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**ORGANISING CIVIL PREPAREDNESS
IN FINLAND, SWEDEN AND NORWAY**
Comparing national approaches

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ABSTRACT

Katri Laakso: Organising civil preparedness in Finland, Sweden and Norway

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Our security environment has become more complex during the past years and the variety of threats and vulnerabilities that emerge have become more unpredictable and transboundary. Civil preparedness is a concept which is used to address cross-sectoral security matters focusing on sustaining the essential societal functions, ensuring basic supply to the population and acting in extraordinary circumstances as well as the civilian sector's ability to support the military defence if needed. The organisation of civil preparedness is a national matter and the ways governments have organised it varies. This study seeks to find out how civil preparedness is conceptually understood and institutionally organised in Finland compared with the concepts and institutional arrangements in Sweden and in Norway.

The study begins by presenting a concept map aiming to increase the understanding of the studied phenomenon of civil preparedness as a broad and cross-sectoral security matter, while it also illustrates the interdependency of the different concepts. Then, a theoretical framework based on security governance studies is built, focusing on complexity as an inherent part of security governance and security mentalities as ways to approach and handle security. The theoretical framework will be used in understanding the core findings and in finding theoretical logics and linkages to the factors identified in the analysis.

The case-oriented comparative study uses qualitative data based on official documents and an expert interview. Content analysis was used as a method for analysing the data. Contextual factors explaining the findings are especially looked for from the strategic decisions implemented regarding the national security and defence policies in the studied countries during the past years and by mirroring the findings to different ways to govern security.

The national approaches to civil preparedness have been modified in Finland, Sweden and Norway during the years to better respond to the new security environment. However, the development has not been similar in all the studied countries and different solutions have been implemented. The findings show that civil preparedness has been conceptually covered in fundamentally different way in Finland compared to the concepts established in Sweden and in Norway. Due to the differences between the conceptual understandings of civil preparedness, also the institutional arrangements established for it varies between the studied countries. While Sweden and Norway are clearly aiming for strong coordination in the field of civil preparedness in their total defence approaches, Finland is counting on its joint preparedness model of comprehensive security in which the concept of civil preparedness is not a separate entity. The studied countries are often characterised by similarity which applies also to the identified security mentalities behind the approaches, while important differences in the strategic decisions made regarding the national security and defence policies exist.

Keywords: Civil preparedness, Societal security, Comprehensive security, Security governance

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1 Introduction

During the past years, there has been a change in our security environment and the threats our societies are facing have become increasingly transboundary. This type of threats cannot be solved by organizations working alone and different arrangements are needed to respond to them. (Christensen, Danielsen, Læg Reid & Rykkja 2016.) Also, the cooperation between the public sector and industry as well as the military and civilian sectors of society has become more important in societal security matters. Our society is developing all the time and so does the risks to it and its vulnerabilities. (Endregard, Brattekkås, Nystuen, Sandrup & Gerhardsen 2017.) Meanwhile, also public administration has increased cross-sectoral working due to its own development towards more multi-actor and multi-level entity. This has also increased the importance of coordination between various actors and organizations. (Christensen, Danielsen, Læg Reid & Rykkja 2016.)

Due to the complex challenges within our security environment, civil preparedness has become a topic that government authorities need constantly plan and adapt as new vulnerabilities and threats emerge. This study compares the conceptual understandings and institutional arrangements of civil preparedness in Finland, Sweden and Norway. In this study, civil preparedness covers the state's ability to sustain the essential societal functions, ensure basic supply to the population and act in extraordinary circumstances as well as the civilian sector's ability to support the military defence if necessary. The chosen definition was originally created by NATO and it is still frequently used within that framework. It should be noted that different national terms are used to address the studied matter and other definitions for the term civil preparedness exist. The chosen definition is known in all the studied countries regardless of the other terms and competing definitions that in some cases also exist. The organisation of civil preparedness is a national matter and the ways governments have conceptually understood the term and implemented structures for it varies depending on the context. The various ways governments have conceptually understood and organised civil preparedness in public administration is interesting and calls for deeper analysis.

The existing research in the field of societal security has developed separately in each of the Nordic countries during the past years. Now that Nordic solidarity is getting increasingly highlighted at the political level, the need for research crossing the region is increasing. (NordForsk 2013.) Also, the rapidly changing security environment has increased the need for research providing knowledge that can be used to develop the contingency planning and crisis management nationally. The amount of scientific research focusing on civil preparedness is limited and the existing literature on the matters

linked to it focuses often on specific organisations or sectors. The public sector arrangements in the field have not gained much attention and there is a lack of research concentrating on cross-sectoral arrangements of societal security matters in the public administration in a more general level (Førde 2016, 7). This master's thesis aims to contribute to this identified research gap by focusing on the different conceptual understandings and institutional arrangements of civil preparedness in Finland, Sweden and Norway. This master's thesis is based on a study that the author of this thesis conducted for the National Emergency Supply Agency of Finland.

1.1 Aims of the study

The main objective of this study is to find out how civil preparedness is conceptually understood and institutionally organized in Finland compared with the arrangements established in Sweden and in Norway. The analysis focuses on the national concepts that cover civil preparedness as well as the official division of tasks in the field, aiming to gain a better understanding of the institutional arrangements of civil preparedness established in the studied countries. A special focus is on the division of key actors' responsibilities on the national level and on the coordination structures that can be identified based on a document analysis supplemented with one expert interview. The studied documents consist of e.g. security strategies for societies as well as national laws and regulations. As a result, the study aims to increase the understanding of different conceptual approaches to civil preparedness as defined in this study and to provide an overview of the similarities and differences regarding the institutional arrangements in the field of civil preparedness.

The study seeks to answer to the following research questions:

1. How has civil preparedness been conceptually understood and institutionally organised in Finland compared to the concepts and institutional arrangements in Sweden and in Norway?
2. What kind of contextual factors can explain the findings?

The first research question focuses on the chosen definition of civil preparedness and aims to identify a corresponding national concept for the term from each of the studied countries. The focus is also on the official institutional arrangements and the question aims to examine the clarity regarding the division of responsibilities in the field of civil preparedness. The second research question is supplementary to the first one, aiming to identify contextual and theoretical explanations to the findings through interpretation of historical events regarding strategic decisions made in the field and by mirroring the current civil preparedness arrangements to different security mentalities.

The study concentrates on the official responsibilities of key actors on the national level and thus, it does not seek to find out the division of operational level tasks. This decision was made because the operational level division of tasks can point to vulnerabilities of the state, which is also why operating procedures and other detailed strategic documents are usually confidential, and it would not have been possible to access the information for this study.

1.2 Structure of the thesis

The first part of the thesis presents the concept map including definitions and background of the concepts that are used throughout the study. The chapter also includes information on the mutual relation of the key concepts and their relation to civil preparedness. Moreover, the chapter explains how civil preparedness is understood and defined in this study and why these choices have been made. The following chapter number three presents the theory that will be used in analysing the results which is based on the governance of security. The chapter elaborates on the development of security governance, the complexity of it and presents an overview of different security mentalities. The theoretical framework will be used in understanding the core findings and in finding theoretical logics and linkages to the factors identified in the analysis.

The chapter four presents the methodology used for conducting the study. This is followed by a chapter presenting the data, including presentations of different conceptualisations that have been identified together with the key actors in the field of civil preparedness in Finland, Sweden and Norway. Thus, the chapter five presents civil preparedness arrangements and national key actors country by country. The chapter number six concentrates on identifying similarities and differences between the case countries and on linking the findings to the theoretical framework. The chapter also elaborates on possible causal factors identified based on historical events from the chosen perspective and based on the theory. Finally, the last part of the thesis concludes the core findings.

2 Key concepts

There are several concepts that are important for understanding the studied phenomenon. In this chapter, the key concepts for the study are presented in a way that first, the concepts forming a base for the emerge of civil preparedness are presented which are the broad conceptualisation of security and societal security. This is followed by a description of two other concepts, namely critical infrastructures and resilience, which are strongly related and partly overlapping with the concept of civil preparedness. Finally, the chapter presents the concept describing the studied phenomenon of civil preparedness, its different definitions and civil preparedness as a field of research. Moreover, the chapter presents a description of how civil preparedness is understood and defined in this study and why these choices have been made.

The concepts presented in this chapter form a concept map for this study, which is useful in understanding the studied phenomenon. The purpose of the concept map is to illustrate the key concepts and their relation to each other as well as to civil preparedness. The concept map is used to specify the problem while it also gives direction to the study. Only the concepts that are considered conceptually important for the development and understanding of the studied phenomenon will be described in this chapter, leaving out the concepts important for the theoretical framework of the study which are presented later in the theory chapter.

The interdisciplinary topic combines concepts from different scientific disciplines. The broad conceptualization of security as defined in this study has its roots in the discipline of international relations, and so has the concept of societal security. Then again, resilience is a concept with multiple origins from different disciplines (Bourbeau 2018, 27), which according to Walker and Cooper (2011), has its academic background in life sciences, e.g. in systems ecology, from which it has spread widely to social sciences (Walker and Cooper 2011, 143). Later, the interdisciplinary topic of civil preparedness will be approached with a theoretical framework based on security governance studies which, together with the concept of complexity thinking represent a theoretical perspective from the discipline of administrative sciences.

2.1 Broad conceptualisation of security

After the Cold War, the understanding of security has evolved significantly. The decreasing threat of nuclear war opened a path for the emergence of new conceptualisations security. The traditional view concentrating solely on military sector of society and the state was no longer enough and the

increasing globalisation emphasised new security aspects such as the individual, values and identity. (Ozoliņa 2010, 9-17.) At that time among scholars, new sectors were considered important in addition to the traditional military sector of society. This development was part of the reconceptualization of security that started because the concept of security became more complex and the old, traditional concept became too narrow with its military threat and state-centred approach. (Buzan et al. 1998, 4-5; Ozoliņa 2010, 9-13.) Buzan et al. (1998, 4-5) present that this shift in thinking happened as a consequence of the emerging idea that threats and vulnerabilities arise not only in the military area and that other sectors, which are economic, societal, political and environmental sector should be considered as important. Thus, new conceptualisation of security emerged taking all these sectors into account. This wider concept of security argues against the understanding that war and force are the core of security studies in which other sectors are considered only if they relate to those. This means that they are proposing a broader security agenda, in which threats can be also non-military and the variety of security issues is much broader. (Buzan et al. 1998, 2-7.)

The broader range of possible threats and vulnerabilities has been widely acknowledged in policies and strategies nationally as well as internationally. The changes in the conceptualisation of security that took place after the 1990's can be seen also in the ways NATO and the EU modified their security and defence politics. The strategic concepts adopted after the 1990's emphasised the new types of challenges that were characterised to be multi-dimensional and diverse and thus, harder to predict and assess. (NATO 2010; European Union 2003). The new security environment was no longer experienced to be most possibly threatened by armed aggressions but instead the source of instabilities was noted to arise from other sectors due to e.g. political, economic or social challenges. This variety of sources for instabilities was noted to require a broad approach to security in NATO. (NATO 2010.) Both EU and NATO started to emphasise other threats than the traditional military ones, putting the broad concept of security into practice.

The increased unpredictability and the new, quickly evolving security threats have also influenced the way Nordic countries define the global security environment. The strategic environment has changed significantly due to the happenings in recent years, such as the annexation of Crimea by Russia as well as the war in Eastern Ukraine which have also had impacts on the European Security order. (Iso-Markku, Innola & Tiilikainen 2018, 5.) The broad concept of security has been used as a basis for national security strategies, e.g. the Finnish comprehensive security approach which will be presented more in detail in the data section, in the chapter number five.

2.2 Societal security

Societal security sector has developed as a part of the widening of the concept of security. First, societal security was considered as one sector of state security along with the environmental, political, economic, and the traditional military sector, but later this was not enough. The five-dimensional approach to security with its state-centric focus was now considered insufficient among a group of scholars. Instead, a duality of state and societal security was introduced in which society is one dimension of state security, but it is also an independent referent object of security. (Roe 2019, 222.) This duality of security is known as a concept developed by the Copenhagen School, in which societal security forms a separate referent object of security and the survival of the society is regarded as different from the survival of the state. (Hama 2017, 4-5 & 10-11.) Buzan, Wæver and de Wilde (1998) understand societal security as identity security and they define it as large, self-sustaining identity groups which concentrate on the various communities and the possible threats to their survival. The most common issues threatening societal security are outlined to be migration, horizontal competition and vertical competition. Migration is considered as a possible threat to identity because a shift in the composition of a population might change the identity of the original community. Horizontal competition refers to the influence of the neighbouring cultures. Vertical competition refers to integrating projects such as the EU or some sort of regionalist projects such as Catalonia that is pulling people towards other identities. Buzan et al. also mention depopulation as a possible fourth threat to identity but it does not follow the usual logic of societal sector. (Buzan et al. 1998, 119-122.)

Thus, according to the approach of Copenhagen School, even if a state has a feeling of being secure, the societal identity might still be threatened. Whereas the traditional concepts of security are concerned with the security of the state and its sovereignty, societal security focuses on the threats to society itself. This approach has been also criticised by various scholars e.g. because of its identity-based approach. For instance, it has been said that identity is a result of a negotiation between people and thus, it cannot be regarded as a fact of society. Meanwhile, Buzan and Wæver consider identity as socially constructed but nevertheless as a referent object of security once the negotiation process of this identity-building is over. (Hama 2017, 4-5 & 10-11.) The wider security agenda has also been criticised by saying that if everything is counted as security threats, the concept of security eventually loses its meaning, as everything becomes securitised (Buzan et al. 1998, 19).

The societal dimension of security has been recently considered important within many international cooperation frameworks. For instance, the European Commission has been enhancing the societal

dimension of security by naming societal resilience as one of the priority themes for security-related research in EU Horizon 2020 Framework Programme. This societal dimension that is mentioned in the programme concentrates mainly on research on security threats, notably terrorism, cyber security questions relevant for the protection of critical infrastructures and management of migration flows. (European Commission 2018, 11.) Societal security is also often discussed in the Nordic countries and various research establishments such as NordForsk, the Research Council of Norway and Norwegian Defence Research Establishment are conducting research in the field. In this Nordic framework, societal security is defined as follows: “Societal security comprises the ability of a society to sustain vital societal functions and secure its population’s life, health, needs and basic values under extraordinary stresses, known as crises” (NordForsk 2013, 5). This definition does not really emphasise the identity aspect presented by Buzan et al. (1998). However, this Nordic definition considers the society as the referent object through which the safety of the population is secured. Also, this definition lists values as one aspect that needs to be secured, which can be regarded as one factor that constructs common identities.

The concept of societal security is important for this study because it represents an important development in the conceptualisation of security. Instead of focusing solely on military threats, the concept of societal security emphasises other threats and vulnerabilities, which are important within the concept of civil preparedness. Moreover, the definition of societal security used by several Nordic research establishments has similar characteristics with the definition of civil preparedness used in this study. Thus, societal security as a part of the broad conceptualisation of security can be considered as a concept forming a base and a way of thinking about security for other concepts relevant for this study.

2.3 Critical infrastructure protection

Critical infrastructure protection has become more and more topical during the past years. It is also strongly related to civil preparedness aiming to ensure that government functions can continue at all times because many of these vital functions are dependent on the critical infrastructures. The term ‘critical infrastructure’ is quite recent as it did not exist before the 1990s. Ever since the term was defined, it has evolved significantly. (Lewis 2014, 4.) Critical infrastructures include vital functions and services such as the internet, health systems, food and water supply logistics, banking and the functionality of the transportation systems, to name a few. These vital infrastructures have become more vulnerable and different threats arising from e.g. extreme weather, terrorism or industrial

accidents need to be acknowledged and prepared for. Also, the access to these vital infrastructures have become easier due to the development of the information technology. (Kerigan-Kyro 2014, 1.)

Critical infrastructures relevant for the functions and services essential for society are more and more often owned and conducted by the private sector. This development of ownership started after the Cold War and ever since, societal infrastructures have been designed and built by private sector actors. Also, public policies are promoting aspects such as increased efficiency, profit and convenience through the development and use of new technologies and innovations. Due to these changes, the infrastructures and services relevant for our societies' vital functions have become more vulnerable. (Hagelstam 2016, 67.) This has made the security governance even more complex and cooperation is required between public and private actors. The ways these actors operate differ and their motivations are not the same; the public sector is motivated by politics and the private sector is motivated by profit. (Lewis 2014, 17.)

Critical infrastructures protection has developed not only because of the increased public-private cooperation but also other factors such as the emphasis on natural disaster response, questions regarding terrorism and the emergence of resilience awareness and thinking have influenced the development. Critical infrastructures are relevant in many disciplines and jurisdictions, crossing administrative levels and organisations representing different sectors. The protection of these infrastructures needs a diverse set of actors with different expertise. It has been said that the most difficult task regarding the protection of critical infrastructures is the decisions that needs to be done regarding the division of responsibilities. This is because of a large variety of actors across political and organisational lines are involved. (Lewis 2014, 1-3.) Also, the European Union has addressed the cross-sectoral issues of critical infrastructure, even though it is above all a national matter. Based on a Commission proposal, a European Programme for Critical Infrastructure Protection was started aiming to raise critical infrastructure protection capability across the member states. This work resulted also in the adoption of a Directive on European Critical Infrastructure in 2008. (Naucodie 2014, 14.)

Critical infrastructure protection is a concept that is strongly linked to societal security and the broad conceptualisation of security because without identifying existential threats through the broad conceptualisation of security, many aspects that critical infrastructure protection concerns today would not be securitised. This would be the case if only military threats were to be considered. The protection of critical infrastructures is one important aspect within civil preparedness and the protection of these infrastructures is strongly related to many relevant functions within the studied concept.

2.4 Resilience

Due to the changes that have taken place in our security environment, the concept of resilience has gained a lot of attention. Instead of the traditional point of view focusing on the prevention of threats, resilience points to the situations when the society and the government have failed in the preventing activities. The concept of resilience has been introduced already in the 1950s and it has its academic background in different fields including life sciences, psychology and complexity thinking. From this background, resilience has developed during the years and it has become widely applied concept in various contexts, including contemporary security politics. Resilience can be defined in multiple ways and there is not an agreement on one single definition for it. However, according to Juntunen and Virta (2019, 72) resilience is often defined as “the latent ability of systems, individuals, communities, and organisations to (i) withstand the effects of major disruptions, (ii) maintain one’s ability to act amid a crisis, and (iii) bounce back from a crisis and use the experience to increase one’s adaptability in the future” (Juntunen & Virta 2019, 71-76). Thus, resilience refers to the ability of various actors of a society to withstand disruptions or crisis, the ability to stay functional and eventually also to learn from them (Juntunen & Virta 2019, 71-76).

Hyvönen & Juntunen (2018) have defined resilience as a three-step process containing resistance, maintaining of functionality and adaptive learning. The main content of each step is illustrated in the Figure 1 below. The figure illustrates the different stages of resilience starting already before any crisis through preparedness planning and continuing after the crisis as adaptation and learning.

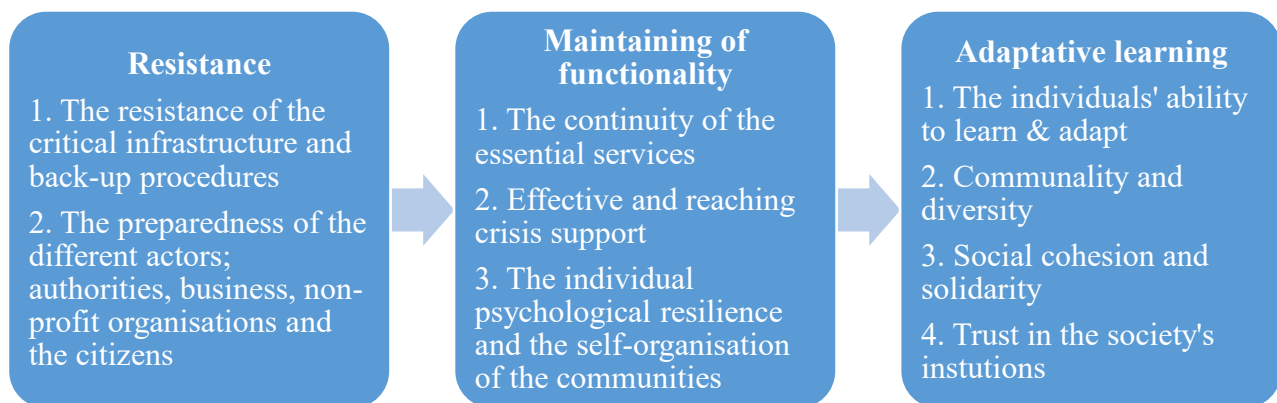


Figure 1. Illustration of the three-step process of resilience (Hyvönen & Juntunen 2018, 2)

Resilience is a concept that has been brought into the national security strategies for example in Finland, while the concept is also widely used in the EU and NATO. Also, Juntunen and Virta (2019, 79) point to the fact that societal security strategies often have citizen participation listed as one of

the strategic objectives. The importance of civil preparedness for resilience has been highlighted especially in NATO by saying that resilience combines both civil preparedness and military capacity as it reflects a society's strength to resist and capability to recover from disturbances (NATO 2018b).

The concept of resilience is important for the studied phenomenon because the concept have influenced the way to approach security. Resilience and civil preparedness are also seen as strongly inter-related concepts e.g. in the frames of NATO civil emergency planning cooperation. Also, critical infrastructures and the resistance of those play a key role in resilience as well as in civil preparedness.

2.5 Civil preparedness

Civil preparedness is a cross-sectoral security matter that encompasses many sectors and different branches of the government. It can be characterized as a fragmented field of security due to the various specializations that need to operate together. Civil preparedness is not only important in the frames of national security but also within various international cooperation frameworks. The governance and development of civil preparedness is a national matter, but for instance the EU and NATO are giving their recommendations and tools to support the preparedness in the field. There is neither one strict definition of civil preparedness, nor an agreement of the functions it covers. Furthermore, different terms are used to address the same security matters.

In the United States, the term civil preparedness has been in use already for a longer time. The term is used mostly as a synonym for civil defence and it is listed as one of the usual responsibilities of the government. In this context, the purpose of civil preparedness is to safeguard people in the event of extraordinary emergencies such as hurricanes, forest fires, floods or nuclear attacks. Civil preparedness refers to the handling of these emergencies through a coordinative effort including federal, state and local government as well as nongovernmental groups. The extraordinary emergencies are defined to be situations in which many or all the emergency forces of a community are needed. Already in 1973, the director of Civil Preparedness Agency believed that civil preparedness efforts should aim to meet the more complex challenges the societies were facing. (Defence Civil Preparedness Agency 1973, 1-2). Also, the Federal Emergency Management Agency (FEMA) has used the term civil preparedness in their Civil Preparedness Guide (CPG) that has been published in 1987. This guide includes procedures for preparedness as well as planning requirements in the field of civil preparedness and it is said to be applicable to authorities responsible for the continuation of government, the protection of citizens as well as the actions required for recovery and restoration. (FEMA 1987.) Another definition for civil preparedness can be found from the Finnish Rescue Services Strategy 2025. In

that context, civil preparedness is defined as follows: “Civil emergency preparedness refers to activities related to security of supply, rescue services, civil defence, and protection of critical infrastructure” (Ministry of the Interior 2016, 19).

NATO is an active organisation in the field of civil preparedness, aiming to increase the state of civil preparedness within the Alliance. NATO's definition of civil preparedness emphasises the aspects of national preparedness planning which can have an impact on the nation's ability to contribute to NATO missions regarding the continuity of government and crucial services to the population as well as civil sector's support to military sector if needed (NATO 2018a). NATO has addressed the state of civil preparedness within the Alliance as an important aspect that is increasing the sense of societal vulnerability. This is because today, many assets NATO might need to uphold collective defence or to protect forces beyond its territory relies on civilian resources. During the Cold War, most of these were in state hands which allowed them to be easily transferred to NATO's control during a crisis. Today, a large majority of the supplies and logistics are moved to private companies. This transfer of ownership and responsibility put more importance on civil preparedness planning. (NATO Review 2016.)

Scientific research on civil preparedness per se is limited and often the issues that are strongly related to it are studied through the frames of societal security that is clearly overlapping with the aspects that are important in civil preparedness. However, some research on civil preparedness can be found. The first research dates to the 1990's when a Norwegian Defence Research Establishment FFI started to carry out research on civil preparedness as a pioneer in this particular field. FFI started a so-called “BAS project series” that broke ground in what is today referred to as research on societal security. (Endregard et al. 2017.) Thus, the link between civil preparedness and societal security is clear, the latter being a somewhat wider approach. Within the BAS series, FFI has carried out studies from various points of views aiming to develop the concept to protect population and society in general. Most of the conducted research focuses on certain sectors within Norway's national civil preparedness such as society's dependence on electricity or vulnerable telecom systems. FFI has also carried out profound research on the national division of civil preparedness roles and responsibilities. However, this type of research presents a critical view to the nation's crisis management and emergency preparedness by pointing out vulnerabilities, which is why this report among many other similar ones is confidential. (Endregard et al. 2017.)

2.5.1 Civil preparedness in relation to other concepts

Civil preparedness is strongly related to other concepts presented earlier in this chapter. The broad conceptualisation of security forms a basis for the kind of security thinking that has allowed the emerge of civil preparedness because it broadened the traditional military and state centric understanding of security and the threat perception. The concept of societal security is important for the concept of civil preparedness for similar reasons and it represents an important development in the conceptualisation of security from the point of view of this study. Instead of focusing solely on military threats, the concept of societal security emphasises other threats and vulnerabilities, which are important within the concept of civil preparedness.

The concepts of resilience and critical infrastructures are strongly related to civil preparedness and partly even overlapping with the concept. Both resilience and critical infrastructures are also part of the broad conceptualisation of security as well as societal security sector. The protection of critical infrastructures is strongly related to the functions of civil preparedness and thus, it represents an important concept for the studied phenomenon. The transfer of ownership regarding many critical infrastructures to the private sector has emphasised the importance of cooperation with the civil sector. Then again, the concept of resilience is regarded as a strongly related concept with civil preparedness and strong civil preparedness contributes to more resilient society. Resilience thinking have also highlighted the role of all the different actors of the society in the provision of security, which is why it can be regarded to be an important concept within the frames of civil preparedness. The figure 2 below presents the concept map which illustrates the relation of civil preparedness to other key concepts.

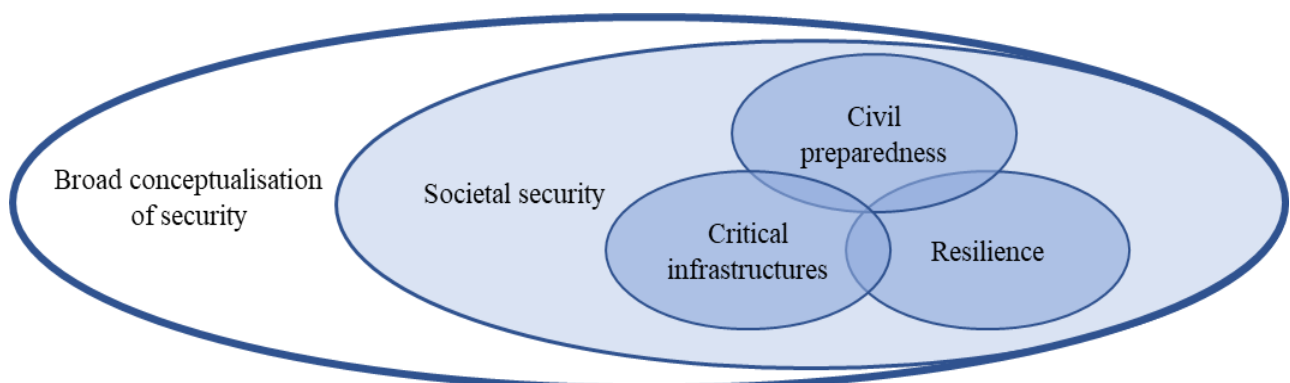


Figure 2. Concept map

2.5.2 Dimensions of civil preparedness & chosen definition

The concept of civil preparedness and what it covers varies and there is not one agreed definition for it. As such, the term can be individually interpreted, and different understandings of its content exist. It is also a concept that overlaps with other concepts and phenomena and the borderlines of it are not clear. Hence, for the clarity of this study there is a need to define civil preparedness. The chosen definition should define the content of the concept in a clear manner that allows a systematic approach for understanding these arrangements, while it should also be broad enough to cover necessary aspects.

Due to the significant importance of clearly defining the object of the study (Gagnon 2010; Jreisat 2005; Otenyo & Lind 2006), I have decided to use the definition of civil preparedness from NATO which is as follows: “*Civil preparedness refers to the ability to sustain the functions vital to society, ensure basic supply for the population and the State's capacity to act in a crisis situation, and also to support the Defence Forces in their war-time duties*” (Mission of Finland to NATO 2017). This definition was chosen because while it gives a rather broad definition, it also sets certain boundaries that will help in keeping the study on the right track. This definition is also known and used in all the studied countries regardless of their engagement to NATO, and the same definition has been previously used in scientific research addressing civil preparedness (see for instance Storsjö & Kachali 2017).

Yet, the definition alone does not really narrow down the dimensions of civil preparedness and for instance, it is still not clear what functions are considered as functions vital to society. Hovden (2004) has suggested that a list of functions that are critical in maintaining the functionality of society can be used in describing and explaining societal safety. Then again, other scholars have suggested that the scope and size of damage and losses could be used in categorisations, while others suggest that examination of specific characteristics and consequences is useful when studying disasters (Olsen, Kruke Hovden 2007, 72). As the focus of this study is not any specific disaster, that option in limiting the dimensions of civil preparedness should be excluded. The scope and size of damage refers also strongly to examination of some specific events and thus, it seems unsuitable for the purpose of this study as well. The alternative proposed by Hovden (2004) that suggests a list of functions that are critical for the functionality of society in describing societal safety seems the most suitable option for limiting the dimensions of civil preparedness.

There is an existing list of functions pointing to specific tasks of civil preparedness created by NATO. Within their civil preparedness definition, NATO has identified three critical functions which are “(1) continuity of government, (2) continuity of essential services to the population and (3) civil support to military operations” (NATO 2018b). These three functions have been used as a basis for so-called seven baseline resilience requirements that NATO has established in 2016 to support nations’ national civil preparedness planning and development. These requirements are also delivered to EU due to closer EU-NATO cooperation as well as to NATO’s closest partner countries Finland and Sweden. The guidelines point to seven functions that are crucial for civil preparedness planning and they consider the following areas:

1. Continuity of government and critical government services
 - Covers the competence for decision-making and communication of them as well as the provision of essential government services to the population in a crisis.
2. Energy supplies
 - Includes that energy supply and power grids are secure and that there are back-up plans and prioritisation arrangements.
3. Ability to deal effectively with uncontrolled movement of people
 - Includes the capability to dissolve the possible movements from e.g. potential national military deployments.
4. Food and water resources
 - Meaning that these supplies need to be kept safe from disruption or sabotage and that those are available for both civilians and military if needed.
5. Ability to deal with mass casualties
 - Meaning the ability of the health systems to cope with difficult conditions, and that sufficient stockpiling of medical supplies is secured.
6. Telecommunications and cyber networks
 - Ensuring the functionality of telecommunications and cyber networks during peacetime and in times of crisis, and that there is a well-planned back-up capacity.
7. Transportation systems
 - Ensuring functioning transportation networks so that NATO forces can move easily and that civilians can trust on functioning services. (Meyer-Minnemann 2016, 92-93; NATO 2018b.)

Many of the above listed essential societal functions can be characterised as cross-sectoral, meaning that the responsibility is shared between the different branches of the government. Even though NATO has established these guidelines to be used as a tool to measure the level of the nations' civil preparedness, they also point to specific functions covered by the concept and thus can be used as a detailed list of functions that are covered by the concept of civil preparedness. For the clarity of clearly understanding the content of civil preparedness, the seven baseline resilience requirements will be used to narrow down the dimensions of the studied phenomenon.

It should be noted that NATO's definition of civil preparedness is not considered as the only correct definition and it was chosen with the aim of having a reference point that will be used to guide and narrow down the object of the study. The chosen definition and the seven baseline resilience requirements will serve as a common tool known in all the studied countries while those also provide a common language. The definition together with the seven identified functions set clear boundaries for the object of the study and those are applicable in all the studied countries. Nevertheless, the chosen definition and the seven baseline resilience requirements set also certain limitations for the study. By using the definition from NATO, the military perspective of civil preparedness is inevitably emphasized because the definition has been created to support NATO's objectives underscoring the civil support to the allied efforts if needed. Thus, the chosen definition and the identified functions represent only one perspective to study civil preparedness and other perspectives to approach the topic exist.

3 Theoretical framework: Security governance

The theoretical framework of the study is constructed in a way that security governance forms the overall framework. Then complexity as an inherent part of security governance together with common ways to manage complex issues are presented as a part of security governance arrangements. This is followed by a presentation of approaches to achieve security, called security mentalities. Together these three steps form a theoretical framework for the study that will be used in understanding and analysing the findings, while it also provides a context for examining the studied matter by forming a base for interpretations and different observations.

Security architecture has gone through significant changes ever since the end of the Cold War. The transatlantic region has shifted the previous bipolar structure to arrangements that involve many bilateral and multilateral security institutions. This new and more complex security environment was no longer typically characterised by the threat of war and other threat scenarios were considered more probable, such as presented earlier as a typical characteristic for the broad conceptualisation of security. After the end of the Cold War, also complex networks formed by state and private sector actors started increased cooperation in the matters related to security. (Krahmann 2003, 5-6.) The dynamics of global security are just one part of the bigger picture of the increasingly complex world and contemporary change processes we are witnessing. This poses new challenges to leadership and the ability to handle issues that are transboundary by nature. (Kangas et al. 2019, 7.)

The changes in the security environment and the increased complexity have brought up questions of how security should be governed. The governance of security aims to respond to security threats that have occurred or that might possibly occur in the future. This is done through policies and strategies. Different concepts have been suggested for the analysis of security governance including mentalities, institutions, technologies and practices. Mentalities refer to the ways of thinking behind the implemented strategies, while institutions refer to the established organisational forms. Then again technologies refer to the techniques used to make the mentalities real, while practices mean the results of the different elements. Matters related to national security and questions regarding the division of power on security matters are fundamentally political ones. Governance of security is thus a political act and as a concept it refers to different strategies, organisations and practices. (Juntunen & Virta 2019, 68-69.) The governance of security is usually regarded to be a primary responsibility of the governments (Wood & Shearing 2007, 7).

3.1 Complexity: an inherent part of security governance

Government and governance processes are often characterised by complexity (Klijn 2008, 300). Multiple actors in different levels of the government are working in the dynamic environment that is characterised by unpredictability. During the years, the society has become more complex and the boundaries between different actors have become fuzzy (Erkoçak & Açıkalın, 74-75.) Today, security landscape in general can be characterised as complex. It involves variety of actors and factors, which are interrelated, and which mutually influence each other. In the dynamic and global environment, cooperation is an obligatory part of effective management of the problems arising from the surroundings. Different matters are interrelated and minor changes somewhere can have consequences much further away. (Scheffran 2008, 13-14.) Interconnectedness and interdependence of different factors characterise well the word 'complex'. The relationships of the different actors cannot be easily mapped because when dealing with complex issues, it is not possible to identify linear cause and effect relations between the actors involved. Instead, the relationships are multidimensional, interrelated and characterised by complexity. (Kangas, Kujala, Lönnqvist, Heikkinen & Laihonon 2019, 10-11.)

The concept of complexity can be understood in various ways and not even complexity theorists agree on one common definition for it (Mitchell 2009, 13; Morçöl 2012, 22). For example, according to Rescher (1998) complexity is "...a matter of the number and variety of an item's constituent elements and of the elaborateness of their inter relational structure, be it organizational or operational" (Rescher 1998, 1). Often complexity is understood as a product of nonlinear relations, in which multiple actors are involved (Kangas et al. 2019, 12). Civil preparedness can be considered to be a complex security matter because it involves a variety of actors and factors which are interrelated, crossing institutional boundaries.

One common way to describe complex matters which are difficult to manage and solve is through the concept of "wicked problems". According to Head and Alford (2015, 712) wicked problems are typically complex, open ended and unpredictable and those are usually associated with institutional complexity and scientific uncertainty. Kangas et al. (2019, 11) describe problems as wicked if those are persistent, cross-cutting and disorganised. The term wicked problem was originally created by Horst Rittel and later, six more precise characteristics defining wicked problems have been developed based on his ideas. The six characteristics are the following: (1) one can understand the problem and its complexity better by trying to find different solutions to solve it; (2) there is no definitive solution

that could solve the problem, just like there is no easy way to define the problem itself either; (3) there are no right or wrong solutions, and the aim is to find the best possible solution that can be considered to be good enough; (4) wicked problems are unique and novel; (5) every solution has its consequences that must be lived with meaning that in order to learn about the problem, one needs to try solutions that will eventually have consequences; (6) there are many alternative solutions to wicked problems that cannot be all considered when choosing a solution that will be implemented. These six characteristics form a comprehensive list of elements describing wicked problems, but it should be noted that a problem does not need to have all the above listed elements in order to be considered wicked. (Conklin 2008, 7-10.)

According to Juntunen and Virta (2019, 71) security in general can be considered as a wicked problem because there is not one state of security that could be achieved that would change the status of these matters as “completed”, and because there are different perceptions of the values, competence and content of various security mentalities. I suggest that civil preparedness can be characterised as wicked for the same reasons as security in general because the concept is part of the wider concept of security and has same characteristics in many ways. Furthermore, civil preparedness can be seen as wicked not only because it can be conceptually understood and organised in public administration in different ways, but also because of the more and more complex security environment that directly impacts the aspects included in the concept. Moreover, civil preparedness covers many policy areas and thus, different perceptions of the priorities can co-exist, while it is also not possible to solve these issues permanently. In addition, it relates to many stakeholders and it is cross-cutting by nature.

The importance of collaboration in tackling wicked problems has been emphasised. The idea is that in the complex environment, one actor alone does not have the required power, ability or competence to solve challenges alone and make decisions for others. (Kangas et al. 2019, 13-14.) Furthermore, complexity thinking emphasises that regarding wicked problems, it is important to involve other actors and not only focus on the collaboration within one organisation. (Vartiainen et al. 2013, 43-44.) The collaborative arrangements can involve different types of partners; different levels of government, organisations, government agencies, private firms and non-profit organisations and the roles of these actors in these collaboration arrangements can vary significantly from policy definition to implementation or resource provision. (Head & Alford 2015, 725.)

According to Head & Alford (2015, 719), traditional hierarchical forms of public administration have not succeeded well in tackling wicked problems. This is because these organisations are usually focusing on systems of control or other monitoring activities. This kind of approach often fails to react

on issues that are considered as wicked problems, and it is said that a successful approach would include coordination and collaboration between various actors and organizations. (Head & Alford 2015, 719.) Similar thoughts have been presented by Vartiainen et al. (2013, 55) by stating that the traditional governance structures with the usual organisational and sector specific boundaries are preventing a comprehensive approach for handling complex issues. These structures are said to be disturbing flexible collaboration across organisations and government branches. This kind of thinking has its roots in an approach aiming for routines and predictability, which fails to respond to wicked issues. The reason for failure is that organisations operate in an environment characterised by change, not stability. (Vartiainen et al. 2013, 54-76.) Also, Kangas et al. (2019, 12) among many others highlight the ambiguity and uncertainty as a built-in characteristics of today's complex environment. This means that it is not possible for organisations to eliminate unintended consequences and surprises in their work because those are part of the organisational reality. The traditional approach of public sector organisations aiming to avoid uncertainties is not sufficient anymore and organisations need to be adaptive, acknowledging the interdependency of different organisations and inevitable change due to the developments in the environment. (Vartiainen et al. 2013, 54-76.)

Due to the global interconnectedness and increased complexity, the division of responsibilities in the provision of security has changed in a way that it involves a much wider network of actors. In addition to state authorities, the subjects of insecurity are more and more responsible for participating in the provision of security. (Methmann & Oels 2015.) Johnston & Shearing (2003) present in their nodal theory for security governance that the state is only one node among a set of nodes delivering security as a common effort. This does not mean that the role of the state is smaller than before but instead this approach emphasises the pluralization of governance in which other nodes of security governance have become necessary sources of support providing knowledge, capacities and resources. The challenge in this type of governance model is said to be the question of how to engage the civil sector of society as much as possible in the collective good endeavour. (Johnston 2006, 33-34.) This approach together with the ideas from other authors presented above linked to the ways to handle security matters in today's security environment are useful for analysing civil preparedness arrangements in different national contexts. This information will be used to see whether clear similarities in the institutional arrangements can be identified with the aspects emphasised in the theory.

3.2 Governing security through security mentalities

The concept ‘security mentality’ refers to sets of ideas that are used to make claims about how security works, meaning how it is achieved (Wood & Shearing 2007, 7). In this study, different security mentalities will be used to analyse the organisation of civil preparedness in Finland, Sweden and Norway. By using the categorisations provided by Juntunen and Virta (2019) presented in the table 1, the study seeks to identify common or differing characteristics in the security mentalities that can be identified from the national objectives in the field of civil preparedness.

According to Johnston & Shearing (2003), programmes aiming to guarantee peace involve six critical elements, one of which is security mentalities. These mentalities are regarded as ways thinking which form a framework of how security matters are handled. The other five elements are definition of order, authority, technologies, institutions and practice. The ‘definition of order’ refers to the idea that there should be order in place in the form of e.g. legislation defining what is permitted and what is not. ‘Authority’ refers to actors who are working as guarantors, aiming to promote security. ‘Technologies’ then again, refer to the programmes in which the state’s security relies upon. ‘Institutions’ refer to official structures allowing organising people and things. The final product when all these different elements are combined create a security ‘practice’. (Johnston & Shearing 2003, 7-8.) This study analyses the official concepts and structures established for civil preparedness in the studied countries from the point of view of security mentalities, aiming to identify similarities or differences that could explain the findings. This approach was chosen because the mentalities describe the ways of thinking and handling security matters and thus, in the case that major similarities and/or differences are found between the object of the study that match with the security mentalities, it can provide information explaining the findings.

Juntunen and Virta (2019, 74) have created a table illustrating four different mentalities of security policy, which are defence, protection, prevention and resilience. The table 1 presents the main differences between the four security mentalities through identification of factors that characterize each of the mentalities regarding its referent object, threat perceptions, key security agents, security policy agendas and relationship between politics and security. The security mentalities of defence, protection, and prevention are seen as traditional state centric security mentalities, while resilience mentality as a more recent approach is based on the increasing complexity and uncertainty. (Juntunen and Virta 2019, 74.)

Table 1. “Four logics or mentalities of security policy” as presented by Juntunen & Virta (2019, 74)

	Referent object	Dominant threat perception	Key security agents	Security policy agenda	Relationship between politics and security
Defence	Territorial integrity of the state and borders; critical infrastructure and continuity of state functions	Fear and uncertainty caused by other states or otherwise highly organised political actors; conflicts between state actors	Defence forces and other key actors protecting territorial integrity and the continuity of key state functions and internal order	The intentions of (rational state) actors can be influenced through the practices of external deterrence, alliance politics, power projection, costly signalling, etc.	Security issues tend to be separated from other societal processes and normal political order; security as the realm of exceptional; enemy images might prevail
Protection	Vulnerable individuals, groups, and communities	Political, economic, and social structures that cause inequality and suffering; global warming, resource scarcity, and deprivation; intrastate ethnic conflicts	Local governments (responsibility to protect); international and nongovernmental actors providing humanitarian assistance and interventions	Explicit ambition to remove the structural sources of insecurity and free the suffering from harm	Security issues are comprehensively “nested” in the socioeconomic structures of the society and culture; state-driven security concerns are often politicised
Prevention	Political, social, and public order and the welfare of society	Organised crime and violent extremism; illegal immigration and human trafficking; terrorism and radicalisation; crime, violence, and disturbances of public order in general	Law enforcement actors such as police, emergency service, and other state actors; also, increasingly, social security actors, private companies, and communities	Inclusive “pacification” of the society through a mixture of welfare policies and crime prevention, including counterterrorism, visible policing, and law enforcement	Political legitimacy and authority of the security providers is central, but otherwise, the relationship between security and politics is ambiguous and contested
Resilience	Processes maintaining the cohesion and everyday functioning of society	Unpredictable nonlinear threats such as environmental hazards and other various “wicked problems”; blurring of external and internal spheres of security	Civil society, local communities, private sector, and eventually also individual citizens; government governing “from a distance”	To strengthen individuals’ and societies’ autonomic capacities for adaptation, recovery, and reform	Unclear: reduces the need to rely on articulated threats and enemy images typical of the logic of defence, but increases securitisation of the societal fabric

It has been argued that resilience-based security mentality is changing the traditional focus on the governance and prevention of threats towards the inevitability of our societies’ inability to prevent all the threats and guarantee security all the time through proactive preparedness and prevention. Security mentality based on resilience highlights the dynamic nature of the emerging threats within the complex environment, aiming to enhance the functionality of the society in situations when

something unpredictable has happened, emphasising aspects such as mental and physical adaptability of different actors within the society to face threats that were not identified beforehand. However, resilience politics have also been criticised because of certain ethical problems. One of the critics point to the problem according to which the concept of resilience as an approach to security might encourage towards an increased insecurity, where the aim is not to provide safety in the sense that any harm would be prevented but instead to tame the occurred consequences. The normalisation of crises as possible learning experiences has been said to potentially bring concerning consequences. (Juntunen & Virta 2019, 72-80.)

The traditional hierarchical forms of security administration based on mentalities of prevention, protection and defence rely strongly on state authorities' capability to act according to the agreed procedures. Then again resilience mentality gives more room for civil sector to act in networks that are vital for the security of society. (Juntunen & Virta 2019, 75.) The rise of resilience mentality is linked to above presented nodal security governance in which different actors of society take part in the provision of security. The characteristics presented in the table 1 by Juntunen and Virta (2019) will be used in the analysis, aiming to see whether some of the mentalities are clearly emphasised in the national civil preparedness concepts. It is especially interesting to see whether all the studied countries emphasise same forms of security administration and whether clear similarities or differences in the mentalities can explain the findings presenting national approaches to civil preparedness.

4 Methodology

This study focuses on the conceptual understandings and institutional arrangements of civil preparedness in Finland, with which the concepts and institutional arrangements in Sweden and in Norway are compared. By civil preparedness I mean the areas covered in NATO's seven baseline resilience requirements focusing on continuity of government and continuity of essential services to the population as well as the civilian sector's ability to support the military defence if necessary. Qualitative methods were chosen because the study seeks to acquire a comprehensive understanding of the organization of civil preparedness.

The conducted study is of explanatory type, seeking to explain the ways civil preparedness has been conceptually understood and institutionally organised in different countries. According to Gagnon (2010) explanatory studies are dealing with topics that are clearly important but have not been studied from the chosen perspective, though some research on the topic from other perspectives already exists. Furthermore, explanatory strategies are used when fundamental information about a certain topic and its different contributing factors might have various outcomes. (McNabb 2017.)

4.1 Approach to research design

The study uses a comparative public administration approach and compares three macrosocial units: Finland, Sweden and Norway aiming to identify cross-societal similarities and differences. Traditionally, the comparative method is used aiming to increase the knowledge that helps in understanding and explaining different historical outcomes and processes, and the way those have influenced the institutional arrangements (Ragin 1989, 1-6.), which is also what this study seeks to do in the field of civil preparedness. Multiple cases were chosen in order to gain a better understanding of the organization of civil preparedness and to identify similarities and differences between the countries. Choosing multiple cases produces information of the societal and global conditions while it also allows e.g. more dependable results and better possibilities to verify the conclusions (Jreisat 2005).

The case-oriented approach to comparative social science applied in this study aims to use theory to support interpretation of historical factors and to guide the identification of relevant causal factors. Case-oriented methods focusing on historically defined cases are considered as classical comparative methods, aiming to explain the experiences of macrosocial units such as societies, nations or cultures. (Ragin 1989, 34-35.) Qualitative tradition in the field of comparative public administration usually concentrates on cases as wholes and sees them as configurations formed by various characteristics,

which is also the way the case countries are considered in this study. Moreover, this approach is often historically interpretive aiming to make sense of the chosen cases by finding chronologically interesting evidence and by making limited historical generalisations of context. (Ragin 1989, 3.)

In comparative social science, there are different understanding of the unit of analysis. According to Ragin (1989, 8), a distinction between observational units and explanatory units should be made. The distinction is made in a way that the observational units are used in data collection and analysis and the explanatory units are used to explain the obtained results. (Ragin 1989, 8-9.) Also Jreisat (2005, 237-238) emphasises the importance of determining a clear unit of analysis when conducting comparative public administration research. This choice is vital in narrowing down the scope of the study by setting boundaries for the study that also provides tools for the cross-cultural analysis. According to Jreisat, one of the most commonly used unit of analysis is the national administrative system and it is still considered useful for investigating administrative systems. (Jreisat 2005, 237-238.) This study focuses on the macro-level analysis and aims to look at the institutional arrangements at large which is done by examining the official division of tasks on the macro level and overall concepts covering the civil preparedness functions in the studied countries. Hence, the observational unit is the institutional, focusing on the division of tasks stated in the official documents and the explanatory unit is societal, focusing on context specific and historical characteristics of the studied countries.

Due to the significant importance of clearly defining the object of the study (Gagnon 2010; Jreisat 2005; Otenyo & Lind 2006), one definition for civil preparedness will be used in this study which is as follows: “*Civil preparedness refers to the ability to sustain the functions vital to society, ensure basic supply for the population and the State's capacity to act in a crisis situation, and also to support the Defence Forces in their war-time duties*” (Mission of Finland to NATO 2017). Furthermore, NATO’s seven baseline resilience requirements will be used to identify functions included in civil preparedness. Thus, the mapping of the responsible actors in each of the studied countries will be analysed through the areas covered in the seven baseline resilience requirements. This will ensure that the concept of civil preparedness is considered in the same way when studying the arrangements in the case countries, while it also helps in narrowing down the scope of the study. However, the chosen definition and the identified functions represent only one perspective to study civil preparedness and other perspectives to approach the topic exist.

4.2 Choice of the case countries

The logic for case selection for the study is based on a decision rule presented by Przeworski and Teune (1970, 39) called “the most similar systems design”. This approach departs from the idea that systems as similar as possible are optimal samples for a comparative inquiry. Countries sharing economic, political and cultural characteristics are recommended for the comparison because in the case that some important differences are identified, the number of factors contributing to these differences will be smaller, meaning that the similarity of the cases narrows down the experimental variables. The design has its focus on the “intersystemic similarities” and “intersystemic differences”. (Przeworski & Teune 1970, 33.)

The Nordic countries are similar in respect that they all represent Nordic politico-administrative systems and the Scandinavian welfare model where public production of services, high-quality of social services and universalism granting a free access to services for the citizens are important features (Kettunen 2012). Nordic countries are often characterised of having high levels of trust e.g. in public institutions and in the rule of law. Also, the Nordic governance model emphasising peaceful approach to any societal conflicts is a commonly used characteristic describing these countries. (NordForsk 2013.) Furthermore, in the Nordic model of societal security factors such as consensus and inclusiveness as well as democratic and welfare-oriented approach are typical (Juntunen & Virta 2019, 77).

The Nordic countries are facing similar threats, risks and vulnerabilities and these countries have cooperation in various fields. The Nordic countries have also cooperated in the field of societal security for a long time and during the past years, Nordic cooperation has been emphasized through political initiatives. Due to the geographical proximity of the countries, many societal security challenges such as disasters can quickly cross boundaries between the countries. (NordForsk 2013.) Finland, Sweden and Norway have long traditions together with Denmark and Iceland within the frames of Nordic cooperation which has deep roots in politics, economics and culture aiming to strengthen Nordic voice and to find Nordic synergies in various fields (Norden n.d.). Nordic cooperation is done both within its formal structures formed by the Nordic Council (NC) and the Nordic Council of Ministers (NCM) as well as through informal settings outside the mandates of NC and NCM. (Iso-Markku, Innola & Tiilikainen 2018.) Moreover, Finland has additional cooperation with Norway and Sweden regarding the questions that are relevant to civil preparedness (NESA 2019a).

The chosen countries share many similarities, values and mutual interests but also differ from each other e.g. by their engagement in the EU and NATO. Hence, the countries are not identical and there

are important contextual differences. For instance, despite the close geographical locations of the chosen countries, the geopolitical questions and concerns on the matters of societal security are more emphasised in Finland. The Russian Federation as a neighbour is still today a central external factor affecting the decisions and solutions to be implemented regarding security matters and the security policies (Blombergs 2016). Another difference between the chosen countries is that Norway is a member of NATO, which is an active organisation in the field of civil preparedness. Due to the fact that NATO represents such an important framework in the field, it will be interesting to have an overview of these arrangements in one NATO member state included in the comparison. Also, Norway is not a member of the European Union which changes its engagement and responsibilities compared with Finland and Sweden. Nevertheless, Norway is an important cooperation partner for Finland due to Nordic cooperation and other bilateral/trilateral agreements (NESA 2019a).

Comparing the concepts covering civil preparedness and the institutional arrangements in Finland with the arrangements established in Sweden and in Norway provide an interesting overview of the governance of civil preparedness within the Nordic countries. It will be especially interesting to find out the similarities that can be identified due to the countries' common Nordic interests as well as the possible differences caused by the different international cooperation frameworks or differences in the strategic decisions implemented regarding national security and defence policies.

4.3 Means of data collection

The study was conducted through a document analysis supplemented with one expert interview conducted in Finland. The main research material consists of publicly available strategy documents and policy statements. First, all the relevant documents were analysed to get an overview of the existing institutional arrangements and to map actors responsible for civil preparedness in each of the countries. The focus on the key actors' responsibilities on the central administrative level allowed to identify a small but nevertheless important part of the wide network of actors. Then, one expert interview was held as an open interview with a civil servant working with questions related to civil preparedness in Finland to confirm and complement the information regarding the findings that were based on the analysed data derived from the official documents. When conducting open interviews, the interview is guided by pre-decided themes. Usually expert interviews are held in order to understand better e.g. societal developments and the complex dynamics of the studied matter. Expert interviews can also be used to piece together historical developments or in analysing and testing different understandings of a phenomenon. (Hyvärinen, Nikander & Ruusuvoori 2017.) This was considered suitable for the

purposes of the study as a method providing fruitful information supplementing the data gathered through document analysis.

4.3.1 Studied documents

The main research material consists of policy statements, strategy documents as well as national laws and regulations. In addition, some other official reports and publications were included in the analysed documents. The amount and type of documents varies between the studied countries. This is because the content and comprehensiveness of the available publications were not identical. The documents that contained the most comprehensive information were chosen for the analysis. Furthermore, the following requirements were considered important when choosing the documents:

- Publisher: official documents published by relevant authorities and official webpages of the government offices or other relevant agencies.
- Content: documents containing information on (1) the concept that cover civil preparedness as defined in this study, or (2) key actors' responsibilities on the national level regarding the identified civil preparedness functions, or (3) contextual factors regarding the national civil preparedness arrangements as well as documents describing the strategic decisions made regarding security and defence policies.
- Date published: the most recent documents were chosen for the analysis.

The number and type of documents was not strictly limited beforehand, and more documents were obtained in the case there were any gaps in the information that was found in relation to the aims of the study. Once the key actors on the national level were identified regarding all the seven identified civil preparedness functions, no more detailed documents were search for. This decision was made because the information was regarded to be sufficient for the purposes of this study and more detailed information would have been unnecessary and even irrelevant. The most important documents that were studied are listed below. All the studied documents are also listed in the references part of the thesis (p. 81-86) and further details of the documents and access information can be viewed from there. In addition to the documents listed below, the official webpages of the relevant authorities were used to obtain additional details or clarifications.

Finland

- Emergency Powers Act (2011/1552)
- Finland's Cyber security Strategy (Secretariat of the Security Committee 2013)

- Government Rules of Procedure (2003/262)
- Government Report on Finnish Foreign and Security Policy (Prime Minister's Office of Finland 2016)
- Government's Defence Policy Report (Prime Minister's Office of Finland 2017)
- Security strategy for society (Security Committee 2017)
- Security of Supply Act (1992/1390)

Sweden

- Ds 2017:66: Resilience - the total defence concept and the development of civil defence 2021-2025 (Ministry of Defence 2017)
- Förordning med instruktion för Myndigheten för samhällsskydd och beredskap (2008:1002)
- Förordning om totalförsvar och höjd beredskap (2015:1053)
- Förordning om krisberedskap och bevakningsansvariga myndigheters åtgärder vid höjd beredskap (2015:1052)
- National security strategy (Prime Minister's Office of Sweden 2017)
- National cyber security strategy (Ministry of Justice 2017)
- Lag om totalförsvar och höjd beredskap (1992:1403)
- Sweden's Defence Policy 2016 to 2020 (Government Offices of Sweden 2015)

Norway

- Support and cooperation. A description of the total defence concept today. (Norwegian Ministry of Defence and Norwegian Ministry of Justice and Public Security 2018)
- National Cyber Security Strategy for Norway (Norwegian Ministries 2019)
- Den videre moderniseringen av Forsvaret i perioden 2005–2008 (Norwegian Ministry of Defence 2004)
- Risk in a Safe and Secure Society (Norwegian Ministry of Justice and Public Security 2016)

One document describing the national security and defence policies were included in the analysis from all the studied countries. Furthermore, the national strategies for cyber security were included because one of the functions included in civil preparedness in this study concerns the functionality of telecommunications and cyber networks and the information was not clearly presented in other

studied documents. Then, other documents were obtained containing information regarding the division of tasks in the field of civil preparedness as defined in this study. At this point, the type and amount of the documents between the studied countries started to differ, because the type and content of the documents that were found was very heterogeneous, depending on the national publications. Finland and Norway had rather comprehensive information regarding the division of tasks listed in the national strategy documents (Finland: security strategy for society and Norway: description of the total defence concept today), while in Sweden, no similar comprehensive document combining different sectors and lists of strategic responsibilities was found. Also, due to a reform that is ongoing in Sweden containing the national civil preparedness arrangements, the up to date division of responsibilities had to be verified from the legislation.

The data regarding Finland is mostly based on the information presented in the security strategy for society because there are clear strategic tasks and the actors responsible for those presented in the document which correspond well to the functions of civil preparedness. In some cases, the division of tasks remained unclear especially regarding the overall coordination, and details were verified from the relevant legislation. The Norwegian publication called Support and cooperation is a document that presents the Norwegian approach to civil preparedness in detail and it includes descriptions on the responsibilities of different actors in the field. That is why, in the case of Norway, a big part of the desired information was found in that one publication and there was no need to study separate laws or regulations more in detail as the information was gathered in one document.

4.4 Method of analysis

The gathered qualitative data was analysed using content analysis which is a commonly used method in qualitative research, and it is considered as a flexible method for analysing text data (Hsieh & Shannon 2005, 1277). However, the flexibility that content analysis as a method provides have been noted to be a challenge because there are no simple instructions of how to do it (Elo & Kyngäs 2008, 110). In general, content analysis can be done inductively, abductively or deductively. Inductive approach moves from specific to general and the analysis process is based on empirical data, while the deductive approach is theory-driven meaning that the analysis is based on theory and predefined categories and it moves from general to specific. In this study, the abductive approach was considered the most suitable one, as it allows the researcher to use theory to guide the analysis, but it is not aiming to test an existing theory as the deductive approach usually is. Instead of theory testing, the

abductive approach aims to find new thoughts and paths for understanding a phenomenon. (Tuomi & Sarajärvi 2018.)

In this study, the analysis is limited to one chosen definition of civil preparedness and the aim was to find information from the data that fits to the definition and the chosen functions listed in the seven baseline resilience requirements. However, the goal was not to test a theory and the chosen definition was used to guide the analysis and narrow down the studied phenomenon. The chosen definition of civil preparedness is not considered as the only correct definition and it was used in the analysis as a tool to identify national concepts that match to the functions included in the chosen definition. This method of analysis was used aiming to attain a description of the phenomenon of civil preparedness in each of the studied countries, regardless of the national differences in terminology or institutional arrangements. However, as a consequence of choosing one definition for approaching the studied matter, the study is limited to the chosen definition. Thus, the analysis emphasizes the operability of military sector with the help of broad civil preparedness, which in that sense creates a limited understanding of civil preparedness as a phenomenon.

The content analysis was conducted in a way that first, the documents containing most comprehensively information regarding the identified functions were analysed systematically, aiming to identify key actors for each of the seven functions. In the case that the information was not found, further documents were analysed until the desired information regarding the division of responsibilities was identified. This also explains the differences in the number of documents analysed regarding each of the studied countries. In some cases, the division of tasks communicated in the strategy documents remained ambiguous and the overall responsibility was not clearly nominated to one actor. In this kind of cases, further details were looked for from the relevant legislation. Then, an open expert interview was held with a civil servant working in an organisation supporting the different government branches with questions relevant to civil preparedness in Finland to confirm and complement the information regarding the findings that were based on the analysed data derived from the official documents.

The identified division of responsibilities that was created as a result of the content analysis is strictly based on the information presented in the official documents. However, it should be noted that the identified division of responsibilities does not represent a comprehensive list of all the important actors in the field and the line between what is considered as a 'key actor' and what is not can be considered to be subject to various interpretations. Only the key actors having a legal responsibility on the national level regarding the identified functions are included in the mapping. The problem of

multiple interpretations was sought to be minimised by identifying a specific focus within the functions that could have been interpreted in several ways. The seven baseline resilience requirements together with the chosen focus for the functions concerned are all presented in the comparative framework for the study presented in the beginning of the chapter five.

The findings regarding each of the studied cases were then compared in accordance with the comparative perspective of the research design. The comparison aimed to discover similarities and differences between the studied countries, and it was built in a way that Finland was the focus of the study to which the findings regarding the arrangements in Sweden and in Norway were then compared. In this case-oriented approach to comparative analysis, the contextual differences regarding historical events concerning security and defence policies were included in the analysis. Thus, the historical contexts important from the point of view of civil preparedness will be briefly introduced regarding each of the case countries. This information will later be used in identifying factors that can explain the findings.

5 Organising for civil preparedness in the studied countries

This chapter presents the contextual factors relevant for the studied phenomenon in Finland, Sweden and Norway and an overview of the different conceptual approaches to civil preparedness. Then, the division of tasks between the key actors on the national level will be investigated in the light of the seven baseline resilience requirements identified in the chapter 2.5.2 (also presented in the table 2 below). For a systematic presentation of the case countries, a comparative framework was built helping to identify the desired information in different national contexts.

The first point of the framework presented in the table 2 below concentrates on contextual information and strategic principles. This part of the framework aims to provide an overview of the context and important strategic decisions implemented regarding national security and defence policies. Also, the special interests and vital functions for society as well as general principles regarding the preparedness arrangements in the studied countries is included in the first part describing the context. Then, the second part aims to present the national concepts that cover civil preparedness as defined in the study in each of the national contexts. Due to the chosen definition's emphasis on civil-military cooperation, a short description of this cooperation within the identified national concepts is also included. This will provide information describing the national approaches in relation to the chosen definition and in that way, it will provide important information on the conceptual approaches to civil preparedness. Moreover, a brief description of public-private partnerships within the national concepts covering civil preparedness is included because of the emphasised importance of private sector actors in the protection of critical infrastructures vital for civil preparedness. The third part of the framework is the mapping of responsible actors. This will be done regarding each of the seven identified functions that are included in the chosen definition of civil preparedness. The mapping concentrates on the key actors' division of tasks and aims to provide comparable information regarding the institutional arrangements within the national approaches to civil preparedness.

Table 2. The comparative framework

Comparative framework
<p>5.x Contextual information and strategic principles</p> <p>5.x.1 National approach to civil preparedness</p> <ul style="list-style-type: none">- Equivalent national concept covering the functions- Civil-military cooperation & public-private partnership in the field <p>5.x.2 Organising civil preparedness & mapping of key actors</p> <ol style="list-style-type: none">1. Continuity of government and critical government services2. Energy supplies3. Ability to deal with uncontrolled movement of people<ul style="list-style-type: none">- focus on actors responsible for large scale migration4. Food and water resources5. Ability to deal with mass casualties<ul style="list-style-type: none">- focus on key actors in healthcare and rescue services6. Telecommunications and cyber networks7. Transportation systems

The information presented in this chapter is based on a document analysis containing of strategy documents, laws and regulations as well as other relevant publications. The studied documents are presented more in detail in the chapter 4.3.1. The information provided in this chapter is presented country by country in the order listed in the framework above (table 2). The numbering of the aspects listed in the framework is the same as the numbering of the sub-chapters presenting the data for each of the countries, where the x is replaced with a number corresponding the country specific sub-chapter. The information is presented in a way that first, the contextual information and strategic principles will work as an introduction to the more specific civil preparedness concepts and institutional arrangements, which will be presented right after that in their own sub-chapters. After presenting the information for the three parts presented in the framework, there is an additional sub-chapter summing up the main characteristics that can be concluded from the data for each of the studied countries.

5.1 Finland

The security environment around Finland has deteriorated in recent years and the changes in the security situation in Europe as well as in the Baltic Sea region have direct impacts on Finland. Also, the Russian actions in recent years have increased the tensions in the Finnish neighbourhood area. This new environment requires that the national defence capacities will be maintained and developed. (Prime Minister's Office of Finland 2017, 8-14 & 30.) The Russian Federation as a neighbour is still today a central external factor affecting the decisions and solutions to be implemented regarding security matters and security policies in Finland (Blombergs 2016). Finland is not part of any military alliance and the country maintains independent military defence capacity. (Prime Minister's Office of Finland 2016, 19-20.) All in all, the Finnish defence policy has remained rather similar during the years, with the military's focus on national defence and the involvement of the entire society in protecting the national security. The most significant changes in the Finnish defence policy are the increased cooperation with NATO, Sweden and the United States. (Salonius-Palsternak 2018, 4.) Finland started to cooperate with NATO already in 1994 together with Sweden within the frames of Partnership for Peace programme (Sallinen 2005, 26).

International cooperation is considered important in Finland, also in the field of security and defence policy. Finland has been an EU members-state since 1995 and it participates actively in the development and implementation of the foreign and security policy in the EU. The EU is a strong security community, which the mutual defence clause (Article 42.7 TEU) and the solidarity clause (Article 222 TFEU) are strengthening. (Prime Minister's Office of Finland 2017, 9 & 16-17). The general objectives of the Finnish foreign and security policy are to strengthen the international status of Finland, secure the independency and the territorial integrity, improve the wellbeing and security of Finnish citizens, ensure the functionality of the society and manage to stay out of armed conflicts. Two characteristics describing the Finnish changed security environment are listed to be the dynamic nature and the unpredictability of it. The factors creating instability in the Finnish operational environment are considered to be the overall changes in the international security environment, the Russian power politics and its increased military capabilities as well as the activation of military measures. (Prime Minister's Office of Finland 2016, 8-13.)

In the government resolution for the security strategy for society, seven vital functions for society have been identified. All the functions can be characterised as cross-administrative and a successful organisation for sufficient level of preparedness regarding the functions requires cooperation by

different actors. Based on the seven vital functions that need to be ensured under all circumstances, a total of 57 strategic tasks have been identified in the government resolution. These tasks have been divided to different administrative branches so that one or several ministries are identified as ministries in charge of the task. (Security Committee 2017.) The seven vital functions are the following:

1. Leadership, referring to functioning system with clear division of responsibilities between different authorities, availability of an updated situation picture, functioning model for crisis communication and good continuity management and cooperation.
2. International and EU activities, referring to the continuation of international cooperation in different administrative branches.
3. Defence capability, aiming to maintain capability to resist against armed attacks or the use of any kind of military force against Finland.
4. Internal security, including e.g. the protection of public order and security, safety of supply chains and goods, maritime search and rescue, civil defence, rescue services as well as border control and management of immigration.
5. Economy, infrastructure and security of supply, including e.g. the continuity of the financial market services, data security and protection, functioning of the infrastructure, food and water supply and supply of daily consumer goods, supply of energy and competence essential for private businesses and public organisations.
6. Functional capacity of the population and services, meaning social security and social welfare, health care services, the continuity of the most essential educational and training services.
7. Psychological resilience, including the dimension of normal conditions building the base for a good psychological resilience, operational capability during a crisis as well as during recovery. Psychological resilience means the ability of society and its individuals to withstand the pressures arising from a crisis and recover from their impacts. (The Security Committee 2017, 5-24.)

Preparedness in general is based on the preparedness obligation, requiring public authorities to ensure preparedness planning and cooperation related to their own administrative areas. In addition, the independent preparedness referring to the individuals' capability to handle crisis situations is crucial for Finland's resilience. The core principle regarding the leadership and coordination of preparedness is that all actors take care of the preparedness activities within their own field of expertise and in the case of disruptions, the organization and division of tasks will be maintained as similar to the organization in normal conditions as possible. This means that during any disturbances, the situation will

be led in accordance with the usual duties by the responsible and competent authority or other security actor required to do so by law. However, it remains the responsibility of the Government to direct, supervise and coordinate the safeguarding of the society's vital functions, while each competent ministry is responsible for their own administrative branch. The Prime Minister is the official in charge of the Government and in the case any disturbances occur, the Prime Minister's role in preparedness is emphasized as well as regarding any coordinative tasks. At the ministerial level, it is the permanent secretary's responsibility within each ministry to ensure the security and preparedness. (Security Committee 2017, 11-16.) Also, the private sector actors have become increasingly important in preparedness planning during the past years in Finland. The authorities are responsible for coordinating the work with the commercial service providers and organizations related to their own administrative field. (Security Committee 2017, 11-12.)

5.1.1 Finnish approach: comprehensive security

The term civil preparedness is frequently used in Finland within the frames of NATO's civil emergency planning cooperation. The term is also used in other contexts and for instance in the Ministry of the Interior, Department for Rescue Services, there is a unit for civil emergency preparedness. In this context, civil emergency preparedness is defined in the Rescue Services Strategy 2025 as follows: "Civil emergency preparedness refers to activities related to security of supply, rescue services, civil defence, and protection of critical infrastructure". (Ministry of the Interior 2016, 19). However, the term civil preparedness is not recognised in the Vocabulary of Comprehensive Security and the term is not used in any other security strategies, laws or regulations. According to an expert who was interviewed for the study, an update of the Vocabulary of Comprehensive Security is to come and an official definition for civil preparedness will be added in the document.

The overall concept covering all the seven civil preparedness functions defined in this study is the concept of comprehensive security. The comprehensive security approach is a cooperation model in which the authorities, business operations, organizations and citizens work together (Security Committee 2017, 5). The system that is in place today has its roots in time starting after the Cold War, when preparedness planning was done aiming to overcome extreme situations including war. The concept has developed during the years aiming to adapt to the changing security environment and it has evolved more towards a crisis management model highlighting peace-time actions. (Hellenberg & Visuri 2013, 222.) The first cross-administrative strategy was published in 2003. Today, the concept emphasizes joint preparedness in safeguarding the vital functions of society through cooperation by the actors from authorities to citizens. This cooperation is based on legal responsibilities,

cooperation agreements and the Security Strategy for Society. Thus, comprehensive security is a term used to describe the Finnish model of joint preparedness. (The Security Committee 2017, 5.)

The cooperation-based idea of the approach emphasising peacetime needs of preparedness has been considered to be the advantage of the system and potentially facilitating the involvement of civil sector in the provision of security. The comprehensive security approach does not divide the preparedness planning between civil and military sectors but instead it aims to involve all the relevant actors in safeguarding the critical societal functions of the Finnish society by emphasising cooperation in general. (Expert interview 2019.) Civil-military cooperation is not particularly emphasised in the Finnish concept of comprehensive security, but it is part of the usual cooperation arrangements. Then again, it is the responsibility of the National Emergency Supply Agency to ensure necessary goods and services and the production that supports the defence forces. According to the Security of Supply Act (1992/1390) the agency is responsible for developing the cooperation between public sector and industry regarding questions related to security of supply and it works to ensure the functioning of the vital technical systems for supply security. (Security of Supply Act 1992/1390.)

5.1.2 Key actors of civil preparedness in Finland

In Finland, there are no separate structures for civil preparedness and thus, there are not specified actors responsible for the overall coordination and development of *civil preparedness* per se. The Ministry of Defence is responsible for military defence and the Emergency Powers Act requires all the authorities to take care of preparedness planning within their own administrative field and the activities are led and monitored by each competent ministry. Preparedness should also be coordinated within each administrative branch by the ministry in charge. (Emergency Powers Act 2011, 12 § & 13 §.) However, the overall coordination between different ministries is regulated separately. In the government rules of procedure, it is stated that the overall preparedness and security is the Prime Minister's Office's responsibility and the Ministry of the Interior is responsible for internal security matters as well as general order and security. (Government Rules of Procedure 2003, 13 § & 15 §.) The Ministry of Defence is responsible for coordination of comprehensive defence in Finland (Government Rules of Procedure 2003 16 §), which refers to the public and private sector activities, as well as voluntary citizen participation aiming to maintain the functionality of the society's vital functions under all circumstances (Sanastokeskus TSK 2017, 16).

Regarding the first civil preparedness function which is the continuity of government and critical government services, the responsibilities are divided to all administrative branches in Finland.

According to the Emergency Powers Act (1552/2011, 12 §), the Finnish Government, the government authorities, the municipalities and public enterprises are responsible for planning their own activities beforehand in a way that they will be able to continue their activities as well as possible during emergency conditions. The Finnish Government and all the Ministries within their own mandate lead and monitor preparedness and coordinate the preparedness planning within their own administrative areas. (Act 1552/2011, 13 §.) The cooperation between ministries is organised through two permanent bodies which are the permanent secretary meetings and the heads of preparedness meetings. According to the Government Rules of Procedure (2003/262), the Prime Minister's Office of Finland is responsible for the joint situation picture, the joint preparedness as well as safety and security, including the overall coordination regarding the management of incidents (Government Rules of Procedure 2003/262, 10 § & 12 §). It should be noted that this refers to the overall preparedness and safety and security in general, not only in the field of civil preparedness.

To ease and support the coordination of the preparedness efforts within comprehensive security, a permanent cooperation body called the Security Committee was established in 2013. According to the decree on the Security Committee (77/2013, 1 § & 2 §), the committee assists the government and the ministries in the field of preparedness within comprehensive security and supports the actors with the coordination of the overall preparedness. The committee also follows up the developments within the security environment and evaluates the effects to the comprehensive security. Moreover, the committee monitors the preparedness activities across the government branches for sustaining and developing the preparedness activities. The committee is also responsible for coordinating broad and important preparedness related topics if necessary. (77/2013, 1 § & 2 §.) The key actors regarding the continuity of the government are illustrated in the figure 3 below.

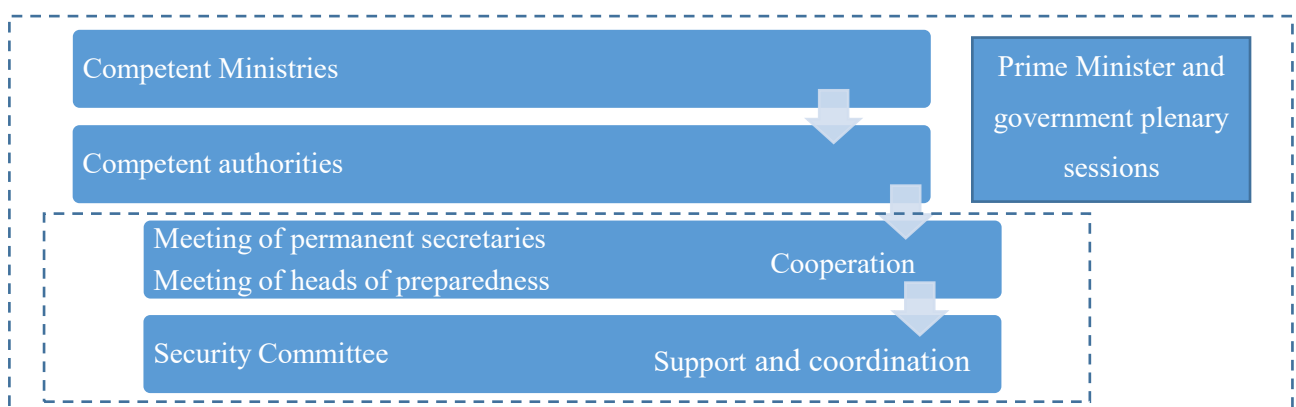


Figure 3. Key actors on the national level regarding the continuity of government in Finland

Regarding the second civil preparedness function related to the secure energy supplies, the overall responsibility is on the Ministry of Economic Affairs and Employment. This responsibility covers the safeguarding of the power supply in Finland at all times and also the safeguarding of the fuel supply. However, the companies are responsible for all the practical measures in the field. Fingrid Oyj, which is the company taking care of the power transmission grid nationally is responsible for the functionality of the system and the balance between peak demand and capacity. The company has also supplementary powers to balance consumption and production in the case of serious crises defined in the Emergency Powers Act. Other companies are also important in securing the energy supplies and it is the responsibility of the National Emergency Supply Agency to steer the preparedness of the companies in the field. (The Security Committee 2017, 64.) The National Emergency Supply Agency is administratively located under the Ministry of Economic Affairs and Employment and it has a key role in developing and maintaining the security of supply in Finland, in which the cooperation between the public sector and industry is crucial (NESA 2019b). The National Emergency Supply Agency is also taking care of the emergency stockpiling for the central government. Furthermore, the Energy Authority is responsible for the functioning of the electricity markets and the supervision of the preparedness arrangements in that field (The Security Committee 2017, 63-64).

The third function regarding the ability to deal effectively with uncontrolled movement of people covers several aspects with divided responsibilities. The Ministry of the Interior is responsible for maintaining public order and security as well as ensuring border security. It also steers the most important agencies which are responsible for management of large-scale immigration. The Finnish Immigration Services as well as ELY Centres have key roles in this field but also other actors e.g. Finnish Defence Forces, the police, Regional State Administrative Agencies, Finnish Border Guard, social welfare, Social Insurance Institution of Finland, health care and rescue authorities and other organizations participate to the preparedness planning in the field. The Finnish Red Cross gives support in the reception of asylum seekers as agreed in a contract with the Finnish Immigration Services. Furthermore from 2020 onwards, the Finnish Immigration Service will have the coordination responsibility regarding large-scale immigration. Immigration questions are stated to concern also many other ministries such as Ministry of Social Affairs and Health, Ministry of Finance, Ministry for Foreign Affairs, Ministry of Justice, Ministry of Economic Affairs and Employment and the Ministry of Education and Culture, but the main responsibility is on the Ministry of the Interior. (The Security Committee 2017, 48-49.)

The fourth function regarding the securing of the food and water resources involves several key actors. The Ministry of Agriculture and Forestry is responsible for the overall steering and monitoring of water supplies. The Ministry of Social Affairs and Health is responsible for ensuring the quality of drinking water. The work of the Ministry is supported by the National Institute for Health and Welfare and the National Supervisory Authority for Welfare and Health. The Ministry of Agriculture and Forestry ensures the operating prerequisites of primary production and safeguards food safety. The Ministry of Economic Affairs and Employment is responsible for the actions related to the processing and distribution of food as well as securing the supply for goods. What comes to transportations of the foodstuff, it is the responsibility of the Ministry of Transport and Communications. (The Security Committee 2017, 75-79.) The figure 4 below illustrates how the responsibilities regarding one civil preparedness function are divided to several ministries.

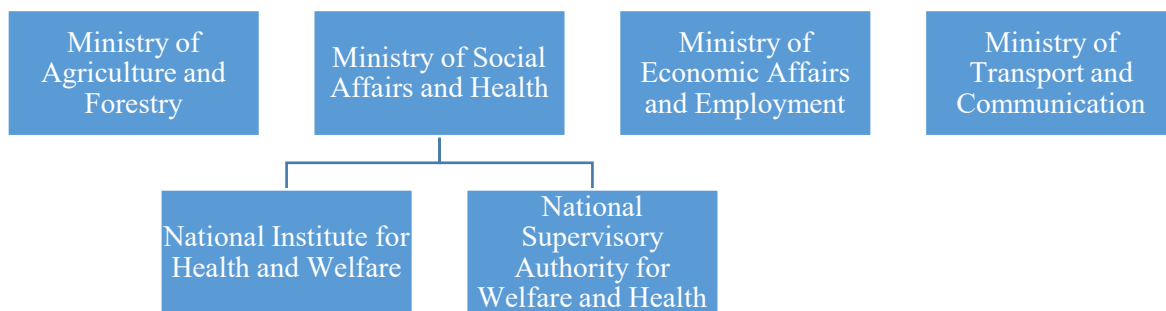


Figure 4. Key actors on the national level regarding the food and water resources in Finland

The fifth function regarding the ability to deal with mass casualties is mainly the responsibility of the administrative areas located under the Ministry of the Interior and the Ministry of Social Affairs and Health. The Ministry of the Interior is responsible for civil defence aiming to protect the population in all security situations. Rescue Services located under the Ministry of the Interior have a key role in the prevention and preparedness for accidents including everyday accidents as well as major disasters. In addition, organisations and voluntary sector as well as other contractual bodies are important in rescue operations. (The Security Committee 2017, 19, 44.) According to the Rescue Services Act (2011/379, 46 §), all government authorities are responsible to participate to the planning of rescue services in the case their expertise is needed and also in the case their help is required regarding accidents or rescue operations that are led by the rescue departments. The Ministry of the Interior steers and monitors the emergency response centre administration. The Ministry of Social Affairs and Health jointly with the Ministry of the Interior takes care of the operational steering of the emergency response centre administration. Furthermore, the Ministry of Social Affairs and Health is a key actor regarding preparedness for mass casualties as it is responsible for developing social welfare and

health care preparedness. (The Security Committee 2017, 46-47.) Thus, the main responsibilities on the national level are divided to two different administrative branches.

Within the sixth function regarding the ensuring of functioning telecommunications and cyber networks, responsibilities are also divided to several actors. The Ministry of Finance is responsible for the overall steering regarding matters related to data and cyber networks. It ensures the steering of the data administration among public authorities, including ICT as well as data and cyber security steering regarding the functions vital to society. Still each authority is responsible for the preparedness planning and arrangements within their own field of expertise as always according to the principle of responsibility. However, the functions used by the state leadership and ministries is the Prime Minister's Office's responsibility. Other key actors in this field are listed to be the Population Register Centre and ICT Centre Valtori, in cooperation with the Prime Minister's Office, Ministry of Transport and Communications, National Emergency Supply Agency, ICT service provider companies as well as the State Security Networks Group. (The Security Committee 2017, 58-61.)

What comes to the ensuring of the functionality of electronic communications services, it is the responsibility of the Ministry of Transport and Communications. However, the cross-administrative cooperation is highly emphasised, including information sharing and coordination in different administrative branches. It is said that in addition to the administrative area of the ministry in charge, the work regarding these matters also involve the Ministry of the Interior, the Energy Authority, the Emergency Response Centre Administration, the National Emergency Supply organisation, the Finnish Defence Forces, the Ministry of Defence as well as the private organisations and third sector actors. (The Security Committee 2017, 59-61.) All the Ministries are responsible for the cyber security matters within their own administrative branch. They should estimate and analyse the risks and vulnerabilities in their own administrative field and ensure the information flow within the cooperation networks as well as define the tasks regarding preparedness arrangements for cyber security issues. (Secretariat of the Security Committee 2013, 4-5.) The key actors regarding the functionality of telecommunications and cyber networks are illustrated in the figure 5 below.

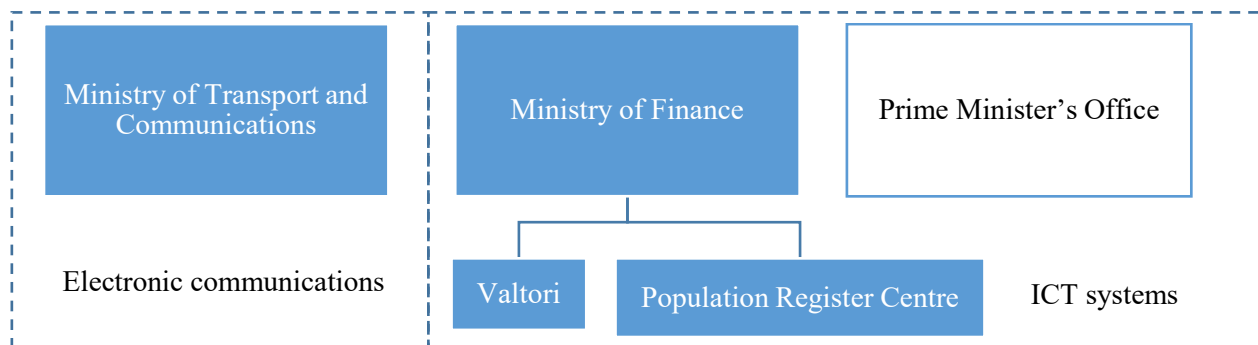


Figure 5. Key actors on the national level regarding telecom and cyber networks in Finland

Regarding the seventh function related to the functioning transportation systems, the ministry in charge is the Ministry of Transport and Communications. The responsibility covers the planning of the availability and usability of transport services, the security of those networks as well as their operational reliability. Also, certain rail transport operators as well as some aviation operators have preparedness obligation defined in the legislation. Other actors not bound by the legislation are still responsible for ensuring the functioning of their services by other means. (Security Committee 2017, 66-67.) The Finnish Transport and Communications Agency Traficom is an authority administratively located under the Ministry of Transport and Communications and it is responsible for licence, registration and approval matters (Traficom 2019). In addition to the Ministry of Transport and Communications, the Ministry of Economic Affairs and Employment and the National Emergency Supply Agency have key roles in the field. Cross-sector collaboration in general is again emphasised. The Energy Authority and the National Emergency Supply Agency are enhancing voluntary preparedness in different sectors. The Ministry of the Interior and the Ministry of Defence are ensuring the integrity of the physical infrastructures when needed. Furthermore, the Finavia Corporation is in charge of the safety and operability of the key Finnish airports. (The Security Committee 2017, 66-67.)

5.1.3 Conclusions: Finland

In Finland there is no separate structures established for civil preparedness and the term has not been considered in national laws and regulations officially. However, the term civil preparedness is frequently used within NATO cooperation as well as in the context of the Ministry of the Interior of Finland. The usage of the term civil preparedness can be considered slightly confusing, because different understandings of the term and its content co-exist. In the Rescue Services Strategy 2025, it is easy to get the impression that the Rescue Services have a national coordinative role regarding civil preparedness. However, the Ministry of the Interior's role as a ministry for internal security does not include a coordinative role in civil preparedness matters as defined in this study. Thus, the Finnish

rescue services' aim to have a coordinative role in civil preparedness is limited to different content of the term and not to the one chosen as a focus of the study.

The tasks are distributed to large number of authorities on different levels, and there is no single authority or agency responsible for civil preparedness. In Finland, it is the principle of responsibility that forms the foundation for the division of tasks regarding the vital functions for society and all the actors are responsible for the preparedness in their own field of expertise. Coordination regarding civil preparedness matters can be considered to go through the same system that is in place for the preparedness in general meaning that the cooperation between ministries is organised through the permanent secretary meetings and the Heads of Preparedness meetings, and that the Prime Minister's Office of Finland is responsible for the joint preparedness. The Security Committee plays a key role as a cooperation forum on the national level in comprehensive security matters, which in Finland covers also civil preparedness.

Through a more detailed investigation of civil preparedness functions with the help of the seven baseline resilience requirements, many key actors on the national level were identified. In some cases, coordination responsibility was clearly stated while sometimes the list of key actors was long and the division of tasks between the actors remained ambiguous. It can also be seen that the functions as identified in this study has not been centralised to be the responsibility of one actor. This is because regarding most of the functions, there were two to four ministries having a shared responsibility regarding the various functions of civil preparedness. The functions have been cut to smaller entities and divided to different branches of the government. In all the functions, the importance of cooperation was emphasised.

It should be noted that the core of the Finnish concept is *cooperation* and the system is not aiming for centralised coordination structures within the field of civil preparedness. The principle of responsibility forms the basis of the system and thus, sector responsibilities are important in Finland. Based on the understanding of civil preparedness arrangements established in Finland, it can be concluded it to be blended in the concept of comprehensive security so that it is part of all the functions vital for society and it does not exist as a separate entity in any way. Furthermore, it is worth mentioning that civil-military cooperation is not particularly emphasised in the Finnish system, but it is part of the normal cooperation arrangements. The figure 6 illustrates this conclusion regarding civil preparedness in Finland and its relation to the comprehensive security approach.



Figure 6. Illustration of civil preparedness as a connected function to all the functions vital for society in the Finnish comprehensive security approach

The Finnish comprehensive security approach aims to handle civil preparedness and the cooperation between civil and military sector of society through the wider frame of comprehensive security without underlining the sectors separately. This means that the preparedness system that is in place supports the military sector if necessary, as part of the normal joint preparedness arrangements. This broad and cooperation-based approach has been considered to be the advantage of the system. However, from the point of view of civil preparedness, the division of responsibilities is not very clear as no authority can be named to have the overall coordination responsibility.

5.2 Sweden

A central feature that characterised Swedish security policy for many years was the aim of neutrality, meaning the aim of staying non-engaged in the European great power affairs and staying neutral in the case of wars. The Swedish neutrality policy has its roots deep in history and dates back to 1812. This neutrality policy tradition was modified in 1992 in a way that military non-alignment became the new approach to foreign policy in Sweden. This meant a fundamental change from a neutrality policy to a solidarity policy. These changes led to two significant changes in the national security policy as Sweden became a NATO partner in 1994 and an EU member state in 1995. (Pettersson 2017.) Today, the Swedish security policy aims to guarantee the country's independence and autonomy. The core tasks are to protect the life and health of the citizens, ensure the functioning of the

society, and to protect the basic values which are democracy, the rule of law and human rights. Solidarity is highly emphasised aspect in the Swedish security policy and it is said that in the case of military conflicts against an EU member state or a Nordic country, Sweden will give its support to the affected country, expecting the same from the other countries in the case Sweden is affected. (Government Offices of Sweden 2015, 20-21.)

Sweden's defence policy has gone through major modifications during the past twenty-five years. The country's political decision-makers have changed the orientation of Swedish defence several times and for many years, Swedish national defence strength and planning was kept low. The funding of defence decreased little by little from 2.6% to 1% during the years from 1990 to 2016. In total the wartime strength of the navy and air force was reduced by 70%, the army was reduced as much as by some 95%. The focus in the defence policy was put strongly on supporting international operations instead of national defence. This decision was made because the decision-makers did not believe that Sweden was and would ever be threatened militarily, and if that would ever be the case there would be enough time to rearm. Due to this thinking, the infrastructure for national defence efforts was demolished or sold and total defence planning was considered irrelevant. In 2010, Swedish national military service was frozen. (Salonius-Palsternak 2018, 3.)

The Swedish defence policy was modified again back towards national defence after the Swedish government acknowledged the dramatic change in the European and Baltic Sea security environment, and a new strategy was created in 2015. The aim was to improve national defence as quickly as possible. Sweden had already regional cooperation at least with Finland, NATO and the United States and this cooperation was now continued. The idea was and had already been that Sweden is able to defend itself *with others*. Also, conscription was reintroduced in 2017 and Sweden had to decide on significant increases in the defence budget. (Salonius-Palsternak 2018, 3-4.) Also, Swedish total defence planning was resumed in the defence bill in 2015 (Government Offices of Sweden 2015).

It can be said that there was a period in Sweden when military defence and crisis preparedness were seen as completely separate alternatives for each other, and the emphasis was put on preparedness for peacetime conflicts (Sallinen 2005, 16). Now in the most recent defence policy, civil-military cooperation is emphasised and armed attack against Sweden is taken into consideration. The Swedish defence policy from the year 2015 can be concluded to focus on two aspects. The first one is the aim to upgrade Swedish military capability and the other one is related to deepening cooperation with other countries and organisations in line with Swedish solidarity declaration. (Government Offices of Sweden 2015).

The Swedish national security strategy for society has been based on the broad concept of security since the Swedish Defence Commission secretariat made the suggestion in 2006. Later, the concept has developed a lot and different sectors have been included in the security concept. The challenges emerging from the evolving security environment and dynamic nature of the threats have been clearly acknowledged also in the latest national security strategy published in 2017. In the national security strategy, Sweden is said to be ready and prepared for the changes in the security environment. The key factors forming a good basis for this is stated to be a strong rule of law, a high standard of living, an advanced welfare system as well as education, research and innovation, not forgetting the strong international partnerships. The security strategy brings forward that many changes have been implemented aiming to strengthen the society's contingency planning and crisis management. (Prime Minister's Office of Sweden 2017, 6-8, 26.)

The broad approach to security includes both public and private sector actors and security is regarded to be a shared task of the entire society. The Government has highlighted seven national interests regarding Sweden's security which are guiding Swedish approach to security and the broader security efforts. These seven interests are the following:

1. Ensuring the safety, security and health of the population
2. Ensuring supplies and the protection of essential services
3. Maintaining the fundamental values; democracy, the rule of law, human rights and human freedom
4. Ensuring that under all circumstances Sweden will maintain its freedom, security and the right to self-determination
5. Promoting stability and security in its region
6. Maintaining and strengthening cooperation, solidarity and EU integration
7. Promoting a rules-based multilateral world order. (Prime Minister's Office of Sweden 2017, 14-16.)

The Swedish crisis preparedness system is based on three general principles which are the principle of responsibility, proximity and similarity. An additional fundamental principle in the Swedish system is called the geographical area responsibility. These principles and the content of those are explained in the table 3 below. However, these fundamental principles are not defined in the Swedish law and those should be understood only as basis and background for the regulatory framework that is in place today. These principles also work as a cornerstone for different actors' tasks and mandate. (Johansson, Mattson, Mittermaier & Roccbach 2017, 27-28.)

Table 3. The fundamental principles of crisis preparedness in Sweden (Johansson, Mattson, Mittermaier & Roccbach 2017, 27-28; Bakken & Rhinard 2013, 1014)

Principle	Content
The principle of responsibility	The authority responsible for an area in normal conditions is also responsible for the same functions in the case of emergencies or disasters.
The principle of proximity	Emergencies should be handled at the lowest possible level in society.
The principle of similarity	The organisation used during emergencies should be as similar as possible with the organisation that operates in normal conditions.
The geographical area responsibility	A central body responsible for cross-sectoral direction, prioritization and cooperation, during and after crises at each geographic-administrative level, which are national, regional and local levels. The government is responsible for the overall coordination.

5.2.1 Swedish approach: total defence

In Sweden, civil preparedness is part of the total defence concept which Sweden is now reforming. Originally, the concept was established in the 1940s and ever since, the Swedish society has developed significantly (Lindgren & Ödlund 2017). In the Swedish law (1992:1403) on total defence and heightened preparedness, total defence is defined as the preparations required to prepare the country for war (lag 1992:1403, 1 §). However, an armed aggression directly against Sweden is considered improbable. Instead some military conflicts are considered to be more likely to happen somewhere in the neighbourhood areas, influencing Sweden as well. (Government Offices of Sweden 2015, 46-52.) The total defence concept is focusing on threats that are caused intentionally (Lindgren & Ödlund 2017).

The Swedish total defence concept consists of two parts; military defence and civil defence. The military defence aims to defend Sweden and the safety of its population through four main goals which are (1) asserting Swedish sovereignty and protecting the sovereign rights and Sweden's national interests, (2) preventing and managing conflicts and wars, (3) protecting Sweden's freedom of action from the political, military or other types of pressures and (4) protecting society and its

functionality by supporting civil authorities. (Government Offices of Sweden 2015, 46-52.) Then again, the concept of civil defence has three main goals which are (1) to warn the population, (2) to ensure the most important functions of the society and (3) to contribute to the Armed forces in the case of an armed conflict in Sweden's territory. The civil defence refers to the actions that relevant actors execute in order to maintain the functionality of the society in times of high alert. It is emphasised that civil defence is not an organisation, but a variety of organisations from different sectors and levels of the government aiming to make the functioning of the society possible. (The Government Offices of Sweden 2015, 51-59.) Thus, the concept of civil defence is very similar with the concept of civil preparedness as defined in this study.

According to the regulation (2015:1053, 4§) on total defence and heightened preparedness, all government authorities are responsible for fulfilling the total defence requirements within their own area and make plans to ensure the functioning of the activities as long time as possible under heightened preparedness. The principle of responsibility presented in the table 3 can be considered as the cornerstone of the Swedish concept. The authorities are responsible for total defence planning in cooperation with relevant actors from different levels of the government, also representing different sectors of the society; national authorities, municipalities, county councils, associations, private businesses etc. (Förordning 2015:1053, 4§.)

Sweden is now reforming the total defence concept and official documents indicating change initiatives have been published in recent years. In a report published by the Swedish Defence Commission in 2017, it is stated that the leading roles and division of responsibilities within civil defence in Sweden are not clear enough in its current form and that there is a lack of clarity among the leading and cooperation roles in the central authority level as well as in the regional level. The principle of responsibility aiming to keep the same division of responsibilities during peacetime and in periods of crisis is stated to be insufficient to meet the complexity of the security environment. The overall concern is that there is not one centralized responsible actor regarding these questions having the overall responsibility for coordination and leadership. Especially clear strategic goals are lacking that could develop the preparedness activities more effectively towards better total defence planning. Also, the business sector is responsible for many essential functions of the society and thus, should be included in the preparedness planning processes in all levels. Thus, the reinforcement of the competences of the entire society is considered central in the development of the Swedish total defence concept. (Ministry of Defence 2017.)

After the publication of the above-mentioned report, some changes have been implemented in the Swedish legislation regarding the aspects of total defence and for instance the Swedish Civil Contingencies Agency's (MSB) role has been broadened in the field of civil defence, aiming to clarify its mandate. Civil-military cooperation is coordinated jointly by the MSB and Swedish Armed forces on the national level. These actors have for some years organised a total defence directors' meeting twice a year combining actors from surveillance authorities, central authorities as well as representatives of the armed forces. (Swedish Armed Forces & MSB 2019.)

The importance of private enterprises is increasing within the total defence. According to Swedish law (1982:1004), businesses are required to participate in the total defence planning process. However, changes are suggested to the involvement of private sector as the Swedish defence Commission has suggested that key companies should be identified. Then public actors should decide on necessary measures to secure preparedness in close dialogue with private enterprises. The Commission proposes that a national business council should be established to enable cooperation between public and private actors on all the levels of the government. (Ministry of Defence 2017, 137-141.)

5.2.2 Key actors of civil preparedness in Sweden

Today, the planning for crisis preparedness and heightened preparedness is carried out mostly through six identified cooperation areas which are (1) technical infrastructure, (2) transportations, (3) dangerous compounds, (4) economical security, (5) geographical security and (6) protection and rescue. Together with the six cooperation areas, the decree on crisis preparedness and surveillance authorities' actions during heightened preparedness (2015:1052) also include a list of authorities that have significant responsibilities within the identified fields. However, none of the listed authorities has the responsibility for any kind of overall planning within the cooperation area; they are just supposed to work together in the identified field. A table presenting the cooperation areas together with the most important actors identified in the law can be viewed from the appendix 1. These six cooperation areas have been stated to be too wide making the structure and division of tasks less clear. A need for clearly divided responsibilities for the different sectors has been identified. (Ministry of Defence 2017, 95-96.)

The Ministry of Justice is responsible for legislation on matters concerning civil defence (Ministry of Justice 2019). However, the Government and the Government Offices are required to be ready to handle all types of major emergencies. The responsibility to manage and coordinate operations is divided to relevant agencies. The MSB is responsible for civil defence questions as well as for

developing and supporting the work in the field. The MSB is responsible for civil protection, crisis management and civil defence in the case that no other authority has the responsibility. The mandate covers all phases of crisis, meaning before, during and after an accident, crisis or war. The MSB also works as the international contact point on civil preparedness matters and it coordinates the Swedish participation to the civil preparedness cooperation within NATO's Partnership for Peace cooperation. (Förordning 2008:1002, 1 § & 18 §.)

The Swedish authorities are all responsible for preparedness planning and managing any disturbances within their own area of expertise and mandate. The government authorities are also responsible for the public-private cooperation within their own sector in situations when private sector actors own some critical societal functions or critical infrastructures. Furthermore, the MSB is responsible for developing and coordinating an action plan for ensuring vital societal functions and critical infrastructure protection. (MSB 2014, 17-19.) In addition, a Crisis Management Coordination Secretariat has a role of a situation centre and it is responsible for monitoring the national as well as international development all the time. (Government Offices of Sweden 2018.) The key actors regarding the continuity of the government are illustrated in the figure 7 below.

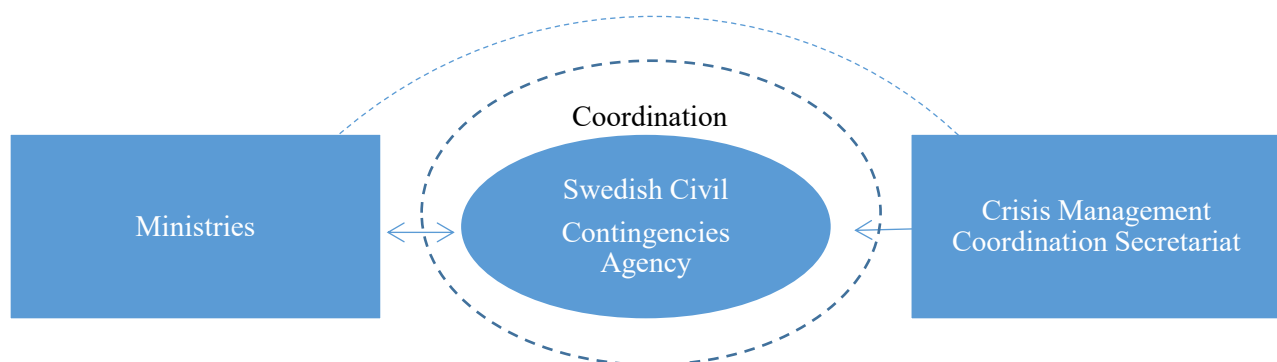


Figure 7. Key actors on the national level regarding the continuity of government in Sweden

The key actors regarding to the second civil preparedness function linked to functioning energy supplies are the Ministry of the Environment and Energy and the Swedish Energy Agency. The Ministry of the Environment and Energy is responsible for matters regarding energy and energy policy (The Government offices of Sweden n.d.) while the Swedish Energy Agency, which is subordinate to the Ministry of Environment and Energy, has a responsibility within the sector in ensuring the supply of energy in Sweden (Ministry of Defence 2017, 165). Furthermore, the Swedish Energy Markets Inspectorate (Ei) is commissioned to strive for functioning energy markets and their tasks is to supervise compliance with laws and regulations in the energy market sector. Ei also represents Sweden in the

international frameworks aiming to develop energy markets and the Inspectorate regulates the terms and conditions for the monopoly companies operating electricity and natural gas networks. Svenska kraftnät is a state-owned enterprise responsible for ensuring the safety and security of Sweden's transmission system for electricity as well as for the preparedness measures in the field of electricity. Svenska kraftnät is also responsible for the national grid for electricity and they monitor the balance between the production and consumption. (Swedish Energy Agency 2013, 21–23.)

The third civil preparedness function regarding the ability to deal with uncontrolled movement of people is the responsibility of the administrative area under the Ministry of Justice. It is responsible for the emergency preparedness as well as migration and asylum matters. Furthermore, the Swedish Migration Agency has the main responsibility for the reception of foreigners and e.g. for considering applications for Swedish citizenship in the entire Sweden. (Government Offices of Sweden n.d.; Lag 1994:137, 2 §.)

The fourth function regarding the securing of the food and water resources involves several key actors. The Ministry responsible for food and water resources is the Ministry of Enterprise and Innovation. The agencies responsible for food and water supplies on the national level today are the Swedish Board of Agriculture, the Swedish National Food Agency and National veterinary Institute. (Ministry of Defence 2017, 171.) Drinking water supply as well as food supply preparedness planning and coordination belongs to the Swedish National Food Agency. Same applies for food supplies after the primary production. The Swedish National Food Agency is also Swedish point of contact regarding foodstuff security in the EU level. (Förordning med instruktion för Livsmedelsverket 2009:1426, 1 §, 3 § & 10 §.)

The fifth function regarding the ability to deal with mass casualties is mainly the responsibility of the Ministry of Justice, which is responsible for matters concerning coordination and development of preparedness for emergencies (Ministry of Justice 2019). The MSB has the responsibility for questions regarding the safety against accidents, crisis preparedness and civil defence in the case that no other authority has the responsibility. (Förordning med instruktion för Myndigheten för samhällsskydd och beredskap 2008:1002, 1 §.) The Ministry of Health and Social Affairs is responsible for the welfare of Swedish society. The National Board of Health and Welfare (Socialstyrelsen) administratively located under the Ministry of Health and Social Affairs is responsible for matters related to sufficient stockpiling arrangements regarding medications. (Stenérus Dover, Odell, Larsson & Lindgren 2019, 41.)

The sixth function regarding the ensuring of functioning telecommunications and cyber networks is basically everyone's responsibility as all the stakeholders are responsible for their own information and cyber security. However, the government has acknowledged a need for more coordinated support in this field in the national strategy for cyber security (Ministry of Justice 2017, 11). Therefore, the 1st of April 2019 onwards, the MSB is responsible for supporting and coordinating the work regarding society's information security. The tasks include the responsibility to support the authorities and private sector actors in their prevention activities and preparedness planning regarding information security. The MSB is also responsible for analysing and evaluating global developments in the field as well as for informing the government about the general circumstances in the field of information security that might lead to actions from the relevant actors in different levels of the society. Moreover, the MSB has the overall responsibility to support the Swedish society in preventing and managing IT-incidents and it is also the Swedish point of contact for international information sharing and cooperation in the field. (Förordning 2008:1002, 11 a § & 11 b §.) The functioning electronic communication and postal services is the responsibility of the Swedish Post and Telecom Authority (PTS). (Förordning om elektronisk kommunikation 2003:396.)

In addition to the role of the MSB and PTS, there are two main supervisory authorities according to the Protective Security Act, which are the Swedish Security Service and the Swedish Armed Forces. These authorities can carry out surveillance over other sector authorities, if other responsible authorities are consulted first. The other responsible authorities are the public utility Svenska kraftnät, the Swedish Post and Telecom Authority PTS, the Swedish Transport Agency and the county administrative board. (Ministry of Justice 2017, 11.) In general, the Swedish government has emphasized the need to develop and deepen the cooperation between various authorities in the field of cyber security in the Swedish society and there are several important cooperation groups working already in this particular field. (Ministry of Justice 2017, 10.)

Regarding the seventh function related to the functioning transportation systems, the Ministry of Enterprise and Innovation is responsible for matters related to transport and infrastructure and state-owned enterprises among its other responsibility areas. (The Government offices of Sweden n.d.) Transport sector in Sweden is divided to four transport types which are road services, railway services, shipping and aviation. The Swedish Transport Administration is the authority having the sector responsibility regarding the long-term infrastructure planning for all the transportation types as well as for the construction of national routes and railways. The Swedish Transport Administration is also responsible for planning better capability to prevent and manage crisis. (Ministry of Defence 2017.)

As is the situation with many civil preparedness functions, also transportation services are often provided by private sector actors. However, the Swedish Defence Commission secretariat concludes that today the crisis preparedness capacity of the business sector actors is not systematically analysed and there should be official requirements for their ability to handle disturbances and to maintain functionality. The Swedish Defence Commission secretariat has suggested that this should be developed in order to attain more robust transportation systems. The Swedish Defence Commission secretariat also suggests that the Swedish Transport Administration should have the overall responsibility to develop the preparedness ability among the business actors in the future. (Ministry of Defence 2017, 176-179). Furthermore, one of the official cooperation areas concerns transportations and the following authorities are listed to have significant responsibilities in the field: LFV, MSB, the Swedish Maritime Administration, the Swedish Energy Agency, the Swedish Transport Administration and The Swedish Transport Agency. (Förordning 2008:1002.) Thus, regarding transportations systems the responsibilities are divided to different sectors of the society in Sweden, and the national coordination role is the responsibility of the Ministry of Enterprise and Innovation.

5.2.3 Conclusions: Sweden

In Sweden, civil preparedness is included in the concept of total defence. The system is clearly divided between civil and military defence, and now there is a reform aiming to clarify the division between these sectors. A closer analysis of the concept reveals that the Swedish concept of civil defence within the total defence concept has very similar objectives as civil preparedness. There is an identified lack of coordination and need for increased clarity regarding the division of responsibilities in the field and measures are taken to reform the system. The coordinative role of the MSB in the field of civil preparedness is broadened and today the MSB has a coordinative role regarding civil defence questions. The figure 8 below illustrates this conclusion.

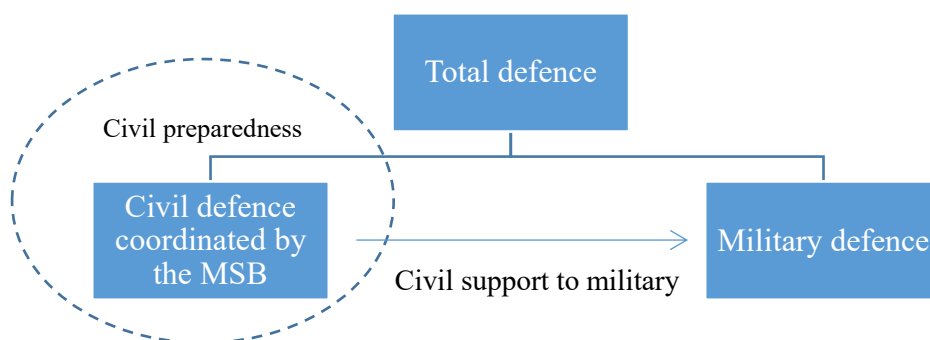


Figure 8. Illustration of civil preparedness as a part of the Swedish total defence concept

Three main governance principles are emphasized in Sweden; the principle of responsibility, proximity and similarity and just like in Finland, each actor is responsible for their operations both in normal conditions as well as during any extraordinary conditions. The civil preparedness tasks are distributed to large number of authorities on different levels of the government. Any emergencies should be handled at the lowest level of the society and the organisation should be maintained as similar as possible during emergencies. Even though the system involves many actors from different sectors of the society, the overall coordination in questions related to civil defence is officially the responsibility of the MSB, which is administratively located under the Ministry of Justice.

The total defence concept exists to prepare Sweden for war, and it consist of both civil and military defence entities and now the reform of the total defence concept is done as a cooperation of the Swedish Armed Forces and the MSB. Even though the Swedish total defence concept has a long history, the defence of Sweden has not been considered central during many years when the defence budget was minimised. The new security environment has brought up the need to rethink the national defence which is one reason for the increased need to develop civil defence so that the civilian sector of society will be able to better support the military sector of the society.

On the level of separate functions, it can be seen that some of the functions have been cut to smaller entities and divided to different actors. In all the functions, the interdependency and importance of cooperation between different actors representing different sectors of the society is emphasised. It is interesting that regardless of the MSB's coordinative role in the field of civil preparedness, it does not have a key position in many of the functions relevant for civil preparedness. The agency is thus responsible for developing and coordinating civil preparedness nationally between various actors as well as in international frameworks, but it does not necessarily coordinate the activities within separate functions.

5.3 Norway

In Norway, the security situation has been described more challenging than it has been for a long time due to the changes in the security environment (Norwegian Ministry of Foreign Affairs 2017, 5). Since the end of the Cold War, the changing political and global environment has led to restructuring of the Norwegian approach to security. Due to the changes, societal security and safety have been emphasised and a much wider perceptions of threats aiming to prevent and prepare for peacetime disasters, natural as well as manmade, have been introduced. Also, the attacks of 22 July 2011 led changes of the civil security system in Norway. (Hollis & Ekengren 2013, 781.)

In Norway, international cooperation in the promotion of peace and prevention of war and conflicts has been emphasised already for long time. NATO was Norway's security guarantee already during the Cold War and it still is and they focus on defence capabilities that are relevant for the country's own defence and which can contribute to the alliance. (Nyhamar 2019, 13-14.) NATO forms the foundations of the Norwegian security and defence policy and most of the security policy challenges are dealt in cooperation with the Allied nations. The broadness and complexity of the risks and threats have been widely acknowledged, and the boundaries between peace, security policy crisis and armed conflict have become blurred. (Norwegian Ministry of Justice and Public Security & Norwegian Ministry of Defence 2018, 27.) The Norwegian defence concept aims to reflect the transforming security environment and the idea is that the system is built in a way that it can adapt to the dynamic changes. The Defence Forces needs to be able to work effectively as a part of NATO and its activities. Close cooperation with relevant civil society actors is stated to be the basis of the defence concept together with the conscription. The overall aim is emphasised to be the ability to safeguard and promote Norway's interests by responding to the broad variety of threats both nationally as well as internationally. (Norwegian Ministry of Defence 2004, 46.)

The participation of the entire society in the provision of security is emphasised as an important factor for the resilience of the Norwegian society. This means that private businesses, citizens, non-governmental organisations and other types of communities need to participate to the efforts in making the Norwegian public security better. In the Norwegian approach to public security, the management of uncertainty is emphasised, which increases the importance of resilience of the society. The fact that not everything can be predicted and that there will always be incidents that come as a surprise is seen as a part of the usual work in the field of public security. (Norwegian Ministry of Justice and Public Security 2016, 5-10.)

The Norwegian government has identified eight core areas in the field of public security. These eight areas are divided into two groups. The first group includes four functions pointing to specific threats and risks, while the second group points to certain aspects that should be considered in order to improve the public security in a more general manner. The eight areas of focus are listed below.

- | | |
|---------|--|
| Group 1 | <ol style="list-style-type: none">1. digital vulnerabilities and ICT security2. natural hazards3. serious crime4. contagious diseases and hazardous substances, improved CBRNE preparedness |
|---------|--|

Group 2

5. the ability to manage contingencies
6. civil-military cooperation and total defence
7. attitudes, culture and leadership for effective public security
8. learning from exercises, incidents and crisis (Norwegian Ministry of Justice and Public Security 2016, 11.)

Within the broad approach to security, 14 critical societal functions have been identified in Norway. The ministry responsible for the overall picture and development of the critical societal functions nationally is the Ministry of Justice and Public Security. However, the coordination and collaboration responsibility within each identified function is divided between eight different Ministries. The division of responsibilities is done in a way that there is always one ministry nominated to be the main responsible Ministry, taking the responsibility to follow up the vulnerabilities and to develop updates regarding the overall situation in the area of responsibility. The critical functions and the responsible ministries are as follows:

1. Management and crisis management: Ministry of Justice and Public Security
2. Defence: Ministry of Defence
3. Law and order: Ministry of Justice and Public Security
4. Health and care services: Ministry of Health and Care Services
5. Rescue service: Ministry of Justice and Public Security
6. ICT security in the civilian sector: Ministry of Justice and Public Security
7. Nature and the environment: Ministry of Climate and Environment
8. Supply security: Ministry of Trade, Industry and Fisheries
9. Water and sewerage: Ministry of Health and Care Services
10. Financial services: Ministry of Finance
11. Power supply: Ministry of Petroleum and Energy
12. Electronic communication services: Ministry of Transport and Communications
13. Transport: Ministry of Transport and Communications
14. Satellite-based services: Ministry of Transport and Communications (Norwegian Ministry of Justice and Public Security & Norwegian Ministry of Defence 2018, 19.)

There are four general principles related to emergency preparedness and crisis management which form the foundation of the Norwegian system. The principles are presented in the table 4 below. The principles presented in the table 4 apply in all levels of the government. (Norwegian Ministry of Justice and Public Security & Norwegian Ministry of Defence 2018, 16.)

Table 4. The general principles in Norway (Norwegian Ministry of Justice and Public Security & Norwegian Ministry of Defence 2018, 16)

Principle	Content
The principle of responsibility	The authority responsible for an area in normal conditions is also responsible for the prevention, preparedness and implementation of the necessary actions in case of emergencies or disasters.
The principle of similarity	The organisation used during emergencies should be as similar as possible with the organisation that operates in normal conditions.
The principle of proximity	Emergencies should be handled at the lowest possible level in society.
The principle of collaboration	Authorities, private enterprises and/or government agencies have an independent responsibility to ensure the best possible cooperation with relevant actors and agencies in the field of prevention, preparedness and crisis management.

5.3.1 Norwegian approach: total defence

In Norway, civil preparedness functions are included in the total defence concept that was developed already after the Second World War by the Norwegian government. Already then, the idea was that the defence of Norway should be built on a military defence and a broad civil emergency preparedness. Originally, the concept was created to meet the challenges of an invasion, but it has developed a lot during the years to meet a much wider range of challenges. Especially the threat and risk situation emphasising civil protection and emergency management after the Cold War increased the need to reconsider the total defence concept. The renewed total defence concept emphasises the importance of support and cooperation between the armed forces and civil sector in addressing public and national security as well as civil protection during peacetime as well as crisis or an armed conflict. This civil-military cooperation is increasing and there is a clear will to develop it even further to meet the challenges of the evolving security environment. Civil-military cooperation is identified as one of the Government's four priority areas for the further development of the Armed forces. These changes to the total defence concept have been made as a response to the wider understanding of security. (Norwegian Ministry of Justice and Public Security & Norwegian Ministry of Defence 2018.)

The structure of Norway's emergency and response system is based on NATO's crisis management system and it includes one system for civil preparedness and one for emergencies in the defence sector. The system covers cross-sectoral crisis that happen in peacetime which are caused intentionally. Thus, other non-intentionally caused threats belong to other contingency plans and not within the emergency and response system based on NATO's crisis response system. (Norwegian Ministry of Justice and Public Security & Norwegian Ministry of Defence 2018, 26-27.) Cooperation in general is highly emphasised and there is many formal and informal cooperation networks and advisory bodies working for better cooperation and coordination in the field of total defence. These cooperation and readiness agencies have been established for total defence and they can all be located administratively under different ministries. There are cooperation forums for health emergency matters, public security, natural disasters, major accidents, emergency planning, ICT Security, food preparedness, power supply preparedness, electronic communications, transports, and fuel preparedness, to name some of the fields that are covered with these networks. (Norwegian Ministry of Justice and Public Security & Norwegian Ministry of Defence 2018, 15, 71-78.)

The role of private business and industry is considered vital in the total defence concept in peacetime activities as well as during any crises. Private businesses are providing important goods and services and there are agreements to ensure the functioning of e.g. repair, maintenance and supply services provided by the private sector. The interaction between military and civilian resources is considered important and they are seen as supplementary to each other. The core idea of total defence in Norway being the combined civil preparedness and military defence, the role of the private sector as an important collaboration partner is evident. (Norwegian Ministry of Justice and Public Security & Norwegian Ministry of Defence 2018, 33-34.)

5.3.2 Key actors of civil preparedness in Norway

The civil preparedness questions affecting the civilian side of society are coordinated by the Ministry of Justice and Public Security. Meanwhile, the matters related to defence sector in this field are coordinated by the Ministry of Defence. Civil-military cooperation is led by both ministries, but all other ministries are still responsible for their own preparedness planning. (Norwegian Ministry of Justice and Public Security & Norwegian Ministry of Defence 2018, 26-27.)

One of the core ideas in the Norwegian total defence concept is that the system should maintain an adequate level of flexibility enabling adaptation to varying situations and responding dynamically to emerging threats. Simultaneously, it is important to have clear command structures, roles and

responsibilities, which is why the Lead Ministry is responsible for coordinating crisis management at the ministry level. The ministry of Justice and Public Security is the permanent Lead Ministry in civil national crises unless otherwise determined. However, this does not change the sector specific decision-making responsibility of each ministry and it gives the Ministry of Justice and Public Security only a coordinative role. There is always one lead ministry identified for each critical societal function. (Norwegian Ministry of Defence and Norwegian Ministry of Justice and Public Security 2018, 17-19.) In the table 5, all the lead ministries regarding the identified civil preparedness functions are listed. Note that these seven functions do not cover the entire list of critical societal functions identified in Norway.

Table 5. Lead ministries regarding civil preparedness functions in Norway (Norwegian Ministry of Justice and Public Security & Norwegian Ministry of Defence 2018)

Function	Task	Lead ministry
1. Continuity of government and critical services	Public security and emergency preparedness	Ministry of Justice and Public Security
2. Energy supplies	Power supply	Ministry of Petroleum and Energy
	Fuel supply	The Ministry of Trade, Industry and Fisheries
3. Dealing with uncontrolled movement of people	Law and order	Ministry of Justice and Public Security
	Immigration and integration	
4. Food and water resources	Water supply and sewers	Ministry of Health and Care Services
	Food supply	Ministry of Trade, Industry and Fisheries
5. Dealing with mass casualties	Rescue Services	Ministry of Justice and Public Security
	Law and order	
	Health and care	Ministry of Health and Care Services
6. Telecommunications & cyber networks	Electronic Communications	Ministry of Transport and Communications
	ICT Policy	Ministry of Local government and Modernisation
7. Transportation systems	Transportation	Ministry of Transport and Communications

The Directorate for Civil Protection (DSB) administratively located under the Ministry of Justice and Public Security is a key agency in civil preparedness matters. The DSB is responsible for following

and registering the changes in Norway's vulnerability and emergency preparedness and it works as a contact point in international cooperation frameworks related to its field in civil preparedness. Furthermore, the directorate carries out supervision over the ministries on behalf of the Ministry of Justice and Public Security. In the case of severe emergencies, the DSB's task is to support all the ministries in their coordinative roles. Moreover, the Norwegian civil defence referring to a governmental reinforcement resource including 8000 people in civilian service duty is subordinate to the DSB. (Norwegian Ministry of Justice and Public Security & Norwegian Ministry of Defence 2018, 20-21, 39.) The key actors regarding the coordination in the field of civil preparedness are illustrated in the figure 9 below.

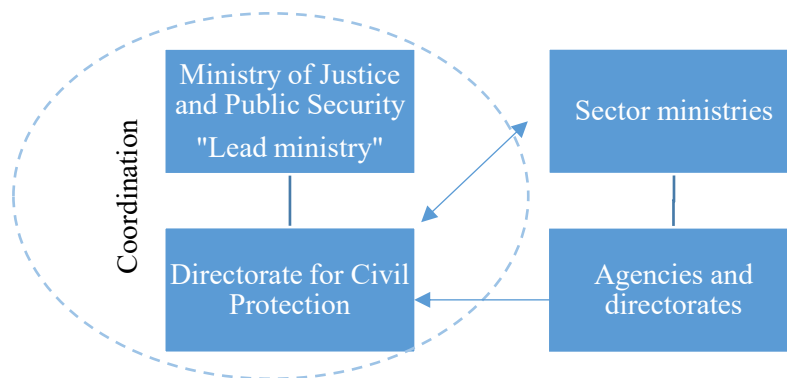


Figure 9. Overall coordination in the field of civil preparedness in Norway

Regarding the second function related to safe and secure energy supplies, the main responsibilities are divided to two different ministries in Norway. The Ministry of Petroleum and Energy is the responsible ministry for the emergency preparedness related to power supply. The Water Resources and Energy Directorate has the operational responsibility in the field, and it is the readiness authority in the case of emergencies. Then again, oil companies and Gassco AS are responsible for supply security for gas. The Ministry of Trade, Industry and Fisheries has the sectoral responsibility over fuel supplies, and it is responsible for the entire value chain from the refinery industry up to the retail sale of fuel. (Norwegian Ministry of Justice and Public Security & Norwegian Ministry of Defence 2018, 44-45.)

The third civil preparedness function regarding the ability to deal effectively with uncontrolled movement of people is one of the coordination responsibilities of the Ministry of Justice and Public Security as it is the ministry having the responsibility on security matters in the civil sector. (Norwegian Ministry of Justice and Public Security & Norwegian Ministry of Defence 2018, 39.) The Norwegian Directorate of Immigration is responsible for foreign nationals' application processing and for the running of asylum reception centres and expulsion cases. (UDI, n.d.)

Regarding the fourth function related to food and water supplies, the lead ministries are the Ministry of Health and Care Services and the Ministry of Trade, Industry and Fisheries. The Ministry of Health and Care Services is responsible for coordinating water supply matters nationally. In addition, the Norwegian Food Safety Authority is responsible for conducting supervision over the waterworks' compliance with regulations. The Ministry of Agriculture and Food is in collaboration with the Ministry of Health and Care and the Ministry of Trade, Industry and Fisheries responsible for preparedness for safe food production. The Ministry of Trade, Industry and Fisheries has coordination responsibility for food supply preparedness while the Ministry of Agriculture and Food has a partial responsibility in safeguarding food supply preparedness for Norwegian citizens by safeguarding the production base, facilitating continuous production, and contributing to the necessary supplementation to Norwegian production through imports. (Norwegian Ministry of Justice and Public Security & Norwegian Ministry of Defence 2018, 42-43.)

The fifth function regarding the ability to deal with mass casualties is mostly the responsibility of the Ministry of Health and Care Services and the Ministry of Justice and Public Security. The Ministry of Health and Care Services is responsible for public security and emergency preparedness in the health and care sector and it coordinates these matters with other ministries. The Directorate of Health, administratively located under the Ministry of Health and Care Services, provides guidelines and support to municipalities through the County Governor. It is also responsible for the overall coordination of health and care sector's work by delegation from the Ministry of Health and Care Services. The Director of Health also coordinates supply security for medicines together with the Norwegian Medicines Agency, the Norwegian Institute of Public Health, and the Regional health authorities. Furthermore, Regional Health Authorities and hospitals are responsible for the provision of healthcare services and according to the National Health Preparedness Act they are also responsible for preparing contingency plans for their services. The regional health enterprises are obliged to ensure coordination in preparedness efforts with relevant agencies such as the Police, the Armed Forces and the Fire Service. Norwegian Rescue Services is the responsibility of the Ministry of Justice and Public Security and the DSB supports the ministry in charge in its coordinative role. (Norwegian Ministry of Justice and Public Security & Norwegian Ministry of Defence 2018, 39-42.)

The sixth function regarding the functioning telecommunications and cyber networks is the responsibility of the Ministry of Transport and Communications and the Ministry of Local government and Modernisation. However, cyber security is most of all the responsibility of relevant companies in Norway and all the ministries are responsible for strengthening cyber security in their own

administrative field. The overall coordination responsibility regarding cyber security in electronic communication matters is the responsibility of the Ministry of Transport and Communications while the government's ICT policy is the Ministry of Local government and Modernisation's responsibility. In addition to these two lead ministries the coordination responsibility on cyber security matters in the civilian sector is assigned to the Ministry of Justice and Public Security while the matters related to the defence sector in the responsibility of the Ministry of defence. (Norwegian Ministries 2019, 22)

The seventh function regarding the transportation systems is coordinated by the Ministry of Transport and Communication. Its subordinate agencies and affiliated companies are responsible for security and preparedness in their own organisation and within their field. The Civil Aviation Authority of Norway is responsible for ensuring the coordination of preparedness plans within aviation and has a coordinative role in the event of disturbances. Avinor AS provides aircraft security services and is responsible for ensuring security at government airports. In railway legislation, it is stated that the Bane NOR SF is the infrastructure administrator and ensures functioning railway infrastructure to the train companies. It also coordinates preparedness and crisis management in the sector. The Railway Authority ensures that all the actors are following security- and emergency preparedness regulations. The Public Roads Administration is responsible for security and contingency planning regarding the roads in Norway. The Coastal Administration monitors shipping traffic in Norway and is also responsible for national emergency towing preparedness. (Norwegian Ministry of Justice and Public Security & Norwegian Ministry of Defence 2018, 45-46.)

5.3.3 Conclusions: Norway

Civil preparedness as defined in this study can be clearly identified from the Norwegian system and it is part of the total defence concept. The main coordination responsibilities are clearly assigned to different ministries and within total defence, it is the Ministry of Justice and Public security that is responsible for the overall coordination of civil preparedness matters while the Ministry of Defence takes care of the military defence part of total defence. The principle of responsibility requires all the ministries to take care of the preparedness planning within their own sector in Norway. Thus, sectorial responsibilities are important and one cross-sectoral civil preparedness function might still involve many actors. Despite the strong sector responsibilities, the Ministry of Justice and Public Security has been given a coordinative role in civil preparedness matters on the civilian sector and its role is to ensure a holistic and coordinated civil preparedness across the government branches. In addition, the DSB supports the Ministry of Justice and Public Security in its coordinative role. The figure 10

below illustrates civil preparedness as a part of the Norwegian total defence concept and the main coordinative authorities.

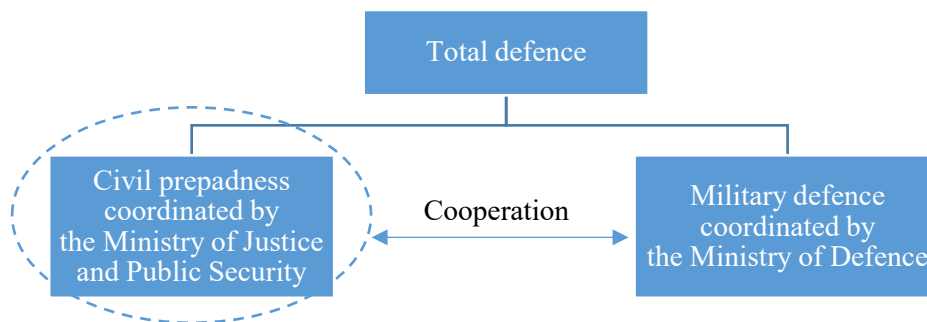


Figure 10. Illustration of civil preparedness in the Norwegian total defence system

Civil-military cooperation is an important aspect of the Norwegian total defence concept. Cooperation in general is highly emphasised and various cooperation forums have been established, covering a broad set of security matters. The fact that NATO forms the foundation of the Norwegian crisis preparedness system can be seen in the civil preparedness arrangements as the aspects and functions emphasised by NATO are clearly defined in Norway. The total defence concept has been modified during the years with the objective that it will support NATO cooperation.

When investigating the division of tasks between the key actors more in detail regarding the identified civil preparedness functions, it can be seen that many actors are involved in the organisation of most of the functions. The overall coordination responsibilities regarding civil preparedness functions are clearly divided among the Norwegian ministries due to the lead ministry system. Even though there are many actors involved in civil preparedness matters, the main coordination responsibility is always assigned to a certain ministry. However, neither does this limit the number of other ministries involved in the organisation of civil preparedness matters nor the number of agencies and directorates involved.

6 Analysis and comparison

In this chapter, the data presented in the chapter five will be analysed, focusing on comparative perspective. The purpose of the analysis is to identify similarities and differences regarding the conceptual understandings of civil preparedness as well as the institutional arrangements when approached from the point of view of the chosen definition from NATO. Furthermore, the analysis seeks to identify factors that explain the findings. This is done by interpreting contextual information and strategic decisions implemented in the studied countries and by mirroring the data to the security governance-based theoretical framework concentrating on complexity and security mentalities.

6.1 Conceptual understandings

In Finland, all the civil preparedness functions are covered in the concept of comprehensive security but the term itself have not been recognised officially in the vocabulary for comprehensive security or in the national legislation. Thus, there are no separate structures established in Finland that could be introduced as civil preparedness arrangements but instead, the functions have been included in the comprehensive security approach together with overall preparedness. However, the term ‘civil preparedness’ is still in use in Finland and different understandings of the term co-exist. Then again, in Sweden and in Norway there are clearer structures for civil preparedness per se. Sweden and Norway both have a total defence concept that covers civil preparedness. In Sweden the concept of civil defence within total defence is very similar with the civil preparedness definition as defined in this study, while in Norway it is the civilian part of total defence that is often referred to as civil emergency preparedness or civil preparedness. The table 6 sums up briefly the different concepts that cover civil preparedness in the studied countries.

Table 6. National terms used to address civil preparedness matters

	Finland	Sweden	Norway
<i>Civil preparedness term in national contexts</i>	Not officially recognised, but functions covered in the comprehensive security	Civil defence (within the concept of total defence)	Civil preparedness (part of total defence)

When comparing the national concepts that cover civil preparedness, it can be concluded that the Swedish and the Norwegian total defence concepts have more similarities with each other than with the Finnish comprehensive security approach. Cooperation is emphasised in all the countries, but the Finnish joint preparedness approach emphasises cooperation even more as it is the corner stone of the whole concept. In Norway, there is a separate core principle established for cooperation and in Sweden it is included in the principle of responsibility. In addition to the general principles of responsibility and collaboration, Sweden and Norway have established other structures aiming to ensure holistic overall coordination in the field of civil preparedness within the total defence concepts.

The main difference between the national approaches is that in Finland, civil preparedness is part of the comprehensive security and it has not been considered separately in any way. Civil preparedness is part of the functions included in the comprehensive security approach and it is blended within the joint preparedness model. This makes it difficult to identify clear division of responsibilities because there is no clear-cut concept that would be equivalent to civil preparedness definition only. Also, no official coordinative roles regarding civil preparedness per se have been identified in the official documents. Moreover, the fact that both Sweden and Norway emphasise civil-military cooperation in the strategy documents illustrate this difference as it is not emphasised separately to the same extent in Finland. Civilian and military actors' cooperation is considered important within the comprehensive security concept, in which all the different actors of the society are involved in the provision of security. Thus, civil-military cooperation is part of the joint preparedness model that is in place in Finland and its role is built in the system in a way that it is not separately emphasised.

The organisation of civil preparedness aims to sustain vital functions for society, which can be characterised as a wicked problem. As presented by Conklin (2008), there are no right or wrong solutions to solve wicked problems and the content of it can be defined in multiple ways. The broadness and the cross-administrative nature of civil preparedness is increasing the alternative solutions for the organisation of it. These differences in the conceptual understandings of the concept represent the variety of outcomes and solutions to wicked problems. The wickedness of the matter means that the differences between the conceptual understandings of civil preparedness per se do not tell anything about the functionality of the arrangements and the information can only be interpreted in a way that the concept has been established differently, aiming to respond to similar threats and security challenges in ensuring the functionality of the society. However, when investigating civil preparedness arrangements through the lenses of the chosen definition, it can be concluded the regulative framework for these matters to be clearer in Sweden and in Norway than it is in Finland.

The fundamental principles underlying civil preparedness in the studied countries have many similarities. All the countries follow the principle of responsibility according to which the authority that is responsible for an area or a function in normal conditions is also responsible for the functioning of it during a crisis. This means that all the ministries are responsible for the preparedness within their own administrative branch and the aim is to maintain the same organisation of the work as in normal conditions as long time as possible during a crisis. The table 7 below sums up some of the main characteristics of each national concept.

Table 7. Main characteristics of each national concept.

	Finland	Sweden	Norway
<i>Civil-military cooperation</i>	Part of the usual cooperation arrangements	Civil support to military important in the total defence concept MSB & the Armed Forces	Civil-military cooperation emphasised Ministry of Justice and Public security & Ministry of Defence
<i>Main principles</i>	Principle of responsibility Cooperation	Principle of responsibility, proximity and similarity	Principle of responsibility, proximity, similarity and cooperation
<i>Regulative framework for civil preparedness</i>	Unclear national regulative framework in the field of civil preparedness	Clear regulative framework for civil preparedness	Clear regulative framework for civil preparedness

6.2 Division of responsibilities

Although the responsibilities in the field of civil preparedness are divided to almost all the sectors of the government, in Sweden and in Norway it is the Ministry of Justice that is responsible for the overall coordination of civil preparedness matters nationally. In Finland the overall responsibilities are divided to several ministries. From the point of view of civil preparedness, the clarity of the arrangements regarding the coordination responsibilities on the national level are clearer in Sweden and in Norway than those are in Finland. This is mainly because of the broadness of the Finnish concept

that blurs the responsibilities especially regarding the overall coordination on the national level. In Norway, coordination responsibility regarding each of the critical societal function is always assigned to one lead ministry, which then has the overall coordination responsibility in the specific field that includes a broad group of actors. In Sweden, the lack of clarity regarding the division on responsibilities and especially the lack of overall coordination in the field of civil preparedness has been identified, and efforts are made to improve the situation. The mandate of the MSB has already been broadened recently to cover wider responsibilities in the field of civil preparedness. In Finland, there are neither separate coordination structures for civil preparedness nor planned reforms to clarify the civil preparedness arrangements except that a definition for civil preparedness will be added to the vocabulary of comprehensive security. This illustrates well the fundamental difference between the civil preparedness approaches implemented in the countries.

Sweden and Norway have both separate agencies reporting to the Ministries of Justice working in the field of civil preparedness with broad mandates. In Sweden, the MSB is responsible for coordination and development of civil defence and it is working together with the Swedish Armed forces in reforming the total defence concept. In Norway, the DSB is responsible for preparedness and emergency planning in national, regional and local level and it supports the Ministry of Justice and Public Security in its coordinative role. In Finland, there is no such national agency responsible for coordination of civil preparedness matters. However, it should be noted that the mere existence of this kind of agency does not automatically mean better functioning of the system. Nevertheless, the existence of a separate organization can be seen to improve the clarity regarding the division of tasks in the field of civil preparedness.

When reflecting the above-mentioned division of tasks to the theory and especially to the learnings provided by Head & Alford (2015) about the handling of wicked problems, some interesting remarks can be made. Head & Alford stated that the traditional hierarchical forms of public administration are not able to respond to wicked problems because of their focus on systems of control and other monitoring activities. Meanwhile, successful arrangements require coordination and collaboration across institutional boundaries. Also, according to Vartiainen et al. (2013) sector specific boundaries are preventing a comprehensive approach for handling complex issues, which supports the Finnish approach of comprehensive security. Nevertheless, all the studied countries are clearly aiming to handle the complex issues of civil preparedness through a cooperative effort combining different administrative branches and sectors of the society but the ways to organise coordination of these matters vary.

It seems clear that both Sweden and Norway are striving for strong coordination structures, aiming to have one authority with centralised responsibility over the overall arrangements. This kind of structure, however, can also be understood as a more traditional public administration approach in which the coordinative authority's role is to monitor the work in the field. However, coordination is also considered important in handling transboundary issues involving multiple actors.

Various government branches are responsible for different civil preparedness functions nationally and that varies between Finland, Sweden and Norway. Some of the civil preparedness functions were clearly assigned to one or two ministries also in Finland, while others were cut into smaller entities and divided to several key ministries. Same applies to the current arrangements in Sweden, but the overall coordination is centralised to be the responsibility of the MSB. Only the Norwegian approach had clear lead ministries for different functions of civil preparedness. The table 8 sums up the main characteristics regarding the coordination of tasks identified in Finland, Sweden and Norway.

Table 8. Summary of the actors with main coordination responsibility

	Finland	Sweden	Norway
<i>Key ministries with coordinative responsibility</i>	Prime Minister's Office (overall preparedness) Ministry of the Interior (internal security) Ministry of Defence (comprehensive defence)	Ministry of Justice	Ministry of Justice and Public Security
<i>Agency level with key responsibility</i>	No agency	Swedish Civil Contingencies Agency (MSB)	Directorate for Civil Protection (DSB)

All in all, the administrative arrangements for civil preparedness are quite fragmented, with a strong degree of sectorization. However, stronger coordination combining different administrative levels in the field of civil preparedness seems to be a tendency in aiming to respond to the evolving security environment and its complex challenges in Sweden and in Norway. In Finland, the current system in which civil preparedness has not been separately considered emphasises the increasing importance

of cooperation forums and broad collaboration instead of clearer coordination structures in civil and military sectors of the society.

6.3 Factors explaining the findings

The strategy for choosing the case countries was to use the most similar cases. The studied countries are similar in many ways as presented already in the methodology chapter number four. Furthermore, the general threat assessments in the studied countries are similar and so are the main principles underlying the preparedness systems. What differentiate these countries are their geographical locations, experiences through history as well as the decisions regarding the national security and defence policies and priorities. The national systems covering civil preparedness have been modified during the years to better respond to the new security environment. However, the development has not been similar in all the three countries and different solutions have been implemented, resulting in fundamental differences in the ways civil preparedness has been conceptually established.

The differences can be partly explained by the major differences in the strategic decisions made regarding the national defence policies implemented during the past twenty-five years. As civil preparedness is closely related to military defence because its function is to support the defence forces if needed, the strategic decisions in the field of defence policy have direct impacts on civil preparedness arrangements. Finland has always underscored continuity while Swedish political decision-makers have changed the orientation of Swedish defence several times. Now more recently, Finnish and Swedish official defence policies have started to be more similar with each other. Norway is a NATO member state which forms the foundation for its crisis management system and NATO's influence in the way civil preparedness has been tackled in Norway seems evident.

The way civil preparedness has been administratively structured in Norway can be explained by their engagement to NATO. However, also Sweden as a non-allied nation is aiming for clear civil preparedness arrangements through its total defence reform and thus, NATO membership is not the only explaining factor. NATO's approach to civil preparedness and the seven baseline resilience requirements can be identified from the Swedish total defence concept and the planned changes are pointing in most cases to the functions identified in NATO's definition for civil preparedness. One major difference between the studied countries is that Finland has always emphasised the need for sufficient independent defence capacities, while both Sweden and Norway have for a long time based their defence policies on the idea that the countries are able to defend themselves in cooperation with others. Thus, the longer period of frozen total defence planning in Sweden, together with its strategic

decisions in the field of defence policies might have influenced the development of civil preparedness in the country. It has adopted a strategy that is more similar with the Norwegian concept and NATO's definition than the Finnish comprehensive security model. Moreover, the Finnish comprehensive security model has its roots deep in the history as it has slowly developed over time and thus, the system is not necessarily easy to transfer to other contexts with different defence policy decisions.

When examining the security mentalities (table 1) behind the different approaches to civil preparedness in the light of the referent objects of security, dominant threat perceptions, key security agents, security policy agendas and relationships between politics and security, it seems evident that all the countries share similar mentalities with some differences between which mentalities are emphasized. While all the studied approaches to civil preparedness emphasise the importance of cooperation and participation of the entire society in the provision of security, the role of the state as a central coordinative actor is clear. However, the role of other actors within the society is seemingly important in all the identified civil preparedness approaches established in the studied countries. This points towards the resilience-based security mentality while it is also well in line with the idea of the state being just one node among a set of nodes delivering security as a common effort which was presented earlier by Johnston & Shearing (2003).

The comprehensive security approach that is in place in Finland has many characteristics of resilience mentality and especially the threat perceptions are well in line with the ones of that mentality. Also, psychological resilience as one of the core functions that need to be safeguarded under all circumstances within the Finnish comprehensive security approach supports the role of resilience mentality. However, the traditional risk assessment approaches, meaning preventive and protective mentalities are still seemingly strong in the approach as key security agents are strongly state authorities which are responsible for taking care of the required cooperation with private sector actors. When examining the referent objects of security, it seems that the Finnish approach has adopted characteristics from all the mentalities, and it aims to protect the society from all the different points of views.

Similar factors regarding different security mentalities can be identified from the Swedish and Norwegian approaches. For instance, the resilience mentality can be identified also from the Swedish and the Norwegian total defence approaches, but without the psychological resilience as one separate function vital for the society. However, both total defence approaches have a special focus on threats that are caused intentionally, which highlights more the mentalities of prevention and defence. Furthermore, the total defence concepts established in Sweden and in Norway emphasise the defence part of the concepts already due to the structure of the approaches which emphasises the defence

mentality. It seems clear that the traditional risk assessment approaches of defence, prevention and protection as security mentalities can be identified from both of the total defence approaches. In Finland, there is no separate system for intentionally and non-intentionally caused crisis, and the comprehensive security approach includes both types of threats within it. However, also the Finnish approach contains characteristics of the defence mentality. Thus, the ways to organise civil preparedness in all the studied countries seem to be based on a mix of the different mentalities, with small differences between which mentalities are emphasised. Hence, the mentalities behind the civil preparedness approaches can only be considered to support the similarity and like-mindedness of the studied countries and not the differences between their approaches to civil preparedness.

7 Conclusions

This study sought to answer to two research questions. The first one aimed to provide information on how civil preparedness is conceptually understood and institutionally organised in Finland compared to the concepts and institutional arrangements in Sweden and in Norway. The analysis of the gathered data shows that regardless of the many similarities and mutual interests the studied countries share, civil preparedness is a security matter that has been tackled conceptually in a fundamentally different way in Finland when compared to Sweden and Norway. In Finland, the joint preparedness model called comprehensive security covers all levels and actors of society, including civil preparedness and its functions. Civil preparedness is not mentioned as a separate function in any way in the legislation in Finland, even though the term is frequently used in the country e.g. within the frames of NATO Partnership for Peace Cooperation. Then again, in Sweden and in Norway, the systems have traditionally been based on civil preparedness and military defence through their total defence approaches and it is still the way civil preparedness is recognised in both countries.

The study shows that the division of responsibilities on the level of specific civil preparedness functions are quite fragmented in all the studied countries, meaning that the responsibilities are divided to different administrative branches and sectors of the society. What differentiates the Finnish approach from the Swedish and Norwegian approaches is the aim to blend civil preparedness within the wider preparedness structures and coordination mechanisms. Unlike Norway and Sweden, Finland is not aiming for strong coordination structures in the specific field of civil preparedness. Instead, these matters are handled through the wider preparedness model of comprehensive security and the cooperation forums established in the frames of that model.

In Finland, there is not one authority responsible for the overall coordination of civil preparedness matters and several authorities share the task. Then again, in Norway the overall coordination of civil preparedness is the responsibility of the Ministry of Justice and Public Security and the Norwegian Directorate for Civil Protection supports the ministry in its coordinative tasks. In addition to this, there is always a so-called lead ministry appointed for every vital function for society which is responsible for the overall coordination within the specific functions also in the field of civil preparedness. In Sweden, civil preparedness matters are officially coordinated by the Swedish Civil Contingencies Agency (MSB), administratively located under the Ministry of Justice. Sweden is now reforming its total defence concept and it is seeking for clearly defined coordination roles regarding civil preparedness and its functions. Thus, in Sweden and in Norway strong holistic coordination in

the field of civil preparedness seems to be a tendency in aiming to respond to the evolving security environment while in Finland, civil preparedness functions are intentionally blended in the wider concept, emphasising the responsibility of each competent ministry.

The second research question sought to provide information on factors explaining the findings by aiming to identify contextual and theoretical explanations through interpretation of historical events regarding strategic decisions made in the field of security and defence policies and by mirroring the current approaches to civil preparedness to ways to govern security through different security mentalities. Based on the analysis, it can be concluded that the threat assessments and the main principles underlying the concepts are quite similar, but what differentiate these countries are the decisions made regarding the national security and defence policies. Finland has always underscored continuity and maintaining independent defence capacity has always been considered important in Finland. Then again, the Swedish political decision-makers have changed the orientation of Swedish defence several times and Swedish total defence planning, including civil preparedness, was kept low for many years. It is only now more recently that Finnish and Swedish defence policies have started to be more similar with each other. Then again, Norway is a NATO member state which forms the foundation of its crisis management system and NATO's influence in the way civil preparedness has been tackled in Norway seems evident when investigating the existing institutional arrangements. Thus, one factor explaining the findings is the differences in the strategic decisions in the field of security and defence policies.

Regardless of the fundamental differences between the countries' approaches to civil preparedness, all the studied systems have characteristics of same security mentalities. All the countries have characteristics of resilience security mentality as they are all emphasising the role of the entire society in the provision of security. However, the emphasis still seems to be on traditional risk assessment approaches, meaning especially preventive and protective mentalities. Furthermore, the total defence systems of Sweden and Norway have clear characteristics of defence security mentality due to the structure of the concepts consisting of military defence and civil preparedness and their special focus on crises that are caused intentionally. Defence security mentality can also be identified from the Finnish comprehensive security concept, but it is not separately emphasised in the approach. Security mentalities behind the national concepts are quite similar, and only some differences between which mentalities are emphasised can be identified. However, it is evident that the Swedish and Norwegian concepts are described in a very similar manner and same security mentalities seem to form the foundations of both concepts. Nevertheless, the identified security mentalities support more the similarity

and the like-mindedness of the studied countries and their similar ways to think about security than those explain the differences in the approaches to civil preparedness.

All in all, it seems clear that Norway as a NATO allied nation has adopted civil preparedness structures derived from NATO, while the conceptual development of civil preparedness arrangements in Finland mainly focus on society as a whole, rather than on civil preparedness per se. In Sweden the total defence concept covering civil preparedness has been on hold for many years and now that the old concept is reformed, it is taken towards developing national resilience and the reinforcement of the entire society’s capacities, in which the NATO’s definition of civil preparedness is visible. All the countries have based their approaches to the broad conceptualisation of security, emphasising the role of the societal sector as well as the role of the private sector in protecting the critical infrastructures. The figure 11 illustrates the relation of the different concepts from the point of view of the findings of this study. The concepts in the figure are based on the concept map built earlier in the chapter number two.

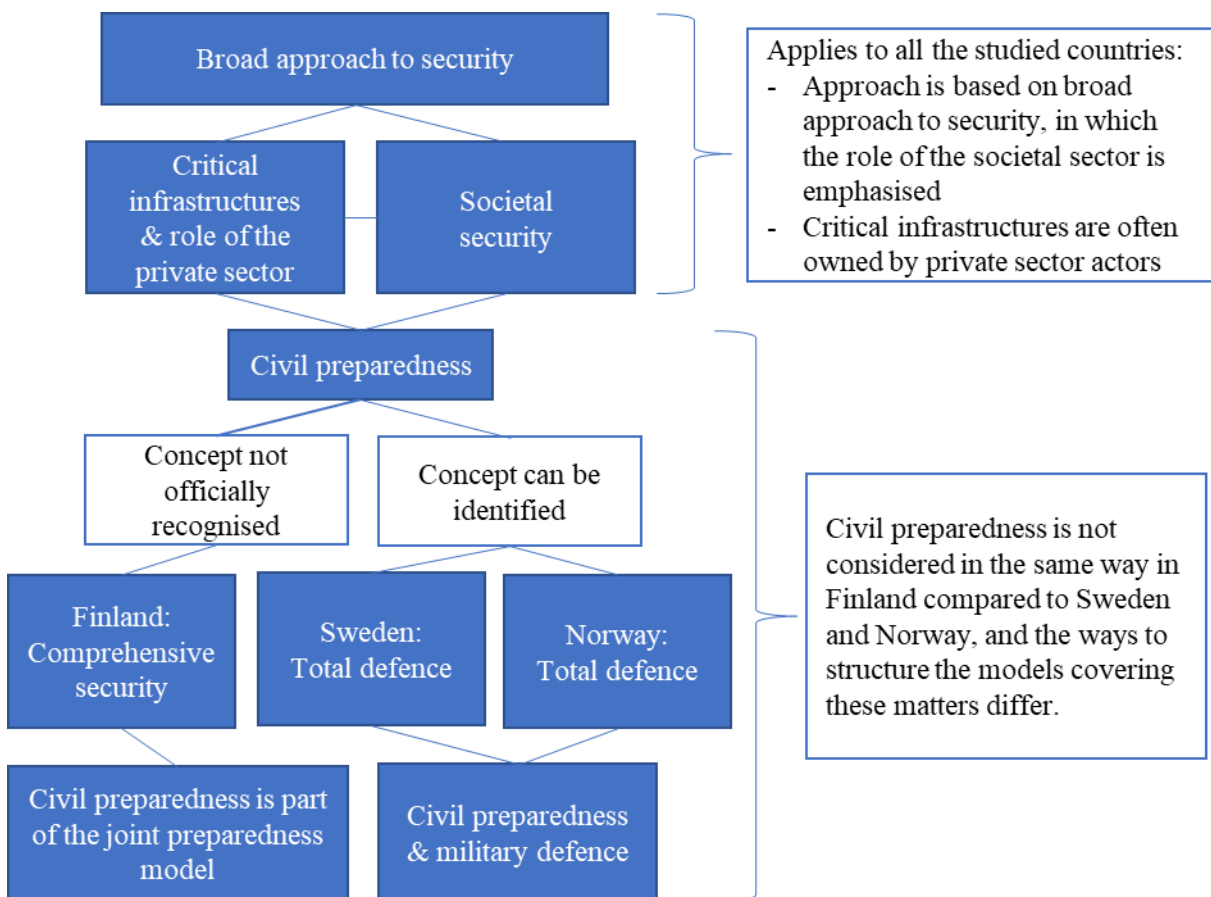


Figure 11. Key concepts based on the analysis and the concept map

One general factor that also explains the differences between the countries is the nature of civil preparedness as a wicked problem. Thus, differences in the conceptual understandings of the concept represent the variety of outcomes and solutions to wicked problems which are numerous. This means that the differences between the conceptual understandings of civil preparedness do not tell anything about the functionality of the arrangements. Instead, the findings are showcasing how different arrangements can be implemented aiming to respond to similar threats and security challenges in ensuring the functionality of the society.

Each of the countries aim to develop their approach to civil preparedness from their own premises and in a way that it best supports the countries' own interests and priorities. It should be noted that while the systems seem very different from the point of view of civil preparedness, there are many similarities as well. This conclusion can also be interpreted from the figure 11 above, as the approaches to civil preparedness are based on similar concepts. The biggest difference concerns only the separate concepts of civil preparedness which are surrounded by other concepts and security mentalities that seem to be approached in rather similar ways in the studied countries. In addition, the main principles underlying the preparedness systems are very similar and all the studied countries emphasise the importance of cooperation and the involvement of the entire society in the provision of security.

7.1 Limitations

It should be noted that the study concentrates strictly on civil preparedness and the conclusions cannot be generalized to apply any wider security governance arrangements. The content of this study can only be applied to increase the understanding of the governance of civil preparedness through one common definition known and used in all the studied countries. The analysis has pointed out that there is lack of clarity regarding certain coordination roles as well as the overall division of responsibilities related to the organisation of civil preparedness as defined in this study. This should not be understood as an implication that the current arrangements are not good from the point of view of security, or even civil preparedness per se. The purpose of the study is not to demonstrate a superior system to the others but instead to illustrate the variety of approaches to civil preparedness when the concept is defined as it is in this study. Furthermore, the study does not consider any possible prevailing practices that are in place in the field of civil preparedness in Finland, Sweden and Norway and the study concentrates strictly on the official division of tasks.

Furthermore, the chosen focus for the analysis emphasizes the operability of the military sector with the help of broad civil preparedness, which in that sense creates a limited understanding of the studied phenomenon. Thus, the findings should be regarded as a comparison regarding the organisation of civil preparedness in Finland, Sweden and Norway approached from the point of view of the chosen definition. The findings are limited to the chosen definition of civil preparedness and only the functions identified in the seven baseline resilience requirements were analysed.

7.2 Future research

This study concentrates strictly on the official structures and division of responsibilities among key actors in the field of civil preparedness in Finland, Sweden and Norway and the findings provide interesting information on that. Based on the information provided in this study, it would be interesting to know how the established structures work in practice and how well the information flows between the interdependent actors. The need for this kind of research is mostly evident in the case of Finland, as there are no official coordination structures for civil preparedness per se and it seems that the work that is directly related to civil preparedness is handled via unofficial division of tasks. For instance, the international cooperation in the field of civil preparedness is not officially appointed to one authority in Finland, unlike in Sweden and in Norway. Nevertheless, it is quite unlikely that all the relevant authorities in Finland are directly in contact with international organisations regarding civil preparedness cooperation and thus, there probably is one organisation appointed as a contact point to ensure functional information flows.

Furthermore, both Sweden and Norway have established clear coordination structures for civil preparedness, and it would be interesting to know how this coordination works and what the contribution of the coordinative authority in the field of civil preparedness is in normal conditions. Moreover, this kind of research focusing on the work in practice could provide additional information on the prevailing practices regarding e.g. the cooperation in the field. This kind of additional research could provide more detailed knowledge on the pros and cons of the different approaches and institutional arrangements of civil preparedness.

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Appendix 1.

Authorities having significant responsibilities in the identified cooperation areas in Sweden.

Cooperation area	Authority with a special responsibility within the co-operation area	
Technical infrastructure	Affärsverket svenska kraftnät	MSB
	Elsäkerhetsverket	Post- och telestyrelsen
	Livsmedelsverket	Statens energimyndighet
Transportations	Luftfartsverket	Statens energimyndighet
	MSB	Trafikverket
	Sjöfartsverket	Transportstyrelsen
Dangerous compounds	Folkhälsomyndigheten	Statens jordbruksverk
	Kustbevakningen	Statens veterinärmedicinska anstalt
	Livsmedelsverket	Strålsäkerhetsmyndigheten
	MSB	Säkerhetspolisen
	Polismyndigheten	Tullverket
	Socialstyrelsen	
Economical security	Finansinspektionen	Pensionsmyndigheten
	Försäkringskassan	Riksgäldskontoret
	MSB	Skatteverket
Geographical security	Länsstyrelserna	
	Myndigheten för samhällsskydd och beredskap	
Protection and rescue	Kustbevakningen	Sjöfartsverket
	Migrationsverket	Socialstyrelsen
	MSB	Transportstyrelsen
	Polismyndigheten	Tullverket

Table 9. Actors having significant responsibilities in the identified cooperation areas. (Förordning 2015:1052).