

Revista Científica General José María Córdova

(Colombian Journal of Military and Strategic Studies)

Bogotá D.C., Colombia

ISSN 1900-6586 (print), 2500-7645 (online)

Journal homepage: <https://www.revistacientificaesmic.com>

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To cite this article: Kaneberg, E., Hertz, S., & Jensen, L. (2019). Voluntary defense networks in emergency preparedness in developed countries: the case of Sweden. *Revista Científica General José María Córdova*, 17(26), 229-250. <http://dx.doi.org/10.21830/19006586.379>

Published online: April 1, 2019

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Revista Científica General José María Córdova

(Colombian Journal of Military and Strategic Studies)
Bogotá D.C., Colombia

Volume 17, Number 26, April-June 2019, pp. 229-250
<http://dx.doi.org/10.21830/19006586.379>

Voluntary defense networks in emergency preparedness in developed countries: the case of Sweden

Redes de defensa voluntarias en preparación ante emergencias en países desarrollados: el caso de Suecia

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ABSTRACT. Voluntary networks are actors in civil society and central to the emergency preparedness efficiency of developed countries'. This study focuses on the voluntary defense networks in Sweden, a unique set of networks that contribute to the efficiency of emergency preparedness. Through interviews with experts in Swedish civil and military fields and their associated voluntary defense networks, as well as secondary data, we examined the coordination of these voluntary defense networks in practice. Although voluntary network coordination is highly associated with efficiency, in practice, most voluntary networks are not well coordinated. This study confirms that civil and military practitioners in developed countries, struggling with the coordination of voluntary networks are not isolated in their struggle; inattentive practices are indeed the norm. This article also establishes a course that civil and military practitioners can follow to improve emergency response efficiency.

KEYWORDS: civil society actors; civil-military coordination; communication; emergency preparedness; management efficiency; voluntary defense networks

RESUMEN. Las redes voluntarias son actores de la sociedad civil e importantes para la eficiencia en la preparación de emergencia de los países desarrollados. Este estudio es sobre las redes de defensa voluntarias en Suecia, un conjunto único de redes voluntarias que contribuyen a la eficiencia de la preparación para emergencias. Las entrevistas con expertos en el campo civil y militar sueco y sus redes de defensa voluntarias asociadas y datos secundarios expusieron el examen de la coordinación de la red de defensa voluntaria en la práctica. La coordinación voluntaria de la red está significativamente asociada con la eficiencia, pero en la práctica, la mayoría de las redes voluntarias no están bien coordinadas. Si los profesionales civiles y militares de los países desarrollados están luchando con la coordinación de redes voluntarias, este estudio confirma que no son únicos en su lucha. La práctica indiferente es de hecho la norma. Los profesionales civiles y militares pueden seguir una ruta adecuada aquí establecida cuando se busca mejorar la eficiencia de la respuesta de emergencia.

PALABRAS CLAVE: actores de la sociedad civil; comunicación; coordinación civil-militar; eficiencia de gestión; preparación para emergencias; redes de defensa voluntarias

Section: EDUCATION AND DOCTRINE • Scientific and technological research article

Received: October 23, 2018 • Approved: March 13, 2019

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Introduction

Many authors consider the voluntary network an ideal actor in civil society (Rotolo, 2010; Kaldor, 2003; Kendall, 2003), synonymous with management efficiency (Boin, Hart, Steen & Sundelius, 2005; Samuelson, 2005). In the current environment of developed society vulnerability, voluntary defense networks are regarded as a criterion of efficiency (Kaneberg, Hertz & Jensen, 2016). Given the recognized importance of voluntary defense networks for emergency preparedness efficiency, developed countries are urgently studying whether this area can help develop voluntary networks in general (Kaneberg et al., 2016). The focus of this study is to examine voluntary defense networks, a unique set of networks, that can provide coordination and communication conditions to the emergency preparedness efficiency in developed countries.

To date, studies have focused on common voluntary networks in less developed societies (Nugrouho, 2011), impact on response effectiveness (Perry & Lindell, 2003), obstacles to civil-military coordination (McConnel & Drennan 2006; Alexander, 2005), and network (Håkansson & Snehota, 2006). As far back as Håkansson (1988), evidence has existed showing the financial benefits ensured by network relationships (involving actors, resources, and activities). Since then, they have come to be viewed (occasionally unquestioned) as essential for success.

Thus, this article focuses on the challenges of voluntary networks; specifically, addressing the voluntary defense networks (civil and military) involved in Swedish emergency preparedness. Although the Swedish emergency preparedness reckons on the coordination and cooperation of all of the actors in the system, the planning only involves some networks (Kaneberg et al., 2016). Regarding the voluntary sector, (2016, p. 22), the system is inefficient, lacking in communication and coordinated practical response operations. In practice, the consequences of the Västmanland forest fire in the summer of 2014, and, later, the consequences of the Gävleborg, Jämtland, and Dalarna forest fires in the summer 2018 shed light on the challenges of the coordination of Swedish voluntary networks. Concerning Västmanland, for example, Strömberg (2015) offers some related dimensions by splitting coordination and cooperation into the two management mechanisms, preparedness and response, and communication and planning. Mikkelsen (2006) emphasizes these interrelated practices and also highlights the need to integrate voluntary defense networks and their related mechanisms.

From a network perspective, many actors of society are coupled in civil, military, public, and private (profit and non-profit or voluntary) relations (Kaldor, 2003). Networks are mechanisms used to overcome communication, coordination, management, and efficiency issues when complex organizational structures apply (Steigenberger, 2016; Wolbers & Boersma, 2013). Because voluntary networks are actors in civil society and vital to overall efficiency, it is suggested that emergency preparedness develop mechanisms for voluntary networks to succeed in response operations (Nolte & Boenigk, 2011; Tomasini & Van Wassenhove, 2009; McConnell & Drennan, 2006; Kaldor, 2003; Osborne, 2002).

When voluntary defense networks are involved with military mechanisms, their non-profit activities must be coordinated with civil networks (Alexander, 2005). Voluntary actors may need to perform in parallel networks when civil and military structures are involved in the coordination (Comfort & Haase, 2006). Civil-military coordination involves voluntary networks that are often poorly attuned in emergency planning and badly coordinated in emergency responses (Heaslip & Barber, 2014; Lundström & Svedberg, 2003). Moreover, Rotolo and Berg (2010), Wijkström, Einarsson and Plowden (2003) claim that splitting coordination and resource sharing into two types of resources (civil and military) will require more planning and control.

In humanitarian literature, voluntary networks are often analyzed in terms of membership, participation, and, increasingly, in relation with the military, when democratic structures apply (Heaslip & Barber, 2014; Wijkström & Einarsson, 2006; Sivesind, Lorentzen, Selle, & Wollebæk, 2002); (Wijkström & Einarsson, 2006; Sivesind, Lorentzen, Selle and Wollebæk 2002). In practice, in Sweden “the number of organizations in the sector (including those that are not registered) amounted to 232,000 in 2013” (Statistics Sweden, 2015, p. 89). The system includes Voluntary Defense Organizations (FFOs), which represent a unique category of voluntary actors. FFOs are separated from the state, the market, and the household (Lundström & Svedberg, 2003). They are intended to support public authorities in modeling the emergency preparedness relations and coordinate within the voluntary defense cooperation (FOS) (Axelsson & Easton, 1992; Cross, 2012) and have the resources to engage in defense, education, recruitment, and emergency activities. FFOs are in an arena in which coordination and communication should function seamlessly, but in practice, there have considerable challenges despite their alignment with the armed forces, as well as the civilian preparedness system (Körlof, Lagerblad, Lundgren, & Wahlberg, 2014). Thus, this paper focuses on the voluntary defense networks of civil society that are engaged in emergency response in developed countries.

The objective of this study is to examine the role of voluntary defense networks in emergency preparedness in developed countries, specifically, the Swedish voluntary defense networks’ impact on efficiency, to answer the following research questions:

RQ 1: What network mechanisms are necessary for planning to integrate the voluntary defense networks of civil society in emergency preparedness?

RQ 2: How can the voluntary defense networks contribute to efficiency in emergency response operations?

This paper is organized into six sections. The first section provides some background on the subject. Section two is a literature review. Section three describes the methodology used. Section four summarizes the empirical findings concerning Sweden. Section five provides an analysis followed by discussions on the voluntary defense networks in practice, the successful pathways for efficiency, implications of the findings, and presentation of an integrated model. The sixth section presents the conclusions and suggestions for future research.

Literature review

A twofold literature review was conducted (CRD, 2009) to analyze the efficiency of civil society in preparing and responding to emergencies in developed countries. First, we used the aspects of management literature to describe different views on efficiency using mechanisms of communication, coordination, and management. The mechanisms here were conditions in emergency preparedness management, emergency planning, and emergency response. Second, we focused on voluntary defense organizations (FFOs) as actors in civil society to promote efficiency. Thus, the theoretical examination included the emergency preparedness of civil society, voluntary defense networks coordination and communication, and management efficiency.

Emergency preparedness of civil society

This section describes the relationship between emergency preparedness and civil society security. Research on civil society focuses on the ability of the political authorities to provide safety and security policy (Kaldor, 2003). However, when the concept is related to debates on “intersectoral partnerships,” according to Nolte and Boenigk (2011, pp. 1-3), it stresses the roles of “public organizations” in achieving public efficiency (Salamon, 1995). Public organizations are actors of civil society “subject to political rather than market controls and perform political activities founded on political authority, their objectives, structures, and processes, defined by central bureaucratic or constrained by legislation” (Parker & Bradley, 2000, p. 130). When complex emergencies arise, namely, terrorist attacks, infrastructure breakdowns, and cyber-attacks, among others, the public actors involved are often military, civil agencies, and divisions of authority from various levels (local, regional, and national), (Salomon & Helmut, 1992). Public actors are required to coordinate emergency management because no single actor can provide all of the necessary resources (Ödlund, 2010; Waugh, 2006). These coordinated activities are required to achieve tasks in networks, as well as preparedness and training (Lalonde, 2007).

In emergency preparedness, voluntary networks coordinate to perform in emergency response (Perry & Lindell, 2003) and are essential resources in the latter to fulfill response operations (Van Wassenhove, 2006). An examination of the public (civil-military) and private (profit and non-profit) sectors indicates that they have vital roles associated to the efficiency of the response (Nolte & Boenigk, 2011; Kaldor, 2003). The public (civil-military) and private (profit and non-profit) actors are involved in networks that can be transformed from permanent (emergency planning) into temporary structures (response operations) (Jahre, Jensen & Listou, 2009). In this article, we define and shape a unique type of network to the efficiency role by taking communication and coordination mechanisms into account; we consider the role of different voluntary defense networks performing in well-defined military structures (Körlof et al., 2014; McConnell & Drennan, 2006).

Because the FFOs' structures, communication, and coordination are closely interrelated, these three aspects should be given equal attention. In this respect, the FFOs' role is a part of emergency preparedness efficiency. Indeed, the main decisions for emergency managers are related to efficiency (Rimstad, Njå, Rake & Braut, 2014; Nugroho, 2011; Comfort, 1994) through the coordination of voluntary networks. While civil society involves diverse voluntary networks, this study concerns one part of the military structures. Voluntary organizations may have different roles depending on the preparedness context but have a relatively stable set of resources (Comfort, 2005; Håkansson & Johanson, 2002; Boin & Lagadec, 2000). The management of voluntary sector networks is a major concern (Adrot & Moriceau, 2013; McConnell & Drennan, 2006). In Sweden, the voluntary sector involves two types of voluntary networks, the voluntary civil networks (e.g., The Swedish Red Cross) and the FFOs representing the military part of the voluntary sector. These two types of networks are included in separate parts of the emergency planning, meaning that they are designed in different structures; however, the two networks are jointly managed in emergency response operations (Körlof et al., 2014; Samuelsson, 2005).

The voluntary defense networks

According to Körlof et al. (2014), FFOs are the only volunteer part of the entire Swedish voluntary sector covered by sections of law. They comprise 18 different voluntary actors and have approximately 400,000 members. Their purpose is to provide resources for Swedish total defense, civil defense, as well as emergency preparedness and emergency response, meaning that some are civil and some military. Therefore, FFOs are voluntary defense networks with special status in Sweden. This study focuses on those of the military segment to provide insights into the whole sector. According to law 343 of 2006, the Swedish Armed Forces (SAF) can support civil actors in complex emergencies through the FFOs, allowing the SAF to coordinate with civil authorities in situations, such as terrorism, that may involve the use of force against individuals (e.g., police or security services). The FFO networks engage in civil responses, including the tracking of missing persons, the disposal of ammunition, and the breakdown of vital infrastructures. Because communications are one of the vital infrastructures, all of the levels (national, regional, local, and individual) need to be coordinated. FFOs have gained prominence in addressing complex emergencies, recruiting young people as their role in emergency management increases. Some examples of FFO interventions are during the Storm, Gudrun, in January 2005; high water in Småland, in July 2004; oil recovery in Skåne, June 2003 (Helsloot, 2005); and forest fires in 2014 and 2018.

Civil voluntary networks

Building on Mikkelsen (2006), this section shifts the attention to the coordination challenges of voluntary civil networks. Voluntary networks are understood as strategic tools in

the efficiency of civil society (Kaldor, 2003). Policy implications have been strengthened by technological progress and financial risks in addressing the challenges of voluntary networks (Young, 2000). Voluntary networks are distinct from those of the state and market, in practice, representing the effort of a “wide spectrum of organizations, [...] to non-profit organizations engaged in [...] collective action around shared interests, purposes and values” (Osborne, 2002, p. 5 and 13). Voluntary networks challenges also arise when planning for response operations (Van Wassenhove, 2006). Birkland (2000) claims that when the voluntary resources are overlooked in planning, coordination and communication becomes unclear in response operations. Birkland suggests that previous experiences can help mitigate coordination and communication challenges and generate policy changes, as well as adapt essential mechanisms to efficiency.

A structure of “network mechanisms” uses a modified version of the ARA model, which states that Actors having Resources can be coordinated in properly managed Activities (Håkansson & Snehota, 2006, 1995; Håkansson, 1988); thus, actors, resources, and activities are intertwined. According to Gadde et al. (2002), actor resources are necessary for the expected activities and have no value unless they are activated in the planning. Resources are often divided into physical and organizational; facilities, products, and business units and relationships are crucial to the network. In terms of importance, relationships for collaborative purposes should be of special concern to managers (Smith & Laage-Hellman, 1992). The critical “network mechanisms” of the ARA model are communication, coordination, and management, as shown in the overview in Figure 1.

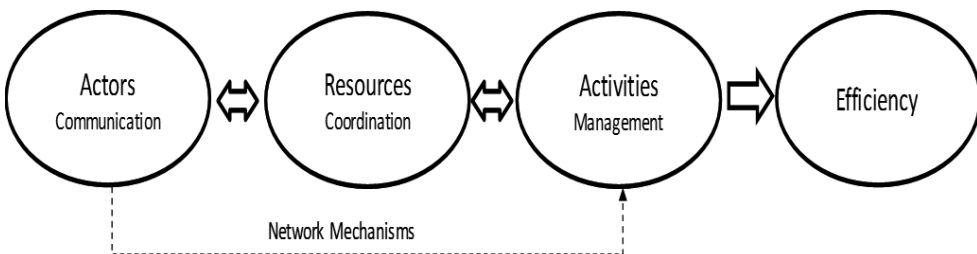


Figure 1. The ARA model based on Håkansson (1988, p. 17).

Source: Created by the authors, Kaneberg, Hertz, and Jensen (2015).

These “network mechanisms” must be adequately managed. This structure is not only important to public actors but should also be adapted for the non-profit sector because it can profit from the public sector’s strengths, such as its allocation of resources or its legislative power (Wyman, 2009; Meyer, 2009).

Communication

This section addresses different aspects of communication that enhance the efficiency of emergency preparedness (Merchant, Elmer & Lurie, 2011). The experiences from hurricane Katrina (August 23-30, 2005), according to Parker, Stern, Paglia, and Brown (2009), revealed an unprepared and untrained state. In particular, communication was vague due to the lack of information among the legislative authorities in the early stages. These aspects show that while ineffective communication produced poor resource availability, communicating the available resources could be a predictor of success or failure in the response activities (Steigenberger, 2016). Additional aspects of communication, in the Merchant et al. (2011) analysis, showed that communication helped to build civil society resilience. Aspects of communication and their importance for the preparedness and the response is significant for efficiency. The impact is evident when communication amongst the involved voluntary networks is conducted based on different structures, as is shown from the FFOs example. Steets and Hamilton (2009) also claim that communication is essential to defined roles and responsibilities, such as the military's role in the preparedness of civil society. Stephenson (2007), argues that military planning should be communicated through adequate mechanisms, facilitating the switch from a military context into civil uses (Clark, 2007; Heaslip et al., 2012); this shows that communication can not only affect different parts of the emergency preparedness but can influence whether responses are successfully achieved. As claimed by Feaver (1996), communication is the pillar of coordination impacting the efficiency of voluntary work.

Coordination

The combined resources of different voluntary networks are strategic to the efficiency of emergency response (Steigenberger, 2016; Stephenson, 2007; Comfort, 1994). The coordination of voluntary networks can be regarded as permanent (planning) or temporary (response) (Jahre et al., 2009). Coordination is essential to combined resources and the adaptations in the emergency preparedness system of the inter-organizational network (Fenton, Passey, & Hems, 1999). Two concepts have been considered promising to the discussion on network coordination in this study. First, Håkansson and Snehota (2006) affirm that network coordination must be correctly understood as a strategic tool. Second, Axelsson and Easton (1992) state that network relationships need to evolve gradually, based on earlier experiences and over time. In agreement with Håkansson (1988), coordination stresses actors and resources that are embedded in inter-organizational activities.

These two concepts highlight the importance of coordination concerning voluntary networks. According to Salamon and Helmut (1992), voluntary networks are taking primary roles in emergency preparedness, and Nugroho (2011) and Kendall (2003) have claimed that voluntary networks are active for the integration of public policy as one of the fastest growing segments of the economy. Fittingly, developed countries, like the

United States, Japan, United Kingdom, Europe, and Australia, are increasingly challenged to coordinate their voluntary networks to increase their welfare efficiency (Hunt, Smith, Hamerton, & Sargisson, 2014). Overall, voluntary network coordination has been considered a success and has been celebrated for increasing involvement of people in response to complex emergencies (Perrow, 2007). The Swedish voluntary sector engages 90-95 percent of the population as members in at least one association (Wijkström, 2000, p. 161). Sweden is an inspiring example, not only in terms of resources (including cultural, educational, recreational, religious, labor, defense, and business associations) but also of the challenges voluntary networks face when fulfilling civil society needs. Because of its strong voluntary sector, Sweden can be a useful and interesting reflection for other countries (Lundström & Svedberg, 2003).

Management efficiency

Management efficiency is vital to emergency response (Brudney and Gazley, 2009). Converting this ideal into practice has proved difficult given that management efficiency is a prerequisite to emergency preparedness (McConnell & Drennan, 2006). Current trends in developed nations like Sweden (Lundström & Svedberg, 2003), are focused on changing threats, such as terrorism, chemical, nuclear, and technological attacks. According to McConnell and Drennan (2006), new threats create new management efficiency demands, for instance, in proposing available and new resources. Management efficiency in emergency preparedness is closely related to resource efficiency, making the use of voluntary networks a fundamental premise to the most efficient form of resource availability (Nolte & Boenigk, 2011; Park, 1996). Challenging the availability of resources to address current threats is the responsibility of military networks (Boin & Lagadec, 2000). A key issue regarding management efficiency is governmental policies that reinforce the efficiency of management when predicting when and where an emergency will strike and involving voluntary networks in emergency response (Boin et al., 2005). Policymakers and managers are often trapped between uncertain danger situations and the choice of actors (resources) that are required (Samuelsson, 2005). For example, when the need for military resources arises to support civil society, the first challenge becomes to overcome policy barriers (Alexander, 2005). Grant (2010) claims that through voluntary networks, the obstacles to management efficiency will be reduced; thus, overcoming communication and coordination barriers (Rotolo & Berg, 2010).

Summary

Despite a wealth of research on emergency preparedness in relevant networks, there is little information regarding improving efficiency in voluntary defense networks. This unique type of network is suited with conditions for communication, coordination, and management. This study intends to fill this research gap by providing an integrated model

(empirical facts and theoretical evidence) of voluntary defense networks to explain the mechanisms that lead to their efficiency.

Methodology

This qualitative study analyzes the mechanisms of the voluntary network in a somewhat different empirical area. By examining voluntary defense networks, this study seeks to find other perspectives of coordination that can be applied by multiple public (civil-military) and private (profit, non-profit) actors in emergency preparedness. FFOs were selected because they represent a unique group amongst the entire voluntary sector in Sweden. The FFOs are an exclusive group in the Swedish system with many conditions for achieving coordination, communication, and management.

According to Yin (2002), the increasingly accepted “what and how” research questions can help in “recognizing patterns in relationships” (Eisenhardt & Graebner, 2007, p. 25). This study conducted in-depth examinations on the voluntary defense networks in Sweden to assess the aspects of management that strongly affect communication, coordination, and efficiency. In this regard, following L’Hermitte, Bowles, Tatham & Brooks (2015), the views of different sources from “public and non-profit” sectors have been widely regarded as “relevant factors” (Nolte & Boenigk, 2011, p. 6). The starting step was then to identify the military materials (doctrines, directions, statistics, budgets) and policy documents (regulations, articles, laws) necessary to build a general understanding of what and how the management and planning of the voluntary sector are communicated and coordinated.

Twenty-five semi-structured interviews with managers and experts in different organizational levels of the Swedish system (FFO, FM, FMV, MSB, SAF, Home Guard (SHV), KKVA, and the FFOs organizations) were conducted (Table 1) to understand the roles of voluntary defense networks. The interviews covered the subject areas of mechanisms, participation, communication, resources, coordination, and management. According to Yin (2002), semi-structured interviews allow respondents to answer freely and cover factors not anticipated by the interviewer. The interviews were conducted from the 16th of November 2015 to the 14th of January 2016, either in personal meetings or over the telephone (2 interviews) and lasted between 60-90 minutes. Once the respondents were identified, a list of questions was sent in advance. All of the interviews were recorded and transcribed with the respondent’s authorization. Interviews were complemented by secondary material, such as webpages, journals, magazines, reports, and specialized newspapers (FFO-related), as well as relevant articles available in the field.

Anonymity was indispensable to guaranteeing the quality of the information. Following Bower and Gasparis (1978), respondents will be more honest and act with less reserve if they believe that what they say or do will be preserved in confidence. Thus, to protect the respondents’ views, their names were replaced by the date on which the inter-

view was conducted, whether in person or by phone, at the FFO, FM, FMV, MSB, SAF, Home Guard (SHV), KKVA, and the FFO organizations.

In terms of quality, following Yin (2002), the strengths of this study include the relatively easy access to data, for example, information about relevant respondents and secondary information. The selection of the FFOs was aimed to delimit the number of voluntary defense networks. Another major strength is that all of the FFOs in Sweden are represented in the interviews.

The delimitation, according to Alvesson et al. (2008), promotes reflection by mixing different theories to induce change. In that sense, this study converged viewpoints from civil society and emergency preparedness theories to elucidate voluntary defense network efficiency. Golafshani (2003) addresses reliability and validity, which in this study of network actors, resources, and activities are reflected in the coordination of systems (civil-military) to determine certainty. The transferability of this study is strengthened by the fact that different civil society actors represent developed countries structures and are different from constructions in underdeveloped countries (World Bank, 2016-2017). Guba and Lincoln (1994) argue that broad descriptions enable the researcher to make judgments about the transferability of the study. The interviews and secondary data focus on the Swedish voluntary defense networks rather than the general voluntary networks; this also facilitates the transferability of the results. Through the opinions expressed during the interviews and secondary materials, this study enables the conceptualization of a broader representation of the empirical material.

Table 1. Classification of interviewed actors and secondary data collected

Name in Swedish	Acronyms	Type of Actor	Type of Network
Frivilliga Automobilkårens	FAK	FFO – Military	non-profit sector
Frivilligas Samarbetskommitté	FOS	FFO – Military	non-profit sector
Frivilliga Radioorganisationen	FRO	FFO – Military	non-profit sector
Flygvapenfrivilligas Riksförbund	FVRF	FFO – Military	non-profit sector
Försvarets Personaltjänstförbund	FPR	FFO – Military	non-profit sector
Insatsingenjörernas Riksförbund	IIR	FFO – Military	non-profit sector
Sjövärnskårens Riksförbund	SVK RF	FFO – Military	non-profit sector
Svenska Brukshundklubben	SBK	FFO – Military	non-profit sector
Svenska Fallskärmsförbundet	SFF	FFO – Military	non-profit sector
Svenska Försvarsutbildningsförbundet	SFU	FFO – Military	non-profit sector

Table continues...

Name in Swedish	Acronyms	Type of Actor	Type of Network
Svenska Lottakåren	SLK	FFO – Military	non-profit sector
Svenska Pistolskytteförbundet	SPSF	FFO – Military	non-profit sector
Svenska Skyttesportförbundet	SvSF	FFO – Military	non-profit sector
Sveriges Bilkärers Riksförbund	SvBR	FFO – Military	non-profit sector
Frivilliga Flykåren	FFK	FFO – Military	non-profit sector
Sveriges Civilförsvarsförbund	SvCF	FFO – Civil	non-profit sector
Svenska Blå Stjärnan	SBS	FFO – Civil	non-profit sector
Svenska Röda Korset	SRK	FFO – Civil	non-profit sector
Voluntary Resource Group*	FRG	Civil	non-profit sector
Kungliga Krigsvetenskapsakademien	KKrVA	Military	non-profit sector
Social Forum	SF	Civil	non-profit sector
Svensk Insamlingskontroll-90konto	90konto	Civil	non-profit sector
Försvarsmakten	FM	Military	public sector
Försvarsmakten HV*	FM HV	Military	public sector
Svenska Hemvärnet	SHV	Military	public sector
Myndigheten Samhällsskydd och Beredskap	MSB	Civil	public sector
Försvarets Materielverk	FMV	Civil	public sector

**information obtained through telephone interviews and secondary materials*

Source: Created by the authors, Kaneberg, Hertz, and Jensen (2015).

Empirical findings

The FFOs' challenges and opportunities in civil emergency planning and emergency response in Sweden are discussed in this section through personal interviews and relevant secondary data.

The Swedish Voluntary Defense Organizations (FFOs)

This section highlights three sections of policy that regulate the voluntary sector and are proposed by the Government Office of Sweden (2016). The first is the Swedish Act (1992:1403) on total defense and heightened preparedness; that is, the actors necessary

to prepare Sweden for war. Total defense includes military (military defense) and civil (civil defense) activities. The second is ordinance (1994:524) of the Swedish FFO regulation on the volunteers' activities for civil defense. The third is law (2002: 375) of the Swedish regulation on voluntary resources in complex emergencies. This law regulates the SAF through which the FFOs supports government agencies, municipalities, and county councils in emergency response activities.

Communication

The interviews revealed that voluntary defense networks are a resource for emergency response efficiency. This study shows that when FFOs are part of response operations, they will communicate through different structures and with different objectives (civil and military) at different levels (national, regional, local).

At a national level, the Swedish Contingencies Agency (MSB) is assigned to plan, coordinate, and communicate with voluntary defense networks. The MSB is responsible for managing FFOs and communicating roles, activities, as well as its coordination with other actors. According to respondents, there are significant gaps in fulfilling these tasks.

Our skills may not be required as they are not adequately communicated due to obsolete mechanisms and management. The MSB is responsible for the communication and coordination of emergency preparedness, but their lack of understanding of the complex voluntary culture hinder the development of vital communication skills, for example, endless documentation processes, inadequate technology, and high-level bureaucrats with little knowledge on the conditions of the voluntary sector. (Respondent 21 Dec. 2015).

At the regional level, four regional military sectors involve the FFOs in planning. In this mechanism, communicating between the SAF and FFOs requires adequate technology, as well as skills.

The FFOs have strategic resources that are essential for emergency activities, including channels of communication with many people. The FFOs provide a broad set of competencies that are acquired by continuously communicating with many actors. Our main task is to provide a cost-effective contribution to military planning and emergency preparedness. (Respondent 24 Nov. 2015).

Locally, the Voluntary Resource Group (FRG) is a voluntary network at the municipal level; it communicates with the municipality when regular resources need to be reinforced. The FRG's networks are combined with the FFOs' when something extraordinary occurs. The FRGs include various experienced and trained NGOs with the resources to address the planning of response operations. There are approximately 125 FRG networks, but the overall goal is to have at least one group in each of the 290 municipalities.

The FRG is a very important non-profit network, not only for the FFOs but also for the overall voluntary sector in Sweden. While they are central actors in exercises and training, communicating good practices from evaluations has been difficult. We try to have the FRG in exercises and often in training programs, for example, management exercises where the FRG communicate directly with other managers (Respondent 1 Dec. 2015).

Coordination

Coordination (and cooperation) is recognized as the Swedish model in which all civil society resources can be involved. The Home Guard (SHV) is an essential actor of the SAF, necessary to guarantee the FFOs' coordination. "The Home Guard engages, today, 22000 forces of which 5500 positions consist of FFOs" (Respondent 17 Nov. 2015). The Home Guard, along with the national security forces, is a part of the SAF's mission-based organization. The Home Guard operates over the entire conflict scale during peacetime and in war.

Coordination is vital for our units, as in emergency response, the Home Guard is required to coordinate the resources with several different civil actors. Our personnel is locally recruited, as voluntaries, and consists mainly of retired experienced soldiers and officers with a background in mission-based units. (Respondent 18 Dec. 2015; Respondent 9 Dec. 2015).

The coordination of the FFOs networks has implications for Swedish efficiency. Managers sometimes lack an understanding of civil and military structures. Respondents claimed that directions and policies need to match current demands better. Civil-military coordination is an integral part of the broader concept of total defense but needs to be reinforced by normal direction and policy, for example, in the latest migration crisis" (Respondent 19 Nov. 2015).

One problem with many organizations is complexity, in which unclear roles and vague responsibilities can generate controlling and dominating cultures. Responsibility is required, and public responsibility requires many actors. The latter leads to competition between the actors because of conflicting relationships (Respondent 3 Dec. 2015; Respondent 9 Dec. 2015).

Management efficiency

Management efficiency needs not always involve an economic component. Rather, the management of FFOs networks requires adequate mechanisms in which their voluntary activities can take place.

There is a need for further analysis, considering the activities that have dominated the tasks of the voluntary organizations in recent years. At least, an analysis of network mechanisms in which voluntary actors can improve efficiency in response to complex emergencies. (Respondent 4 Dec. 2015).

Managing FFOs presents challenges in terms of efficiency. Recruiting young people, acquiring technology, developing, and remaining competitive has proved to be difficult. Defense policy may strengthen the FFOs commitment in civil-military roles.

As long as activities match a military task, the difficulty stands only for civilian FFOs to manage their activities according to military planning. For example, during the latest migration crisis and the requested assistance from the migration office, it became clear that the Swedish system did not have a structure to involve FFOs over short periods. Current methods and policies in the Swedish system make it very difficult for voluntary actors to manage rapid mobilizations (Respondent 25 Nov. 2015; Respondent 16 Nov. 2015).

Moreover,

As with emergency response operations; it requires extreme workloads, this means that additional resources are required to handle the activities that appear ad hoc" (Respondent 26 Nov. 2015; Respondent 27 Nov. 2015).

Some of the FFOs may not always focus on how they are managed; instead, their focus is more on how to use their resources, whether in a temporary or ad hoc basis.

Organizations that are unfamiliar with each other and have dissimilar roles often struggle to coordinate; this becomes even more problematic in spontaneous setups. Reasons for these problems are due to a lack of communication and competition for available financial funding. (Respondent 23 Nov. 2015; Respondent 3 Dec; Respondent 21 Dec. 2015).

Analysis

Here, we discuss the most relevant findings in the empirical materials concerning the theoretical framework.

The examination of voluntary defense networks (FFOs), could support, if well managed, emergency preparedness. Körlof et al. (2014) claim that the FFOs are the only voluntary network in the Swedish sector considered in the law. FFOs should, therefore, contribute to improving coordination, communication, and management. Unfortunately, fulfilling such expectations has often been unsuccessful in practice. According to the respondents, communication and coordination are attributes of FFOs, but, when they are required in response operations, they are poorly coordinated, both in the civil and military structures.

This study found that the organizational complexity in developed countries has led to mechanisms and strategies that counteract conditions for efficiency. For voluntary defense networks, the civil-military mechanisms of emergency planning take on symbolic importance. Notably, improving communication and coordination falls into tradition-

al emergency management. For example, the coordination of public (civil-military) and non-profit actors, as well as the mechanisms by which voluntary defense networks resources are put together (e.g., physical and organizational types), have been underemphasized in emergency planning. This study finds that the notion of voluntary defense networks is built on three pillars, direction, strategy, and ambition (Nolte & Boenigk, 2011; Kaldor, 2003; Osborne, 2002). These pillars are intended as figurative positive effects for emergency preparedness, and, thus, capture the complexity of the general Swedish voluntary sector and its joint activities. This study revealed that communication, exercise, training, and coordination between public (civil-military) and non-profit sectors and among voluntary actors are the most significant contributors to these positive effects.

The findings regarding civil-military voluntary network coordination and communication in emergency preparedness and response operations show that these elements play a vital role in developing emergency management efficiency. Several researchers (Steigenberger, 2016; Helsloot, 2005; Gadde et al., 2003; Gadde et al., 2002) support this view, in terms of what constitutes the coordination of the public sector and its related complexity. Respondents believe that shortfalls in communication and coordination in the present Swedish voluntary defense networks are caused by differences in direction, strategy, objectives, and the management of Swedish public actors (i.e., political authorities, MSB and FM). To properly function, voluntary defense networks must coordinate with many public actors and communicate at all levels (national, regional, and local).

Overall, the findings suggest that there are both positive and negative mechanisms in voluntary defense networks. To a certain degree, conditions such as complexity, management, and emergency coordination had disappointing outcomes. Previous research has shown that voluntary sector networks can fulfill or abandon emergency activities if communication skills are poor (Adrot & Moriceau, 2013). This study suggests that the public-private actors should not replace their ongoing planning components; implementing new mechanisms, can provide synchronized exercise and training on current emergencies. It is through coordination that emergency management finds efficiency, and through communication that the voluntary defense resources can be planned in civil structures (Steigenberger, 2016; Stephenson, 2007; Comfort, 1994).

The model in Figure 2 shows the insights obtained in the literary review, using the opinions of the respondent in this study (presented in Table 1). The lower segment of Figure 2 illustrates the three main interrelated network mechanisms that are required in emergency preparedness, namely, communication, coordination, and management. The management of actors, resources, and activities are linked to a context of national capability in which public (civil-military) and voluntary networks are part of civil society. In the upper part of the model are the different networks operating at the regional and local levels (civil-military, public, voluntary) that affect each other. These networks are arranged with the mechanisms that affect the preparedness efficiency in which it is found that the management deficiencies have detrimental effects.

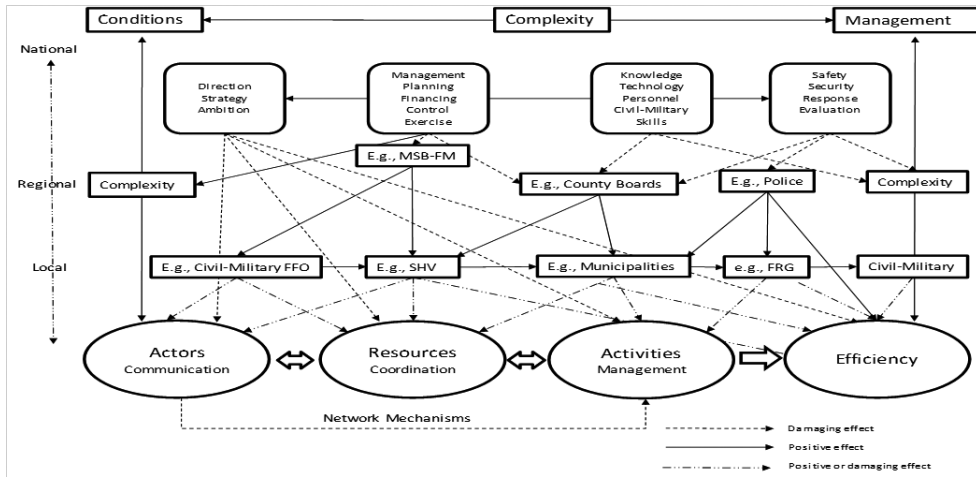


Figure 2. Integrated model based on the results of this study and inspired by Steigenberger (2016).
Source: Created by the authors, Kaneberg, Hertz, and Jensen (2015).

Inspired by the work of Steigenberger (2016) on multi-agency disaster response, the arrows in the model show the damaging or adverse effects (dotted line) and positive effects (solid line) of the mechanisms. The dotted lines suggest that the direction, strategy, and objective of the desired effect depends upon other conditions. Policy conditions and management often facilitate the communication and coordination of actors (e.g., MSB and FM) and the management of operational planning, financing, control, and exercise, among others (Wijkström, & Einarsson, 2006). For instance, complexity affects communication (regionally and locally) and coordination (between civil and military actors), and is impacted by whether the actors are aware of, exercise for, train for, and develop a culture grounded on a common political ambition (as a common goal of safety and security).

In contrast, skills, exercise, and training can help control the relationship between planning and communication and between planning and coordination. Damaging effects stem from the inability of policymakers to understand emergency demands. Policymakers are trapped between conflicting duties, complex situations, and the ability to produce adequate economic evaluations. From a practical perspective, the arrows suggest that emergency managers (police, county boards, and municipalities) are responsible for integrating the voluntary network sector in their planning. For instance, it is essential to understand the types of demands imposed by new complex emergencies and threats to civil society. The non-profit sector should be considered in management to respond appropriately to complex emergencies, as well as the use of appropriate technology and required experience. Therefore, this model is important not only when considering public actors but should also be adapted for the non-profit sector, as they can profit from the public sector's strengths (Wyman, 2009; Meyer, 2009).

The areas in the model can be read as exerting positive and adverse effects. Deficiencies in communication infrastructures are common problems at all levels. Thus, building flexibility regarding communication is vital to the efficiency of emergency response operations. The complexity of the emergencies, as well as the availability of resources, are the most significant tensions when assembling planning coordination. For instance, for complex emergencies (such as terrorist attacks, forest fires, earthquakes, and riots) and those in which inter-operational coordination is not a significant issue (and for which the national authority has restricted capability), planning with decentralized coordination structures is suitable at the regional and local levels.

Conclusions

This study analyzed the role of voluntary defense networks in emergency preparedness in developed countries, specifically, the Swedish voluntary defense networks' impact on efficiency. It confirmed that the voluntary defense networks (FFOs) are the only voluntary part of the entire Swedish voluntary sector considered by the law. One of the main conclusions of this study is that FFOs have the conditions to build on communication and coordination attributes in the Swedish system. It is concluded that managing FFOs with higher privileges than other voluntary networks have, in practice, proved to be challenging. Furthermore, in fulfilling these expectations, the FFOs have been treated with the same measure as any other volunteer, losing important privileges in both systems—military and civil. In brief, the study revealed that the Swedish voluntary defense networks lack coordination, communication, and adequate management to operate efficiently in complex structures. A fragmented effort becomes necessary when FFOs networks are required to assume roles in military and civil expectations, in parallel. The fragmentation of these actors (FFOs), resources, and activities generate a high degree of inflexibility. The findings of the study overlap with the opinions on other voluntary networks in the humanitarian literature. In Figure 2, voluntary networks assume different roles in emergency management.

In response to the necessary network mechanisms in planning to integrate the voluntary defense networks of civil society in emergency preparedness, for the practical management, the voluntary network mechanisms that should be planned to secure response efficiency, are communication, coordination, and management. Because FFOs are part of several networks, an important conclusion of this study is that the FFOs are challenged in their goals because of inadequate mechanisms, unclear strategies, deficient communication, and inadequate management. When organizing FFOs as actors in voluntary networks, limited training, exercise, and strategic action are not limited to the misinterpretation of their role but also their non-appearance in emergency preparedness planning.

Responding to how they can contribute to efficiency in emergency response operations, three major challenges hinder the voluntary defense networks' contribution to efficiency. The first challenge relates to voluntary actors taking part in response operations. This study claims that this challenge applies to the voluntary sector in general. Voluntary

actors are part of a broader network; however, they are only partially communicated with planning managers. Swedish military and civil authorities have expressed that a problem for the voluntary sector, in general, is the lack of clarity in the regulations of how, when, and in which coordination efforts the voluntary defense networks are strategic to efficiency. As a result, a lack of coordination prevents development and adaptation capacity in response operations. The second challenge relates to the coordination of the voluntary defense resources in complex structures when economic expenses are focused. The third challenge refers to the management of the activities that are linked to current threats, which often justifies the use of voluntary defense networks resources and the coordination of their activities.

Future research

Regarding future research, this study showed that voluntary defense networks could be used as strategic actors to develop emergency preparedness efficiency; this requires further study to find broader applicability. Conditions, complexity, and management, at all levels, can damage or exert positive effects on emergency planning and the coordination of response operations. Future research on the general voluntary network mechanisms concerning communication, coordination, and management can use the views presented in this study to further develop more general principles for the emergency preparedness efficiency in developed countries.

Acknowledgements

The authors wish to thank the University of Jönköping for the support given to this article.

Disclaimer

The authors declare that there is no potential conflict of interest related to the article.

Funding

The authors do not report sources of funding for this article.

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