in the implementation of agile systems. Their counterparts in profit-making organizations have much to learn from these organizations in this domain. The volatility of demand, imbalance between supply and demand and disruptions are all factors that affect commercial supply chains and call for a high level of agility. Based on the study by Charles *et al.* (2010), a consensus within humanitarian organizations has not been reached on the acceptance of the definition of a customer. In a commercial supply chain, a customer pays for the product or service he uses. In the humanitarian world, the end-user (or beneficiary) is an entity different from the buyer or donor. Similar discrepancies in terminology of actors upstream in the supply chain have been noted, where two types of suppliers have been described: suppliers who provide products or money (donors) and suppliers who are paid by the organization for the supply of the necessary items. Therefore, the notion of the supply chain (and hence the notion of supply chain network agility) varies slightly from one sector to another (*e.g.*, civil, commercial, and humanitarian sectors).

Third, in the view of Young and Leveson (2014), the benefits of creating an integrated approach to both security and safety are based on the relationship between safety and security. Practitioners have traditionally treated safety and security as different system properties. Both communities generally work in isolation using their respective vocabulary and frameworks. Safety experts see their role as preventing losses due to *unintentional* actions by benevolent actors. Security experts see their role as preventing losses due to *intentional* actions by malevolent actors. The key difference is the intent of the actor that produced the loss event. Thus, intent does not need to be considered, only the problem, which can be reframed as a general loss preparedness problem by focusing on the aspects of the problem (such as the system design) over which we have control, rather than directly addressing the aspects for which little information is available, such as identifying all potential external threats.

2.2 Complex emergencies and changing threats to civil society

Complex emergencies and changing threats are increasingly challenging problems for developed nations (Spiegel *et al.*, 2007). Threats to the core values of a system or the functioning of life-sustaining systems must be urgently addressed under conditions of deep uncertainty (Boin and McConnell, 2007). One major threat involves pressure on production systems that supply food, meat, dairy, fish, and other essentials. Simultaneously, food producers are experiencing greater competition for land, water, and energy (Godfray *et al.*, 2010; Vorosmarty *et al.*, 2010).

A definition of changing threats and complex emergencies concerns emergencies of a magnitude that engage the attention of the global community, including power developments in other countries. Changing threats are related to the general security policy, the situation, and the way in which war is exercised that has been changing dramatically over the past twenty years. These threats include a combination of humanitarian emergencies (*e.g.*, pandemics, natural catastrophes, and considerable migration flows), the breakdown of national political

authority (*e.g.*, occupations), regional confrontations that have moved into a violent stage (*e.g.*, hybrid warfare¹), and infrastructure breakdowns (*e.g.*, due to terror attacks, riots, and cyber-attacks) (Landon and Hayes, 2003, p. 2)

From a legal perspective, a threat has the objective of forcing someone into cooperation, *e.g.*, by threatening violence (Law, 2015). In social disciplines, however, threats are understood as “socially constructed within and among the discourses of experts, political actors and the public at large, each using their own lenses through which they see the threat” (Meyer, 2009, p. 648). Complex threats are connected to globalization because “the increase in transactions between diverse groups and specialized actors around the world has affected the economies of criminal and political violence as deeply as it has the legitimate economy” (Gustafson, 2010, p. 72). Globalization has blurred the lines between criminals, terrorists, and insurgent groups. Thus, an integrated approach that recognizes the essential construction of domestic and foreign threats must be adopted to manage complex threats (Gustafson, 2010). This understanding is critical for establishing the building blocks of risk management (Van Wassenhove, 2006).

Ethics related to complex threats are a delicate topic because they are linked to the choice between saving the infrastructure (from breakdowns) and the principle of saving lives (people in danger) (Veuthey, 2005). In developed societies (*e.g.*, Sweden, Finland, and Poland), Beck (2002) has reported a view of ethics that includes shared values to maintain safety and security (*e.g.*, choosing to safeguard infrastructures such as transportation and energy supplies that will affect a greater proportion of the public). The balance between safeguarding vital infrastructures against terrorism and the saving of lives is a challenge. Individual nations struggling against threats (*e.g.*, terrorism, ecological damage, war, natural catastrophes, and financial crises) must consider aspect of ethics to enhance the safety of the global society (Boin and McConnell, 2007).

2.3 The EPM

Perry and Lindell (2003) define emergency preparedness as the political readiness to respond to threats from the environment. The EPM approach reported by Rota *et al.* (2008) manages options regarding political readiness. EPM is a method that minimizes negative consequences for individuals’ safety and integrity and maintains the function of physical infrastructures and systems. EPM has been designed as part of SCNM, as a general platform for managers and security operators to calculate and manage the changing characteristics of threats, vulnerability factors, and risk scenarios (Charles *et al.*, 2010), whereas emergency preparedness is accomplished through the activities of emergency organizations. Quarantelli (2000) views planning as a vital process for the provision of ES and training as a requirement to support emergency action. EPM is considered the management of problems related to planning processes, as communication, the exercise of authority and the development of coordination are sources of conflicts in civil-military relations. When EPM is used to address complex emergencies (*e.g.*, the chain of events, domino effects, the transport of dangerous substances,

¹ “Hybrid warfare” is most frequently described as a construct in which the adversary will most likely present a unique combinational or *hybrid* threats specifically targeting countries vulnerabilities. Instead of separate challengers with fundamentally different approaches (conventional, irregular, or terrorist), we can expect to face competitors who will employ *all* forms of war and tactics, perhaps simultaneously (Hoffman, 2009, p.35)

and floods, earthquakes, and hurricanes), actors are expected to coordinate their response activities (Quarantelli and Dynes, 1977).

2.3.1 Communication processes: Communication among emergency actors entails the collection of appropriate information within diverse databases controlled by several entities (e.g., local governments, organizational managers, and rescue services). According to Rota *et al.* (2008), EPM provides the overall structure to help actors communicate and further evaluate existing situations, as they are often part of separate systems (e.g., civil and military systems). Communication is a tool used to both identify the appropriate operational strategy and to activate the chain of actions to overcome a state of emergency. A lack of communication linked to the complexity of emergencies can rapidly overwhelm organizations and personnel, ultimately leading to poor decisions (Taniguchi *et al.*, 2012). A lack of communication (for example, when resources become stressed or standard procedures are missed) can negatively impact the operational transition (from planning to response and back) (Altay, 2006).

2.3.2 The exercise of authority: The exercise of authority entails the ability of adaptive management and the correct use of authority (Kartez and Lindell, 1990). However, the military record in the exercise of authority is at best unclear and at worst unacceptable (Alexander, 2002; Nielsen and Snider, 2009). Although the military focuses on a relatively general security purpose, EPM focuses on specific events based on the civil authority (Altay *et al.*, 2009). Attitudes are derived from concerns regarding military authority in the force required for national security (Nielsen, 2002; Nielsen and Snider, 2009). Governmental policies moving towards the greater use of military must recognize the civil-military relations. Young and Leveson (2014) claim that safety and security policy changes are shifting developed countries towards different methods of exercising authority. According to Van Wassenhove (2006), further analyses of the exercise of authority are needed when civil actors must involve military resources in EPM. The military can apply significant authority over civil actors in the operational field, as they have dedicated equipment, clear command structures, robust field communications, and a variety of useful skills; however, they also tend to be rigid and authoritarian (Nielsen and Snider, 2009).

2.3.2 Developing coordination with the military: According to Balcik *et al.* (2009), civil-military coordination is critical for EPM because of the dual and intertwined humanitarian goals of saving lives and the efficient use of limited resources. Nielsen (2002) has described civil-military coordination as a vehicle to discuss military effectiveness as a product of civil-military relations. The difficulty is that the superiority of this ideal type of “professional military” (2002, p. 66) is dubious, regardless of context. No one type of military organization has been the most effective over time and in different regions, regardless of the adversary or strategic context. The above discussion asserts that the maintenance of military effectiveness may require strategic changes to safety and security policies over time.

2.4 Managing the planning of ES

The management and planning of ES involves both consumable assets (such as water, power, food, medical items, and transportation) and tangible assets (such as furniture, containers, and mechanical equipment). According to Caunhye *et al.* (2011), the process of planning and the management of supply flows considers ES as providing immediate assistance when emergencies arise. Yoho *et al.* (2013) argues that military logistics are often intertwined with

ongoing changes in the security environment, the integration of actors and the management of skills to develop and transform the situation. The management of logistics coordination can lead to problems that have not yet been addressed by the literature, engendering gaps in practices, such as activities related to coordinated sourcing and procurement (Balcik *et al.*, 2009). Military logistics have been studied with respect to numerous aspects and choices (Brodin, 2002). Here, sourcing generally refers to the procurement of materials and services that are traditionally associated with warfare operations (Beamon and Balcik, 2008). Sourcing and procurement are considered critical activities in emergency responses (Rendon, 2005).

2.5 Summary

The reviewed literature combines several flows related to a broader SCNM. In SCNM, EPM processes in civil-military relations are required to achieve an overall approach that ensures safety and security. The planning of ES in the supply chain network deals with the supply of necessary products and services and the switchable adaptation to a high level of alertness (war) and ongoing complex emergencies. The relational process in EPM deals with problems between civil and military authorities related to communication, the exercise of authority and coordination (Figure 1).

Figure 1. SCNM

Sources: Adapted from Larson & McLachlin, (2011); Young & Leveson (2014); Rota *et al.* (2008); Quarantelli (2000)

3 Methodology

The EPM and the planning of ES are imbedded in the efficiency of civil-military relations and are used to develop theories of supply chain network management (Yoho *et al.*, 2013). This study uses a qualitative research approach to study the complex appeal of EPM, in which civil-military relations are indeed a concerning problem (Nielsen and Snider, 2009). Therefore, the struggles to obtain efficiency and control among political and governmental authorities cannot be studied in a vacuum. Civil society actors that participate in emergency management processes must be considered to understand that civil-military relations are not an oversized problem and identify strategies to maintain the problem at a manageable size. According to Bryman (2015), one way to conceptualize this problem is to assess the way researchers join groups, observe conditions, make notes, and publish findings relevant to their research problem. He contends that “participant observations [...] draw attention to the fact that the participant observer immerses in a group for an extended period of time” (2015, p. 423). Transfer of this

analytical leverage to the study of military involvement in emergency preparedness has steered the methodological requirements of this study.

EPM is concerned of understanding the civil-military relations as a meaningful part of civil society resources. This study views civil-military relations as an analysis from observations of the balance between two different ideal types and actual practices (the civil and the military) (see Nielsen and Snider, 2009). In developed countries, this balance has been maintained through approaches in which political actors have implicitly incorporated the two approaches (Boin *et al.*, 2005). Analytical observations differ in terms of obtaining good informants, being in the right place at the right time, and striking the right note. Therefore, the ability to form relationships may also be as important as skills in methodological techniques (Serridge and Sarsby, 2008). Indeed, civil-military relations require sophisticated planning, authority and decision making (Boin and McConnell, 2007). However, in field observations, unsuccessful episodes lead to bad judgements and problems within the interviews (Bryman, 2015).

3.1 Research study design and analysis: The design of this research study was mainly guided by previous reports (Bryman, 2015; Silverman, 2011; Yin, 2010), with the aim of examining the extensive amount of data collected. The focus on field observations requests the selection of an empirical context that enables theoretical insights (Silverman, 2011). This study examines the civil-military relations within the EPM, because discussions about when and where military actors become involved in humanitarian operations, peacekeeping, and peace reinforcement occur among the many actors who participate in EPM (Bryman, 2015). Participant field observations have disclosed how these choices are creating civil-military tensions in terms of communication, the use of authority and coordination (Nielsen and Snider, 2009). As an explanation of the research process, this study utilized several methods for over a year that focused on the civil-military relations in EPM in developed countries. The study combined field observations according to Bryman, (2015), specifically field observations from northern Sweden, Finland and Poland, with the study of related documents, interviews and information called “hanging out”, known as knowledge shared among experts involved in the field on a daily basis (Listou, 2015).

The unit of analysis is expansive text and the resulting implications, as they are produced in a network of organizations that comprise the three pillars of the SCNM: relations, civil society actors, and ES planning. Field observation notes, articles, policy documents, and researcher discussions on the experiences on the civil-military relations in EPM were helpful in identifying central and challenging positions and analyses of communication, the exercise of authority and coordination.

3.2 Validity of the research study:

Experts were systematically chosen among key actors in EPM to ensure the validity of the study (Yin, 2010). As the study is concerned with the Swedish EPM, the involvement of the SAF and the FMV (in providing military logistics) was captured in forums dedicated to the coordination of these actors in EPM, in discussions, thought observations, meetings, gossip, and documents (Listou, 2015). In summary, this study is based on four main sources of information, namely, personal interviews with key representatives of the Swedish system; field trips to Finland, Poland, and northern Sweden; vital information from articles, websites, and studies; and the opinions of civil-military experts in the field. The interviews were performed in Swedish, recorded, and then transcribed into written text (see the examples below).

3.3 Semi-structured interviews:

Overall, eleven (11) interviews with a duration of 1-2 hours were conducted with key actors with broad experience in the EPM and military fields. Interviews were based on prepared questions that were provided in advance to ensure reliability, and respondents views were taped and notes were taken (Silverman, 2011). The interviews were conducted between April 21 and May 12, 2016. Respondents represented the Swedish Ministry of Defence (MoD), the SAF, the Swedish Contingencies Agency (MSB) and the FMV, see Table 3.1. The interview questions concerned, *first*, the general views of EPM, as a set of five additional questions were prepared to assess the respondent's views on the current civil-military coordination to an overall safety and security strategy. *Second*, views about the current Swedish EPM were channelled through a set of five questions that were focused on the civil-military problems in communication and the use of authority. *Third*, five questions aimed to capture information about civil-military coordination and specific views on military involvement in EPM to provide ES support in complex emergencies. See Appendix 1

Table 3.1. Organizations involved in semi-structured interviews

<i>Organization</i>	<i>Role</i>	<i>Level</i>	<i>Number</i>
Swedish Ministry of Defence (MoD)	Administrative Officer Military expert	Middle Management	1 respondent
The Swedish Armed Forces (SAF)	Military planning experts	Middle Management	2 respondents
Swedish Contingencies Agency (MSB)	Administrative Officers EPM and ES experts	Middle Management	2 respondents
Swedish Defence Material Administration (FMV)	Chief of Planning Strategy	High Level Managers	2 respondents
	Commercial policy experts	Middle Management	2 respondents
	Military logistics experts	Middle Management	2 respondents

3.4 “Hanging out”:

According to Bryman (Bryman, 2015), obtaining information in a social setting is relevant to the research problem of the study. Access to information in social contexts is approached using different strategies that relate to public settings in contrast to strategies used in non-public settings (Hammersley and Atkinson, 2007). In this study, access to public settings has been an opportunity to constantly gather extensive information in non-planned talks (*e.g.*, hints, clues, claims, and gossip about my subjects of work and interest). Information has been collected from different organizational structures, such as governmental organizations, civil authorities, and military organizations, and from planned talks during meetings, seminars, field exercises and study trips. According to Listou (2015), this type of information collection method is called “hanging out”, *i.e.*, being a member of the organizational environment and daily work. In this study, the term “hanging out” refers to participation in discussions with logistics managers and business experts at the FMV and with commanders at all levels at the SAF, commercial consultants and other actors. Daily discussions often occur during meetings, courses, seminars and conferences with colleagues and other key actors in the system, such as the MSB, the Swedish Defence Research Institution (FOI), the Defence Academy (FHS), and the SAF.

3.5 Field trips to Finland and Poland and field exercises in northern Sweden:

Participant observations have advantages and limitations (Bryman, 2015) that are linked to ethical problems affecting researchers attempting to assess issues who assume a role. For

example, a researcher may visit a foreign country, obtain access to a group and engage in specific issues and conversations to take notes and review an area of interest (Bryman, 2015). In coordinated field trips, such as the arranged field trips to Finland (March 7-11, 2016) and Poland (March 12-17, 2016). The views of civil-military experts on the EPM in their countries was provided through meetings, exercises, workshops, and informal talks. These fields trips are part of the final step in the “Senior Crises Management and Total Defence Course 2015-2016” provided by the FHS in Sweden. The field trips were aimed to provide a broader understanding of EPM in other nations and to compare those practices with the Swedish system. Discussions and views from key civil-military actors in the Swedish system were collected through a participant observation arranged by the SAF in May 23-26, 2016, called the “cooperation field exercise”, which focused on developing Swedish civil-military coordination. Table 3.2 (shown below) describes vulnerable areas in countries current conditions to humanitarian and military approaches collected from field trips.

Table 3.2. Conditions and approaches to civil-military coordination

<i>Developed Countries (Field Trips)</i>	<i>Approaches (EPM)</i>	<i>Humanitarian vulnerability (ES)</i>	<i>Military vulnerability (Safety and Security)</i>
Northern Sweden (May 23-26, 2016)	Neutrality and negotiation skills rather than the use of force. Involves total defence and civil defence.	Providing assistance to displaced people, transport of food, clothing, and shelter	Arbitration in disputes over land, water rights and freedom of movement
Finland (March 7-11, 2016)	Mediation in inter-state conflicts skills rather than the use of force	Providing services to individuals who have been denied access to sources of essential supplies and services	Dependence on electricity and information technology (IT) and the hybrid warfare threat is targeted in safety and security supply structures
Poland (March 12-17, 2016)	Member of NATO	Humanitarian missions including mutual respect, impartiality, and credibility that limit the use of force according to the NATO doctrine to recognize the standards of international law	Peacekeeping missions Conflict prevention Transparency of operations Unity of command and civil-military coordination

Sources: SAF (2014); National Security Bureau (2014); Spiegel *et al.* (2007) and Landon and Hayes (2003)

3.6 Anonymity:

Ensuring anonymity of the data collected (Byman *et al.*, 2000), such as the “hanging out” data collected from the participating organizations (Listou, 2015), is only possible under the “Chatham House Rule” (Chatham House Chatham House Rule, 2016), which states that when a meeting, or part thereof, is held under the Chatham House Rule, the participants are not free to identify the membership of either the speaker or any other participant. Using the “Chatham House Rule,” participants in this study anticipated anonymity. The conditions of anonymity were familiar to the participants and provided a useful method by which participants could discuss problems and challenges more freely without the risk of being identified.

4 Empirical Contribution

This section comprises three parts. The first part addresses military involvement in complex emergencies, based on interviews with key representatives of the Swedish system. The second part addresses the Swedish system in relation to other, different systems, i.e., the views of

experts from field trips to Finland, Poland, and northern Sweden. The third part examines other vital information about actors' engagement in activities related to EPM.

4.1 Part one: interviews with key representatives

This first empirical section addresses the views of respondents collected from semi-structured personal interviews about Swedish military involvement in current preparedness efforts to support civil society during complex threats.

4.1.1 Military involvement in emergency preparedness

The Swedish approach to preparedness is based on two legal grounds (Government Bill, 2014/15, p.109; Defence Stance – Swedish Defence 2016-2020, p.11). The first is the law on total defence, which regulates the overall defence activities needed for Sweden to prepare for war. According to this law, total defence consists of both military activities (military defence) and civil activities (civil defence), whereby organizations must collaborate to respond to the uncertainty of war. The second regulates emergency preparedness, including attitudes and practices regarding preparedness. The planning and coordination of activities to meet the threat of war constitute great challenges for Sweden: *“The total defence was removed from the political agenda after more than 20 years, and what remains of it is probably too old for it to work in an armed attack”* (respondent 1 on 09 May 2016).

The involvement of military actors in emergency preparedness processes is complex, but the nature of current threats has prompted military involvement. An organizational structure is therefore needed to plan, train, and engage actors to efficiently respond to complex crises that may harmfully affect Swedish society (MSB, 2016): *“Everything is based on emergency preparedness, and Sweden has made a conscious choice to not deal with crisis plans, but a strategy based on cooperation”* (respondent 10 on 25 April 2016).

One task for the SAF is to coordinate key areas of emergency preparedness (MoD, 2016): *“SAF preparedness is very well designed for targeting military activities. However, if claims of logistical limitations caused by SAF in the face of complex crises, we can only respond as an organization that looks like perhaps the police—high availability, short notice and special case resources—but regarding general efficiency, has mainly focused on improving and reducing costs. As a result, civil actors do not seek our support because it represents higher costs to them”* (respondent 2 on 21 April 2016).

Successful national emergency management for all types of threats should include the following: (a) clear identification of the current authority with responsibility for all emergency actors; (b) proximity, similarity, and the responsibility principle (i.e., responsibility assumes that the party responsible for a certain activity under normal conditions should also have the responsibility in an emergency. The proximity assumes that emergencies should be handled where they occur and by those who are closest to them. The similarity implies the localization and organization of activities that, to the greatest extent possible, should be the same during a crisis as they are under normal conditions); and (c) transparency from commercial suppliers that must provide for the needs of society, even under distressed conditions (respondent 4 of 24 April 2016). Central military areas that generally contribute to the Swedish preparedness system are the most difficult to reach, e.g., “Just-In-Time Logistics” contrast robustness and flexibility goals: *“With this, I mean support to civil society in providing energy supply, surveillance and*

protection, and transportation—essentially logistical functions. The SAF supports civil actors according to laws and regulations. The FMV provides military logistics to the SAF, and civil actors support the SAF accordingly. Thus, a symbiosis! With higher readiness levels and heightened alert, the civil defence supports the SAF in all provisions according to the respective laws” (respondent 5 on 26 April 2016).

An important requirement safety and security in that military experts in logistics is to establish a balance between the goal of developing military activities and the goal of supporting a civil society in complex crises. The role of key authorities however, is unclear, for example, the FMV is a civil actor in the Swedish system with high logistics competence not considered an emergency actor; therefore, FMV is not part in emergency preparedness planning (FMV, 2016): *“Successful crisis management, including complex levels of threats, should include all needed stakeholders, tasks, roles and responsibilities in overall planning to achieve fast deliveries during crises. However, the FMV is not seen as a major supplier of logistics, the role of the MSB is still uncertain, and coordination between counties and regions is lacking” (respondent 6 on 27 April 2016).* One way to achieve safety and security goals is, for example, through developing a Swedish military sourcing and procurement strategy together with civil actors. *“SAF supports civil society as part of total defence. In civil defence, the same actors have different tasks but similar needs. The FMV is an actor that can ensure logistics support for total defence” (respondent 7 on 4 May 2016).*

The aim of reducing procurement costs has encouraged counterproductive competition. The FMV has increased its use of a costly and long-term procurement model in its processes, which has led to reduced collaboration and innovation (FMV, 2016). Currently, military resources cannot be designated for civilian use, but strategic considerations are implemented with respect to total defence. For example, the SAF can provide logistics support to civil society: *“Civil society today has its particular system in which commercial actors do not build large stocks. Thus, it does not represent a model for the military; military defence has other needs, such as protecting the country’s assets” (respondent 8 on 12 May 2016).*

Considering safety and security in an overall approach, the current part of the SAF in the Swedish system, accounts for approximately 10% of total defence resources; thus, the SAF must coordinate with civil actors on the other 90% of resources. For example, FMV logistics operations in approximately 80 locations in the country, is a key actor (FMV, 2016): *“FMV resources, with knowledge and expertise in technical, commercial and legal fields, allow us to find technical and economical solutions for the SAF. However, a lack of consensus among civil organizations concerning the meaning and forms of coordination with the SAF and a lack of communication about challenging projects are hindering flexibility in our ability to achieve efficiency goals” (respondent 9 on 25 April 2016).*

4.2 Part two: field trips - Finland, Poland, and northern Sweden

This second empirical section addresses the views of several key representatives from three countries—Finland, Poland, and Sweden—each of which has a different EPM system to manage complex threats.

4.2.1 Complex threats to developed nations: Finland and Poland

Developed nations are substantially connected to the international operating environment. For example, Finland’s economy and society cannot be separated from the international network

because the Finnish supply chain environment is international in scope. Hence, technological, financial, political, and social dependencies across borders are increasing, and Finland is vulnerable to complex disruptions to critical infrastructures, urbanization, electrification, networking, and digitalization (www.nesa.fi). *“Many critical products and services are produced outside Finland; thus, the most serious external threat is a crisis that temporarily impedes Finland’s ability to produce critical products and services, for instance, disruptions to data communication, cyber threats, interruptions in the energy supply, etc.”* (National Emergency Supply Agency, 2016).

Security challenges that are different but correlated represent an increasingly complex threat to Finland and Poland. For instance, both countries face ethical judgements in their emergency management: *“Polish national security and preparedness embrace strategies within boundaries of the NATO and the European Union (EU) and a strategy for developing and managing the national system that constitutes the foundation for civil-military coordination strategy with security objectives”* (National Security Bureau, 2014). In Finland, however, ethical interpretations must consider greater integration with the military when anticipating a major crisis: *“A functioning economy, the well-being of the population, secure infrastructure, and national defence require the readiness of the system to reduce risks and prevent threats”* (Dir. Policy, Planning and Analysis, 11 March 2016).

Threats are partially understood as the struggle against terrorism and partially as the struggle against the causes of terrorism and efforts to protect vital infrastructures: *“In Finland, a threat scenario reflects disorder of the security environment, and when these scenarios actually occur, they may affect safety, the livelihood of the population or national sovereignty, e.g., when caused by terrorism or organized crime”* (taken from MoD 2006). In Poland, complex threats are considered a primary concern with respect to national sovereignty; thus, the functions of public administration bodies and institutions and a self-sufficient system are requirements for Polish preparedness (National Security Bureau, 2014): *“Threats to society’s vital functions occur separately or simultaneously with several other threats [...]. Terrorism threatens EU security; thus, terrorism has been highlighted as the greatest threat. The likelihood that threats are realized varies and changes quickly, and we must be self-sufficient, as history teaches”* (www.frontex.europa.eu).

Civil-military coordination in Sweden: In Sweden, field exercises are part of extended learning of a robust system to ensure basic values and skills and to improve preparedness efficiency. In such exercises, top-level individuals in Swedish society learn how to manage many of the most severe crises and threats that will affect the function of civil society (SAF, 2014, May 23-26). *“Deeper civil-military coordination is related to issues of civil defence and total defence, which have been given lower priority, consequently generating gaps regarding the provision of information in both the military and civil systems, and cultural differences arise between the two systems”* (SAF Lecturer on 30 June 2016:3).

The exercises aim to increase the number of civil actors to better reflect the actual total defence situation and to develop trust and communication in civil-military decision-making processes: *“Participants confirmed the need and usefulness of exercising together. Similar field exercises need to be conducted (e.g., one is called Aurora expected in 2018). A stronger focus on common forms of collaboration and military involvement during emergencies can help solve actor’s*

relational problems in complex emergency operations” (C-Core Team Planning and Assistant Lecturer, June 30, 2016).

4.3 Part three: SAF and FMV support for civil society

The third empirical section examines secondary data as an important complement. The views of skilled players who have worked on EPM for many years were collected through “hanging out” sessions while following the “Chatham House Rule” (e.g., gossip, discussions, opinions, documents, articles, homepages, and several studies).

4.3.1 Military support to civil society

The Swedish government has a far-reaching mandate to decide that a different order applies in the event of a complex threat or war. Thus, government agencies continue to wait for their directors to increase coordination in preparedness planning (*SAF: Rapport, June 30, 2016:17*). Currently, the Swedish constitution does not support the development of civil-military coordination in all types of complex emergencies (i.e., continuous changes in safety and security policies through Swedish policy history, has generated gaps in terms of communication, and coordination. This is due to that responsible boundaries of responsibility among actor’s, swishes back and forth) (*SAF: Rapport, June 30, 2016:16*).

Actors’ relations in connection to the provision of ES not only involves communication (e.g., what supplies or tangible assets; such as food, oil, water, and medicine, are required). But also, under who’s authority the supply of civil-military services, is managed (such as energy, transport, logistics, health, information, and finances). For certain relations, (such as in the storage of oil) authority will correspond to the Energy Agency as the regulatory authority (*SAF: Rapport, June 30, 2016:44*). “Sweden has lost the ability to coordinate the delivery of goods and services and to supply ES to civil society because public responsibilities are currently unclear with respect to almost every kind of ES” (gossip, 2016).

The SAF and the Swedish Defence Material Administration: The SAF is Sweden’s ultimate security resource to support civil society during complex threats and war. Thus, changes within the SAF are consistent with similar developments in other developed countries (www.fm.se). The FMV is a civil authority responsible for the management and procurement of military logistics. The FMV, in cooperation with civil actors, is an important tool for achieving not only efficiency in military logistics acquisition but also operational effectiveness (www.fmv.se).

5 Analysis

Before illustrating how the humanitarian SCNM is constructed by EPM through civil-military relations, a brief description of the EPM is presented. The study of EPM of changing threats and complex emergencies in developed countries is categorized into three main elements suggested by Rota *et al.* (2008) to create a broader SCNM suggested by Larson, (2011), and to offer a structured approach to the study of the military involvement in EPM. The first category is the course of the Swedish EPM approaches over time, as it provides settings for analysing a civil society actor’s contemporary struggles (total defence, civil defence, and emergency preparedness). The second category is the management of relations (civil-military) and overall safety and security approach (safety and security). The third category is the management of planning (ES and military logistics).

5.1 EPM: an overall approach

In this study, EPM is concerned with emergency actor's relations (*e.g.*, commercial, industry, military, voluntary, government and authorities) that support the planning of ES (*e.g.*, water, food, medical supplies, shelter, and infrastructure). Changing threats and complex emergencies in developed countries have placed a greater focus on an overall approach to the safety and security of civil society. Thus, communication (*e.g.*, IT, cyber, written, and person to person), the use of authority (*e.g.*, in the chain of command and consensus), the coordination of response operations (*e.g.*, between civil society actors, including the military, commercial actors, and voluntary actors) are critical for EPM and a broader understanding of SCNM.

5.2 Swedish EPM

Current demands for humanitarian responses (*e.g.*, complex emergencies) and preparedness to manage hybrid warfare (*e.g.*, changing threats with different purposes that can scale to war) in developed countries has shifted the focus to increase civil-military relations. Sweden has re-adopted the so-called "Total Defence" system that represents an example of an overall approach to safety and security in current times. In this approach, civil-military relations (in civil defence) are central to the management and planning of ES and to the military logistics planning under military leadership. On the other hand, by decoupling the Total Defence system, the military involvement in EPM is organized by the MSB. The military involvement in EPM is significant regarding civil-military relations in ES planning and preparedness for complex emergencies. According to recent reports, the Swedish EPM is challenged, however, by the lowest defence spending (in 2012) of all the Nordic countries in relation to the gross domestic product (GDP) at times when Nordic countries are expected to receive support from Sweden during emergencies. EU member states and certain Nordic countries have cut back on their own defence spending. Reports have also highlighted the growing interest in sharing defence costs through further international coordination and cooperation (FOI, 2012, p. 4) (Figure 2).

Figure 2: The Swedish EPM system

Source: Adapted by the author from "hanging out" information collected at the FMV, MSB, and FMV, 2016

5.3 Civil-military relations in an overall safety and security approach

According to the data analysis and interpretation, the role of the military in EPM to support complex emergencies is part of complex management and relational processes in which different actors relate differently to the military. Concerning the first question of the study, i.e., “*What is the current role of the military in supporting EPM in response to complex emergencies and changing threats in developed countries (such as Sweden, Finland, and Poland)?*”, the study findings reveal a three-party order of readiness: EPM, civil defence, and the total defence. Respondents argued that the Swedish constitution does not provide support for the development of civil-military relations in EPM. In fact, continuous policy changes have had a negative impact on the civil-military relations in terms of coordination, communication, and the use of authority. Although the Swedish EPM is built on coordination and cooperation, the study revealed that policy changes have weakened the system through the negative implications of civil-military coordination. This view is related to the historical reasons why changes in the Swedish policy have been made (from 1986 to 2015) and how the arrival of complex emergencies and changing threats to civil society have impacted policy development as a basis for dealing with both safety and security (Figure 3). Echoing the conclusions of Nielsen and Snider (2009) that civil-military relations are still a problem, this study revealed that the involvement of military actors in EPM is a long-standing and complex issue.

Figure 3 Swedish policy development over time

Source: an extensive review of Swedish Policy documents from 1986 to 2015

Thus, the Swedish EPM engages military actors in preparedness, planning, and response operations (if efficiency is accounted for in common agreements with suppliers and common logistics planning), but the military requires proper management. Sweden has made a conscious choice not to work with crisis plans and instead uses a strategy based on cooperation. In this regard, the country's EPM approach is considered to provide options for military support in emergency preparedness (Rota *et al.*, 2008). In this view, research denies solving civil-military relational problems through planning (e.g., Quarantelli, 2000; Quarantelli and Dynes, 1977). Based on these findings, EPM occurs through the planning of activities the coordination of

emergency organizations and targets problems in communication, the exercise of authority, and coordination, but those problems cannot be solved through the planning.

An extended approach to EPM occurs in civil defence, in which civil-military coordination involves military planning (*e.g.*, military logistics). The EPM contribution involves planning of ES (*e.g.*, water, food, medicines). In that way, civil-military actors are engaged in Total Defence to changing threats that can escalate to a full war (*e.g.*, terror attacks, IT espionage, cyber-attacks) and complex emergencies (*e.g.*, substantial flows of migration, riots, organized crime, and infrastructure disruptions). Respondents argued that the Swedish system is not adapted to function in the context of today's complex threats. Therefore, the government must reconsider its planning approach by improving the civil-military relations in Total Defence planning. Previous literature has presented positive and negative associations with a Total Defence system; however, it can impact the perception and efficiency of safety and security analysis techniques (*e.g.*, Young and Leveson, 2014). In Total Defence settings, Alexander (2005) explicitly confirms military support for EPM. Moreover, Robertson (2006) recognizes the justified use of the military in response to terrorist attacks because the military has the skills to address terrorism.

5.3.1 Communication processes: According to respondents, the challenges facing the SAF and the FMV correspond to the lack of communication concerning the role of the FMV in the Swedish system. The FMV is a civil actor with high logistical skills, but it is not considered by emergency actors and is therefore not included in emergency preparedness planning. In this regard, communication between the SAF and the FMV is a bottleneck because of the lack of connection between the two authorities. Additionally, the role of the MSB must be communicated to all actors in the system. Rota *et al.* (2008) emphasizes that managers must have skills to communicate how experiences from previous emergencies should be considered in current planning and to develop appropriate communication strategies for future emergencies. Altay (2006) argues that lack of suitable communication strategies generates stress among emergency actors in the response operations (*e.g.*, a lack of standard procedures). Connecting this view to the view of Taniguchi *et al.* (2012), a lack of communication can overwhelm organizations and lead to poor decision making. Consequently, a lack of communication may negatively affect the transition to a higher level of emergency preparedness and, thus, the recognition of relational problems among actors in the response operations.

5.3.2 The exercise of authority: In the Swedish EPM, the actors engage in preparedness built on two important components of the total defence system: military activities (military defence) and civil activities (civil defence). However, respondents argued that the total defence system must be structured and developed to manage the involvement of civil actors in total defence planning (civil defence) when the threat escalates (*e.g.*, a high level of preparedness) to a warfare. The EPM is the system in which civil planning occurs (*e.g.*, ES) to address all forms of emergency responses in times of peace, but the involvement of the SAF in EPM requires suitable management. Defence organizations (such as SAF and FMV) could provide a greater contribution to civil society if given appropriate skills regarding the use of authority. According to Nielsen and Snider (2009), the state of civil-military relations is indeed a concerning problem. Struggles for influence, command and control among politics and bureaucratic authorities are responsible for civil-military conflicts.

Respondents argued that the military has great autonomy and clear command structures, but military structures tend to be rigid and authoritarian, which specific challenges civil-military relations. One example is the uncertainty of whether the FMV (a civil actor specialized in military logistics) could provide support to EPM in the planning and provision of ES. This uncertainty is grounded in contradictions regarding providing the military with too much authority. Echoing the ideas reported by Taniguchi *et al.* (2012) on military authority, and autonomy, as well as the idea of civil-military relations (Nielsen and Snider, 2009), the study findings reveal that a lack of management may threaten democratic values (*e.g.*, allowing the military to have too much authority over civilians). However, cases of complex emergencies and changing threats to civil society, autonomy and authority tend to shift the hierarchy to military commanders, and thus, in EPM, the management of the military authority requires great understanding and flexibility.

5.3.3 Developing civil-military coordination in emergency preparedness: The Swedish EPM lacks clarity regarding the current state of actors' roles. From the respondents' perspective, the MSB is responsible for coordinating the provision of ES during emergency responses. The SAF is responsible for providing support to the EPM, but a legal foundation for this action of the military is not available. In addition, a lack of consensus among emergency organizations regarding the meaning and form of coordination with both the SAF and the FMV has been noted. These civil-military interactions (Alexander, 2002; Nielsen and Snider, 2009) relate to civil-military relational consequences in EPM. These interactions must be developed for the system to function, that is, coordination depends on the conditions of civil-military relations (Landon and Hayes, 2003). Here, the strategy used for the implementation of an overall approach to safety and security (Quarantelli, 2000) is expressed as the activities of emergency actors through EPM. The development of an overall approach and coordination must be based on an overall system in which all actors are included in planning and preparedness (*e.g.*, actors have different and essential resources important for planning to become operative) (Charles *et al.*, 2010; Van Wassenhove and Tomasini, 2009). Overall, the study concludes that coordination serves as symbolic resource to display and understand skills, ES accuracy, logistics planning, and judgement. This resource is used to negotiate the efficiency of EPM towards humanitarian responses.

5.4 The planning of ES and military logistics

Discussions on the planning of ES that speak to the commitment of the EPM (Tatham *et al.*, 2010) and the development of military logistics planning (Boin and McConnell, 2007) considers the second research question of the study, *i.e.*, "*How and in what ways can the planning of ES be supported by the SAF and specifically the FMV (a civil actor that exclusively provides military logistics) to develop and improve their involvement in emergency preparedness?*" The analysis and explanations of the current roles of the military in supporting EPM in developed countries have focused on the role of the SAF and the FMV in EPM. Sweden, Poland, and Finland are different but are similar in terms of their threats, dependency on the international environment, and civil-military coordination approaches.

In field observations, similar threats to Sweden, Poland, and Finland were broadly discussed as imbedded in tensions along Europe-West borders. New threats, required both national military authorities and the international community to develop a renewed policy to undertake

and promote peace and stability (Landon and Hayes, 2003). Field observations also provided an understanding of the international dependence on commercial suppliers. This dependency is crucial when ES provisions need to be supplied to society, such as when infrastructures breakdown (e.g., transportation system, healthcare, food supply, and energy) (Boin and McConnell, 2007). However, the observed three countries have different approaches to civil-military coordination but the relational problems among actors, are similar. In Sweden and Finland, civil-military approaches utilize a combination of humanitarian resources and military preparedness to address threats to safety (peace) and security. In these approaches, the study showed that, Sweden and Finland have long-term rooted relational conflicts among civil-military actors. That, conflicts are initiated in the planning (e.g., logistics and ES), and then prolonged in the responses to complex emergencies (e.g., Forest fire in 2014). Whereas in Poland, the traditional peacekeeping operations, conflict prevention and humanitarian missions are accomplished through NATO doctrines and standards for peace and support operations. In that setting, the study showed that, Poland civil-military relations are better understood in the well-trained planning structures of NATO, those also functions as the starting point in the provision of ES to emergency responses.

5.4.1 Swedish military support for emergency planning: From the respondents' perspectives, the SAF support to EPM is based on complicated regulations that create limitations in planning (e.g., late provision of ES in ongoing emergencies). Thus, the Swedish planning of ES is built on two parallel systems (the civil and military systems), in which efficiency becomes a difficult goal. For example, the requirement that the FMV must follow the Swedish Public Procurement Policy is not always efficient. According to Listou (2015), civil-military coordination in logistics is a key element in EPM efficiency. Therefore, the primary focus must not be to reduce costs but to develop an overall logistics system (e.g., built using common agreements and joint activities). The management of logistics activities is usually connected to efficiency, namely, the less expensive mode of ES provision (Ferreira, 2010). According to, Tunca and Wu (2009) and Lyonw (2006), cost efficiency should not be the only motivation driving the selection of suppliers, but quality, time exactness and service should also be considered. In this regard, respondents claimed that if the FMV is considered a central logistics supplier it should also help to supply ES in EPM structures and to achieve efficiency (e.g., in the acquisition of materials and in operational planning). Thus, a clearer role of the military actors in EPM is a fundamental requirement in emergency response operations.

5.4.2 Military support for emergency planning in other developed countries: The Finnish EPM system uses business management to ensure the flexibility of the system, i.e., it integrates business management as part of EPM. However, Finland's vulnerability is growing because it cannot entirely separate its international dependence from the national scope of its technological, financial, political, and social supplies. For example, resources and assets used to ensure ES can vary in different emergency situations, and legislation written in peace time may suggest more limited possibilities than emergency legislation. In Poland, complex threats are a primary concern with respect to national sovereignty and the function of public institutions. This ambition of a self-sufficient system is complex if threats involve overlapping humanitarian and military relations that challenge the core values and the function of life-sustaining systems (Boin and McConnell, 2007).

From the respondents' perspective, Sweden is promoting an increased military involvement in EPM by monitoring developments in Europe (e.g., increased social distress, terror attacks in

Sweden, France, and the UK, the annexation of Ukraine, and the increased migration flows due to the war in Syria). Thus, the need to develop an overall approach that considers all complex emergencies and changing threats to society is garnering attention in Sweden. Actors emphasized that additional considerations that are addressed in common emergency structures, (e.g., activities, resources, concepts, standards, and communication processes), should be linked to ES planning. This approach is consistent with the policies of neighbouring governments regarding the greater use of military resources to perform tasks in civil fields. Sweden, Finland and Poland, with their different but related systems, are politically vulnerable; therefore, a policy that considers greater military involvement in civil fields, has implications not only for EPM, but to the safety and security policy. Gustafson (2010); and (Yoho *et al.*, 2013) highlight one security challenge in terms of the blurred line between criminal and terrorist actions. However, more analysis is needed if emergency policies are to include greater military involvement (Rietjens & Voordijk, 2004) if it involves ethical implication. Thus, individual nations cannot identify one common ethical solution to their threats (i.e., when civil authorities, NGOs, and the military are coordinating to formulate political or economic solutions); instead, nations may need to coordinate their involvement in international safety and security operations (Boin and McConnell, 2007).

6 Conclusions

Based on the results of this analysis of the SCNM through EPM, civil-military relations are essential for EPM to function. The management of civil-military relations can function as a meaningful resource that is jointly used in an overall safety and security approach, particularly in the planning of ES provisions in response to complex emergencies and changing threats to developed countries. This management strategy is exemplified in civil-military coordination in Sweden, as showed in Figure 2.

This study has two main contributions. First, the study focuses on the use of the EPM concept to manage problems in actors' activities when they are responding to complex emergencies and changing threats. This study adds a set of contributions regarding communication, the exercise of authority and coordination among civil and military actors during emergency operations that highlight this concept. Second, by recognizing EPM as a suitable method to manage problems among actors, the provision of ES is associated with civil and military authorities' abilities to prepare for and respond to complex threats. Military actors are not fully stable when engaging in EPM and problems related to actors' joint activities exist. Consequently, solutions to these problems will not automatically arise from emergency planning, as more problems will inevitably arise. Thus, in the emergency preparedness field, the management of actors' activities cannot be resolved solely by focusing on the civil actors' challenges but must also be resolved by focusing on support to military actors, because they often are also required to respond to complex emergencies.

The first research question (RQ1): *"What is the current role of the military in supporting EPM in response to complex emergencies and changing threats in developed countries (such as Sweden, Finland, and Poland)?"* With respect to the role of the military in the response to complex threats in developed countries, Sweden is increasing its military involvement in civil fields. A significant conclusion concerning the use of military resources in civil fields is that developed countries are moving towards greater civil-military coordination to address the challenges of complex threats. Thus, Sweden, Poland, and Finland are gradually threatening

their core values, the function of life-sustaining systems and their national sovereignty. The study highlights the significant degree of managerial considerations associated with the use of the military in fulfilling the traditional responsibilities of a civil society. In this regard, concerns are based on the belief that too much military authority can threaten democratic values. Thus, developed nations remain uncertain about the involvement of the military in fulfilling the responsibilities of civil actors. However, some exceptions among developed countries, such as Sweden, Poland, and Finland, have been noted, as these countries have identified a possible role for the military in responding to both terrorism and the causes of terrorism. Safety and security policies have continuously developed changing strategies that counteract civil-military relations. This strategy was exemplified through the policy changes occurring throughout Swedish history, as shown in Figure 3.

The second research question of the study RQ2: *“How and in what ways can the planning of ES be supported by SAF and specifically the FMV (a civil actor that exclusively provides military logistics) to develop and improve their involvement in emergency preparedness?”* The study highlights the lack of clarity related to the current role of the SAF in EPM. Similarly, the roles of the MSB and the FMV are also ambiguous. A lack of clarity in the role of EPM in total defence has also been observed. One important conclusion is that although the Swedish government has a far-reaching mandate to decide whether a different order can apply, the current political readiness to respond to complex emergencies is insufficient. Regarding this lack of readiness, the ability of the Swedish military to support civil society has no legal basis for efficient coordination. Another conclusion related to readiness concerns the exercise of authority and the development of civil-military coordination. Whereby the provision of information in both the military and civil systems and between the two systems remains a key concern. EPM can support managers’ abilities to address uncertainty with respect to the use of military resources. One necessary conclusion is that for the FMV to become an efficient actor, its role as major logistics supplier must be clarified to help achieve not only efficiency in the acquisition of ES but also operational effectiveness in emergency responses.

This study has added to the previous literature on SCNM and specifically described how civil-military relations are essential for EPM. The study confirmed the importance of civil-military coordination, the management and practice of authority, and the shared forms of communication. Developed countries systematically employ EPM for safety and security purposes, but the EPM systems differ from one another. Thus, the analysis asserts that the development of the EPM is not itself a goal but is imbedded in the construction of a broader SCNM framework to address complex emergencies and changing threats and to support safety and security policy.

7 Future research

Additional research should further examine the use of EPM to manage civil-military relations. Further research is also needed regarding the coordination of civil activities with the military and the role of commercial actors in emergency preparedness to ensure the provision of ES. The development of a common strategy to ensure ES during emergencies is necessarily requiring more research. Research aiming to develop coordination among and within countries to ensure regional safety and security is necessary.

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Appendix 1.

Interview guide to gather information about the military involvement in emergency preparedness in Sweden

Question on EPM and the use of authority that civil-military organizations make use of in dealing with safety and security in Sweden

1. How does your organization manage authority regarding complex emergencies? And under what circumstances does military authority can support the emergency preparedness planning?
2. In view of different perspectives (civil and military) on emergency preparedness management, from your point of view, what would a successful emergency management consist of? What problems can rise between actors?
3. In what way do you consider that the different actors involved in the supply chain can contribute to the overall goal of EPM, and to a greater coordination between the civil and military activities?
4. What authority the Armed Forces (FM) have in a “changed” strategy to ensure safety and security to civil society? (e.g., against terrorism, forest fires, floods, social concerns, and war)
5. What would the main motivation for FM be to admit civil authority from civil actors in the planning of emergency preparedness?

Views about the current EPM coordination between military and civil actors in response operations

1. How would you describe the coordination between Swedish civil and military actors in response operations today? how and when does civil-military coordination occur during an emergency response? What decisions and at what level are taken?
2. Which problems can arise in concern to coordination, and the use of military authority in emergency activities?
3. In the case of total defense -civil defense - what would FM need to develop to avoid problems in coordination, when managing of emergency supplies, for example, in responding to terror, floods, forest fires and transport accidents etc.?
4. In what way could use of military authority be effective to adapt in emergency response and to increase FM coordination benefit?

5. Given that military organizations can represent very valuable support for management structures, how could these be coordinated with civil actors in planning?

Managing military involvement and communication in the emergency planning and response operations

1. In view of the ongoing changes in the international information security environment, would you like to describe possible military management strategies to meet these changes? (specific to FM respondents)
2. In what way communications processes need to be managed in order to increase the coordination between stakeholders to achieve reliable emergency supplies and services?
3. What communication problems can be encountered in civil military coordination, regarding the procurement processes of emergency preparedness? (specific to FMV and FM respondents)
4. What problems can be encountered when it comes to procurement to communicate the benefit from joint agreements?
5. What are the advantages and disadvantages associated with the military communication in the field of response operations?
6. Do you have any last advice to EPM organizations on coordination and cooperation efforts in planning and support for emergency response operations?