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Comparing the resilience objectives of Finnish comprehensive security model and the NATO baseline requirements for resilience

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Abstract: Finnish national preparedness is conceptualized in the comprehensive security model (CSM). It presents a cooperation model for Finnish security stakeholders: officials, non-governmental organizations (NGOs), companies, and citizens. The concept of resilience is sparingly used in Finnish strategy documents but is a major objective for North Atlantic Treaty Organization (NATO), which Finland joined in 2023. NATO sets the minimum criteria for national preparedness in seven NATO baseline requirements (NBRs) of resilience. NATO considers resilience a national responsibility. This paper investigates to what extent the Finnish CSM covers the NBRs, and which stakeholders are entrusted with safeguarding them. A framework utilizing the seven NBRs and three stakeholder levels is developed. Recent Finnish Government level documents are used as the main source of data for the study, supplemented with expert interviews. The results suggest that the CSM covers all the NBRs. The CSM is also broader in scope than the NBRs. The two NBR categories, *ability to deal with large-scale population movements* and *resilient civilian transportation systems*, are not covered regarding the individual citizens' level, but this is not deemed to be a major problem.

Keywords: Finnish comprehensive security model, NATO, baseline requirements, resilience

1 Introduction

The Russian war of aggression against Ukraine in 2022 triggered Finland together with Sweden to apply for the

North Atlantic Treaty Organization (NATO) membership. The countries are perceived to be militarily a good fit for the alliance (see for example Nokkala 2022) and most in the alliance welcomed their application. Also, the civil preparedness of Finland is considered to be exemplary among other Nordic countries (Pursiainen 2018).

The national preparedness of Finland is conceptualized in the comprehensive security model (CSM), which is a 'cooperation-based preparedness model' (Government of Finland 2017, p. 7). It presents a cooperation model for security actors: government and local level officials, non-governmental organizations (NGOs), private companies, and individual citizens. In the strategy, resilience as a concept is used fairly narrowly mainly to refer to individual psychological resources to cope with distress (Aaltola et al. 2016; Hyvönen and Juntunen 2021). Beyond that, resilience has not been defined in a collectively accepted way, and the concept is rarely used in Finnish government strategies and resolution papers.

However, this is not the case for the NATO community where resilience has become a major objective. The community reached a Commitment to Enhance Resilience in 2016, published a Strengthened Resilience Commitment in 2021, and established the Resilience Committee in 2022 (NATO 2016, 2021a, 2022). Seven NATO baseline requirements (NBRs) of resilience have been formed to guide the NATO member states (NATO 2021a).

It is unclear how well the Finnish CSM fits in the NATO community's perception of resilience. In the context of NATO, the concept of resilience is used in a much broader sense than in Finland, and the concept incorporates areas of security such as security of supply, military deterrence, and critical infrastructure protection (NATO 2016, 2021a; Jackson 2019). As Finland is a recent member of the NATO community (NATO 2023a) and the 'civil preparedness is above all a national responsibility' (NATO 2016, para. 4), it is essential to identify how the resilience objectives differ between Finland and the NATO community.

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The aim of the present paper is to discover how well the current objectives of the Finnish CSM respond to the NATO's resilience objectives. As the Finnish CSM is in essence a cooperation model, the other major research interest is in identifying which level of security actors – national, organizational, or individual – is deemed responsible for each of the NBRs in the Finnish CSM. This paper utilizes Finnish Government level documents as its main source of data. This includes reports and strategy papers that are adopted by one or more ministries and on most occasions scrutinized by the parliament of Finland. Lower-level administrative documents were used when necessary. Additionally, expert interviews were conducted to gain additional information regarding areas that were not covered in the documents analysed during the first two phases of the study. This paper is structured as follows: the second section, *Background* presents NATO's resilience requirements and the Finnish CSM. The third section presents the methods and the fourth section the results and discussion. Fifth and last section concludes.

2 Background

The concept of resilience started its still ongoing spread over the boundaries of scientific fields in the early 1970s (Ponomarov and Holcomb 2009). Resilience was conceptually adapted to the fields of security studies and supply chain management studies comparatively late in the early 2010s (Bourbeau 2013; Hohenstein et al. 2015). While traditional security strategies emphasise preventing threats before they occur (Juntunen and Virta 2019), resilience aims to limit the impact of a threat and minimise the effects on society (Fjäder 2014; Juntunen and Hyvönen 2020). Similarly, while the traditional supply chain risk management strategies aimed to address and prevent each risk independently and beforehand, resilience emphasises adapting to the risks (Pettit et al. 2019).

Especially, the scholarship for security studies has received resilience dichotomously. The concept has been criticised for its ambiguity (Bourbeau 2013; Joseph 2013). From this perspective, the concept 'does not mean much' and lacks any deeper meaning (Joseph 2013, p. 51). Also, resilience policies' aim has been perceived to be decreasing the government's responsibility in the sphere of security and to shift it – along with the costs – to individuals and communities (Walker and Cooper 2011; Joseph 2013). However, this flexibility and the prospect of cutting costs has also been seen as a necessity for governments to be

able to tackle the multitude of threats in modern society (Fjäder 2014; Juntunen and Virta 2019).

Regardless of the perspective, resilience is deemed to be a flexible concept and has been identified as a boundary object (Brand and Jax 2007). This means that the concept can help communicate across different disciplines as it offers 'shared vocabulary', but the definition of the concept can vary due to its vagueness (Brand and Jax 2007). Furthermore, resilience is very context and perspective dependent (Bourbeau 2013), and without the historical background, it becomes a 'semi-empty signifier' (Hyvönen and Juntunen 2021) without much practical use. Thus, the NATO perspective of resilience and the Finnish preparedness model are presented next to provide the requisite context.

2.1 NATO perspective on resilience – NATO baseline requirements for resilience

After the Cold War, the NATO community redefined its mission. The war against terror and similar contexts of asymmetric warfare started to guide the defence and strategy planning. NATO members scaled down their defence budgets and preparedness against traditional war (NATO 2021b). A major part of the infrastructure critical to the armed forces was privatised (Meyer-Minnemann 2016). This period of the so called 'peace dividend' came to an end when Russia invaded Crimea in 2014 (Berglof 2015: 294), and it was clear that NATO was not ready for such hybrid warfare, let alone a traditional war. It can be argued that adapting the concept of resilience to the NATO community aims to oppose such hybrid threats and indicates a return to a whole-of-society approach (Meyer-Minnemann 2016). NATO defines resilience as 'the individual and collective capacity to prepare for, resist, respond to and quickly recover from shocks and disruptions' (NATO 2023b). The aim of resilience is not to prevent a risk from happening but rather to ensure 'the continuity of the Alliance's activities' (NATO 2023b). By increasing resilience, NATO aims to respond to a complexity of threats, not just military ones. COVID-19, cyberthreats, hybrid-warfare, and climate change are named as possible threats to the alliance (NATO 2021b). It must be noted that although NATO has defined resilience (NATO 2023b), the concept's relation to other concepts such as preparedness is not explicitly or clearly stated. Some NATO sources seem to state that (civil) preparedness enhances resilience (NATO 2021b). However, other sources suggest that the NATO baseline requirements (NBRs) of resilience reflect 'the three core

functions of civil preparedness' (NATO 2023b), which further suggests that the resilience enhances preparedness. Thus, in the NATO context, the concepts of resilience and preparedness are used on many occasions somewhat interchangeably, and there does not seem to be a clear hierarchical relation between the concepts.

Four stakeholder groups are identified in civil preparedness: NATO itself, the member countries, private sector, and the population. The member country is responsible for establishing 'the legislative and institutional framework' for the crisis response and has to 'develop emergency plans and early warning tools' (NATO 2021b, p. 4). Ensuring adequate funding and keeping up emergency stocks are named as national responsibilities (ibid.), as well as making decisions and communicating them effectively to the population. The private sector is deemed responsible for the functioning supply chains of 'essential goods' and 'operation of key infrastructure' (ibid, p. 5). It is also evident that NATO would use private resources for communications and transport in a crisis (Lasconjarias 2017). The civilian population must be able to cope with the crisis. This includes training, individual 'food stocks', and 'respect of the measures set out by authorities' (NATO 2021b, p. 6).

NATO has established seven baseline requirements (NBR) for resilience, which 'provide a comprehensive framework to support the effective enablement of our armed forces and of NATO's three core tasks' (NATO 2021a). The NBRs were first agreed upon by the NATO defence ministers and later by the heads of the states and governments of NATO (Meyer-Minnemann 2016). The baseline requirements are as follows:

- 1) assured continuity of government and critical government services
- 2) resilient energy supplies
- 3) ability to deal effectively with uncontrolled movement of people
- 4) resilient food and water resources
- 5) ability to deal with mass casualties
- 6) resilient civil communication systems
- 7) resilient civil transportation systems (NATO 2016, 2021b).

More detailed descriptions of the NBRs are presented in Appendix 1. The NBRs can be seen as minimum criteria for the NATO member states, and they are constantly revised. However, the seven general categories have remained similar. Guidelines and evaluation criteria for the requirements are published by the committees under the Resilience Committee (NATO 2022). The detailed guidelines of the operationalisation and evaluation

criteria of the NBR's have been declared NATO unclassified. The documents being NATO unclassified includes that they are released to the NATO community and partner countries (Jonsson and Veibäck 2020) but are not publicly available.

2.2 Finnish CSM

The modern history of Finnish preparedness can be understood to comprise of three phases: total defence, comprehensive defence, and comprehensive security (Valtonen and Branders 2021). The phases reflect the Finnish threat perceptions of their time. The first phase, the phase of *total defence*, starts from the 1950s and includes the notion that as Finland was located next to the Soviet Union and had, after gaining its independence in 1917, already fought two major wars with it, all the resources of the society were needed to be prepared to defend itself (Heikka 2005). This included the national economy, communication systems, medical support, and civil preparedness that were all included in the defence planning (Heikka 2005; Valtonen and Branders 2021). The second phase, *comprehensive defence*, started in the 1990s as the end of the Cold War meant that the threat perceptions were updated and Finland among other nations moved to a broader notion of threat perceptions. However, while many European countries significantly reduced their capabilities to fight traditional wars by, for example, abolishing large, reserve-based armed forces, Finland preserved much of the old approach. However, the Finnish threat perceptions were updated to include broad security challenges, for example, international terrorism and crime (Riipinen 2008). Over time, the emergence of hybrid threats and the constantly broadening threat perceptions started the third phase called *comprehensive security*. It included new sectors of administration and actors of the society (Government of Finland 2017) to the security strategy, and the cooperation of the authorities became a major aspect of the strategy.

The CSM is a Finnish model of preparedness that is based on an all-of-society approach and broad notion of security (Government of Finland 2017). It aims to secure the 'vital functions of society' (Government of Finland 2017, p. 5). The main document describing the CSM is The Security Strategy for Society from 2017 (ibid.). The strategy presents seven vital functions of the society, which are to be secured through the cooperation of 'security actors' (Government of Finland 2017, p. 7). The vital functions for society that must be maintained in every situation are presented in Table 1.

Tab. 1: The vital functions in the security strategy for society (Government of Finland 2017)

Vital function	Main objectives
(1) Leadership	Leadership ‘provides the basis for safeguarding all other functions’. It includes the requirements of effective leadership, for example: ‘clear lines of authority’, ‘a situation picture’, ‘crisis communications’, ‘continuity management’, and ‘cooperation’. (p. 15).
(2) International and EU activities	The vital function ‘[p]roviding a basis for international cooperation and participation in crisis prevention’ is deemed important in ‘safeguarding of other vital functions’ and includes fighting global threats such as ‘uncontrolled migration, pandemics, terrorism and international crime’. (p. 17).
(3) Defence capability	The main objective is to ‘establish deterrence against the use of military force against Finland’ and the preparedness needed for this is developed ‘as part of the concept for comprehensive security in a joint effort by the authorities, business operators, organisations and citizens’. (p. 18).
(4) Internal security	The vital function aims to ‘prevent and counter criminal activities [...] prevent accidents, environmental damage and other similar incidents and threats. It also allows Finland to successfully manage the consequences of the above activities, threats and incidents’. (p. 19).
(5) Economy, infrastructure, and security of supply	The vital function safeguards ‘the funding and other resources for vital functions’. The objects to be safeguarded include Finnish and ‘international infrastructure’, organizations, constructs and ‘processes’ that are ‘essential for vital functions’. (p. 20).
(6) Functional capacity of the population and services	The vital function aims to maintain ‘key basic services’ to help ‘ensure independent living in all situations’. This includes ‘social welfare’ and medical services. (p. 22).
(7) Psychological resilience	The vital function means ‘the ability of individuals, communities, society and the nation to withstand the pressures arising from crisis situations and to recover from their impacts’. This includes ‘will to defend country’s independence’ and is strengthened among other things by high ‘trust in the authorities’ and preventing social divisions among citizens. (p. 22–23).

Cooperation of security actors is a major aspect of the CSM (Valtonen and Branders 2021). The Security Strategy for Society identifies ‘authorities, business operators, organisations and citizens’ as security actors (Government of Finland 2017, p. 7). *Authorities* are responsible for the ‘drafting of preparedness legislation, steering and development as well as in the implementation of the preparedness measures’ (ibid, p. 7). The strategy names central government, authorities, municipalities, universities, and research institutions as sub-categories of the category of authorities. *Businesses* ‘play a key role in [...] the functioning of the economy and the infrastructure’ (ibid, p. 7–8), and their role in providing vital services, for example health care services, is acknowledged. In CSM, the *organisations* are considered as a group consisting of NGOs and, for example, religious communities. Their role is to ‘provide services, coordinate the participation of volunteers in the activities supporting authorities’ (ibid, p. 8), and the group is also labelled as organisations and other bodies (ibid, p. 11). Individual *citizens* are considered important security actors and their ‘knowledge and skills [...] as their security-oriented attitude form the basis for a resilient society’ (ibid, p. 8).

The understanding of resilience as a concept is much narrower in the Finnish than in the Anglo-Saxon context (Hyvönen and Juntunen 2021) and thus most of NATO. A glance at the Finnish security-related government documents reveals that resilience as a concept is used to

describe individual capabilities to cope with distress. The concept of resilience can even be called to be domesticated into an ‘auxiliary role’ in the CSM (Hyvönen and Juntunen 2021, p. 171). The concepts used more often in the Finnish strategies than resilience involve *preparedness* and *security of supply*. According to the Security Strategy for Society:

“[p]reparedness means activities ensuring that all tasks can continue with minimum interruptions and that the required exceptional measures can be performed during disruptions occurring in normal conditions and during emergencies” (Government of Finland 2017, p. 9).

The understanding of preparedness is arguably somewhat similar to NATO’s description because the aim of preparedness is not to prevent disruption but to adapt to it. The Finnish concept of *security of supply* covers a much broader field than the name would suggest. The concept means:

“preparedness for crises and disruptions as well as continuity management so that the production, services and infrastructure necessary for the subsistence of the population, the economy and national defence can be secured during serious disruptions and in emergency conditions” (Ministry of Economic Affairs and Employment 2022, p. 5).

As noted by Aaltola et al. (2016, p. 79), the concept is problematic as internationally it is used mainly to refer

to material supplies and usually in the context of military and energy sector.

Due to the challenges related especially to the concept of security of supply, there has been some discussion whether the concept of resilience should be used more broadly in Finnish security discourse, but this has not been unreserved. For example, Aaltola et al. (2016) argued that resilience has to be well defined before implementing it. Also, it is argued that resilience can mean moving from preventive ‘producing of security’ to ‘reactive recovery’ or even ‘survival’ (ibid, p. 80).

A government report on the security of supply (Ministry of Economic Affairs and Employment 2022, p. 13) suggests on a general level that the CSM responds well to the requirements set by the seven NBRs and that the CSM covers more areas than the NBRs. Next, the methods for testing this claim are presented.

3 Methods

This paper employs three layers of data and is formed of three corresponding parts. The first part (*First Part of the Document Analysis*) consists of document analysis of government level documents. The second part (*Second Part of the Document Analysis*) concentrates on the NBR areas for which no information was found in the first part of the document analysis and consists of lower-level document analysis. The third part (*The Expert Interviews*) consists of complementary expert interviews. The scope of part 3 was decided on the grounds of the document analysis, and the rationale was to find experts’ views for the missing NBR areas. Thus, the scope of the research is narrower in part 2 and narrowest in part 3 in comparison to part 1. The paper follows the framework analysis method presented by Ritchie and Spencer (2002) and demonstrated with concrete examples by Goldsmith (2021).

The *framework* for the empirical part of the present study consisted of the seven NBRs and three levels of actors: national, organisational, and individual. The national level actors are deemed as the Finnish central authorities, for example, ministries and other national government entities. The organisational level consists of businesses and NGOs. The individual level consists of individual citizens and households.

3.1 First part of the document analysis

The documents reviewed in the first part are Finnish official documents regarding comprehensive security. The

analysis focuses on the most recent government level documents that were published between 2013 and 2022. The government level is understood as resolutions and reports accepted by ministers or ministries but not for example study group reports published by the government. Thus, the document material is deemed to reflect the official interpretation of the phenomena studied.

The documents included in the first part are the following:

- Ministry for Foreign Affairs (2022) Government report on changes in the security environment.
- Ministry of Economic Affairs and Employment (2022) Valtioneuvoston huoltovarmuusselonteko (Government report on the Security of Supply).
- Ministry of the Interior (2022) National Counter-Terrorism Strategy 2022–2025.
- Government of Finland (2021a) Government’s Defence Report.
- Government of Finland (2021b) Valtioneuvoston selonteko tiedustelulainsäädännöstä (Government report on intelligence legislation).
- Ministry of the Interior (2021) Government Report on Internal Security.
- Ministry for Foreign Affairs (2020) Government Report on Finnish Foreign and Security Policy.
- The Security Committee (2019) Finland’s Cyber Security Strategy.
- Ministry of Economic Affairs and Employment (2018) Valtioneuvoston päätös huoltovarmuuden tavoitteista (Government resolution on the objectives of the security of supply).
- Ministry of the Interior (2018) National Risk Assessment 2018.
- Government of Finland (2017) The Security Strategy for Society - Government Resolution.
- Ministry of the Interior (2017) Hyvä elämä – turvallinen arki, Valtioneuvoston periaatepäätös sisäisen turvallisuuden strategiasta (Government Resolution on the Internal Security).

Documents regarding European Union resilience and Finnish international relations were omitted because they are also approved and implemented by nations other than Finland, and the present paper focuses on comparing the NATO and the Finnish models. However, it must be noted that the EU and NATO have recently started cooperating on building resilience (European Commission 2023) and EU resilience legislation, and also, most importantly, the Critical Entities Resilience directive set requirements for Finnish preparedness. English versions of the documents were used where available, and

the references refer to the English versions. Finnish versions of the documents were used if needed to improve the understanding of the use of definitions for example. The selection of all relevant documents was ensured by two means: by examining for cross references and by the expert interviews. The documents were examined for references of other government level documents, and relevant reference documents were included in the analysis. Also, the interviewees were asked to name additional documents if necessary.

The selected sources were systematically reviewed and analysed. The analysis did not aim to explicitly find the same phrases as used in the NBRs but to categorise whether similar objectives are tried to be achieved within the Finnish strategies. If the analysed document suggested which of the actors are responsible for a certain NBR category, this information was recorded.

The instances of NBRs in the Finnish materials were compiled into spreadsheets. The instances were charted by assigning a note to each of them. This was done according to the level of the sign of the NBR: was it merely mentioned (in a list with other concepts for example), was it mentioned individually (in its own sentence for example), or was it mentioned in more detail (several sentences or a paragraph)? Also, a note was made on the explicit or implicit nature of the sign of NBR. If the sign was interpreted to be unambiguously reflecting an NBR, it was considered explicit. However, if the sign was related to or partly overlapping with an NBR, but not at the core of it, the sign was considered implicit. After all the 12 documents were indexed, the information was charted to identify which NBR levels were not covered by the government level documents.

3.2 Second part of the document analysis

The second empirical part concentrated on the NBR areas for which no information was found in the first part of the document analysis. It consisted of analysis of lower-level official documents. This included guidelines published by ministries or major national Finnish NGOs for example. The documents used had to, however, reflect the public authorities and the Finnish comprehensive security as a model. Therefore, for example, documents published by local NGOs were not used. The search for sources was iterative in nature. This means that when a NBR was covered in previously analysed documents, no additional sources were sought for more information on this particular NBR, and the emphasis was moved to the NBRs not yet covered.

3.3 The expert interviews

The interviews had two objectives: gathering data for the areas not yet covered in the document analysis and triangulation to validate the results. The main aim of the expert interviews was to find out if a source had been unnoticed regarding the NBR areas still not covered after the two document analysis parts and if there was a justified reason for this.

The experts interviewed were identified by locating the authority responsible for the NBR area and contacting the department responsible for preparedness in that area. The responsible departments were allowed to name their best experts to be interviewed. Four interviews (Respondents 2–5) were conducted regarding the two missing NBR areas, two for each. One additional interview was conducted to gain a view from outside the ‘focus NBR’ areas (Respondent 1). The interviews were semi-structured. The NBRs defined the frames for the overall interest area of the interviews, but otherwise, the questions were open-ended in nature. While saturation was not the goal for the round of expert interviews, the data obtained from the interviews showed considerable overlap regarding key issues. As such, this round of expert interviews was satisfactory to address the limited gaps remaining after the two document analysis rounds.

4 Results and Discussion

The charting of the first part of the document analysis revealed that the NBRs are well covered regarding the national authorities’ level and the private sector or NGO level.

The most comprehensive of the documents studied is the Security Strategy for Society (Government of Finland 2017), which alone covered explicitly and in detail all the national and private/NGO levels of the seven NBRs. The two other most comprehensive documents are the Government report on the Security of Supply (Ministry of Economic Affairs and Employment 2022), and Government resolution on the objectives of the security of supply (Ministry of Economic Affairs and Employment 2018).

The level of individual citizens is well covered only regarding the NBR category of resilient food and water supply and partly covered in resilient civil communications services. Therefore, a second part of the document analysis was conducted regarding the six remaining NBR categories.

An NBR was deemed to be covered on the individual level by the lower-level documents if concrete instructions

for individuals were identified in the sources. The instructions were deemed concrete if they clearly stated what the individual should do in an emergency regarding a NBR and how the individual could prepare for it respectively. The second part of the document analysis revealed that five of the NBRs are covered at the individual level. Table 2 presents the coverage of the NBRs by the Finnish Government level and lower-level documents.

The two NBRs not covered are *the ability to deal with large-scale population movements* and *resilient civilian transportation systems*. Therefore, expert interviews were conducted regarding these two NBRs. The next sub-sections present the results structured according to the NBRs.

4.1 Continuity of government

The *continuity of government* is referred to as decision-making capacity and communications in the Finnish CSM. Both aspects are well expressed in the national and private/NGO level in the government level documents.

Decision-making capacity is mentioned explicitly in detail in the Security Strategy for Society (Government of Finland 2017) under the vital function of Leadership. The general guidelines of cooperation of the ‘Government, Parliament and the President of the Republic’ (ibid, p. 30) in an emergency are presented, and the Government Situation Centre is tasked with gathering and analysing ‘information on the security situation as well as on incidents and threats that endanger vital functions of society’ to support decision making (ibid, p. 31).

Communication is clearly emphasised in all the sources that considered leadership. Communications were presented as two separate strategic tasks in the Security Strategy for Society, which states that: ‘[r]eliable, effective and correctly timed internal and external communications are an essential part of the management of incidents and emergencies’ (Government of Finland 2017,

p. 32) and that communications ‘strengthen citizens’ resilience during incidents and emergencies’ (ibid, p. 89).

The businesses and NGOs are seen as an important part of communications. It was deemed important that the media operators can ‘produce and share reliable and up-to-date information’ (Ministry for Foreign Affairs 2022), and the need to improve strategic security communications amongst authorities, private sector, and NGOs was presented (Ministry of the Interior 2017, p. 39). However, the organisations are not deemed just one-way medium of communication but an important medium of detecting the morale of the population by communicating ‘citizens’ feelings to the authorities’ (Government of Finland 2017, p. 89). The individuals are instructed to have a back-up communication system, for example, a battery radio, and that fighting against information operations requires source criticism and only trusting reliable sources (The Finnish National Rescue Association 2023a).

4.2 Resilient energy supplies

The NBR of *resilient energy supplies* is well covered in the government level documents regarding authorities and businesses. For the individual level, lower-level documents cover the NBR. It is stated (Government of Finland 2017, p. 21) that ‘[d]omestic solutions and international cooperation will ensure continuous supply of energy’ and it is highlighted that the private sector is in a leading role in the energy preparedness and ‘the preparedness measures taken by the public sector are of supplementary nature’ (ibid, p. 64).

The Government Resolution on the Objectives of the Security of Supply states that the ‘oil refining capabilities’ must be maintained at a sufficient level to ‘support the energy security of supply’ (Ministry of Economic Affairs and Employment 2018, p. section 6) and that the state

Tab. 2: Coverage of Finnish Government level (G) and lower-level (L) documents of the NBRs

NBR	Authorities	Private/NGO	Individual
Continuity of Government	G	G	L
Resilient Energy Supplies	G	G	L
Resilient Civil Communications Services	G	G	(G), L
Resilient Food and Water Supply	G	G	G, L
Ability to Deal with Large-Scale Population Movements	G	G	
Ability to Deal with Mass Casualties	G	G	L
Resilient Civilian Transportation Systems	G	G	

G, the area is covered by Government level documents; (G), the area is partly covered by the Government level documents; L, the area is covered by the lower-level documents; NGO, non-governmental organizations.

must have a ‘share majority and power to decide’ in the national grid and natural gas transmission network companies. Also, a national stock of 5 months average consumption of fuels, coal, oil products and natural gas must be maintained by the authorities (Ministry of Economic Affairs and Employment 2022, p. 34–38).

The most detailed objectives of preparedness are given to the energy companies. The Government Resolution on the Objectives of the Security of Supply states that the energy producers must aim to create a communication network that would function for 24 h in a power outage amongst themselves. District heating companies must consider ‘major disruptions and national emergencies’ in their preparedness planning by reserving ‘emergency stocks and preparing for power outages’ (Ministry of Economic Affairs and Employment 2018, section 6). The importer companies and energy suppliers, for example, must maintain an emergency stock of 2–3 months of the fuels used (Ministry of Economic Affairs and Employment 2022, p. 33). The network companies are also tasked to assure the energy supply by ‘underground cabling’ of the networks and ‘building more circular connections’ (Government of Finland 2017, p. 64). It can be argued that this is exactly what the NATO requirements demand in the form of: ‘back-up plans and power grids’ (NATO 2021b, p. 8).

On the individual level, the NBR is covered by instructions on how to cope with a power outage. The 72 h concept provides with a list of supplies that should be kept at home in case of a power outage (The Finnish National Rescue Association 2023a).

4.3 Resilient civil communications services

Resilient civil communications services is the most comprehensively covered NBR in the CSM’s national level. The Security Strategy for Society (Government of Finland 2017, p. 59–60) aims to guarantee the information services needed by the authorities to maintain situational awareness and decision-making capability. Also, ensuring ‘availability of critical electronic communications services’ (ibid, p. 61) for the whole society is presented as an objective. The private service providers are tasked to ensure that the operations continue with ‘minimum interruptions’ during the crisis (ibid, p. 61). Among other cooperating authorities, Ministry of Defence and the Finnish Defence Forces are mentioned, and thus, it can be argued that the civilian networks can also be used by the military (Government of Finland 2017, p. 61) as required by NATO (NATO 2016, para. 4).

The private businesses are presented in the role of service providers regarding the civil communications, and the cooperation is based on agreements between the authorities and the companies (Government of Finland 2017). Their role is especially in keeping the systems secure so that ‘their control systems for energy supply, logistics chains or other critical infrastructure cannot be breached directly through an open network’ (Ministry for Foreign Affairs 2022, p. 33). The role of the financial service providers is emphasised, and it is stated that disruptions in such services ‘might endanger the continuation of the functions vital to society’ (Government of Finland 2017, p. 58).

Individual citizens are explicitly mentioned in detail in the Government report on the security of supply (Ministry of Economic Affairs and Employment 2022), which argues for attaching cyber security teaching to all education levels and states that the consumers’ electronic devices should be well guarded against malware as the devices can otherwise be used in attacks against critical objects. In lower-level documents, the civil communication systems are considered, and it is deemed important to stay safe online by using ‘firewalls, antivirus software and website certificates’ and having a compensatory means of communications available in case of an emergency – mainly a battery radio (The Finnish National Rescue Association 2023a).

4.4 Resilient food and water supplies

The NBR of *resilient food and water supplies* is covered explicitly on all three levels by the government level documents. The security strategy for society includes three strategic tasks that cover the NBR: ‘Safeguarding the water supply’ (Government of Finland 2017, p. 75), which includes ‘steering and monitoring’ activities for the authorities; ‘Safeguarding food supply’ (ibid, p. 79), which involves for example monitoring; and safety stocks, ensuring the supply of daily consumer goods (ibid, p. 80).

The importance of safety stocks is also mentioned in the Government resolution on the objectives of the security of supply (Ministry of Economic Affairs and Employment 2018, section 7.4) that states that a safety stock of grain sufficient for at least 6 month average consumption is held in state’s stocks. Measures to safeguard water supplies include ‘securing the supply of electricity, chemicals and components’ and also ‘enhancing cyber security and preparedness against disruptions’ (Ministry of Economic Affairs and Employment 2022, p. 37).

The level of private businesses and NGOs is covered by two government level documents. The security

strategy for society notes the importance of functioning food supply chains: ‘[t]he functioning of the order-delivery chain in digital and physical environments (including foreign trade) is ensured in cooperation with business operators’ (Government of Finland 2017, p. 79). The water plant operators are deemed responsible for disruption preparedness including ‘physical and cyber security’, and they are responsible for making necessary ‘infrastructure investments’ to safeguard the reliability of the systems (Ministry of Economic Affairs and Employment 2018, section 7). The NATO NBR of resilient food and water supply aims to safeguard the supplies from ‘disruption or sabotage’ (NATO 2021b, p. 8). Therefore, including the physical and cyber security aspect to the food and water supplies helps covering the NATO requirements.

Resilient water and food supplies are the only NBR well covered with regard to individuals in the government level documents. This is due to the fact that the 72 h concept’s household preparedness instructions are presented (Ministry of the Interior 2017; Ministry of Economic Affairs and Employment 2022, p. 24).

4.5 Resilient civilian transportation systems

The NBR of *resilient civilian transportation systems* is considered in several strategic tasks in the Security strategy for society. The strategy aims to ensure the functionality of the ‘critical transport and communications networks’, which include for example: ‘key transport hubs, such as ports, terminals and airports as well as critical transport routes’ (Government of Finland 2017, p. 67). Also, the ‘National Emergency Supply Agency maintains stockpiles of imported fuels so that Finland has, on average, reserves of imported fuels for 5 months’ normal consumption’ (ibid, p. 63).

The level of private companies and NGOs is represented mainly regarding emergency stocks and partnership agreements. Likewise, regarding food supplies and energy supplies, the transportation is safeguarded by ‘obligatory stockpiling of imported fuels by the companies’ (Government of Finland 2017, p. 63). This is a rare occasion of regulation-based compulsory preparedness of the companies because most of the preparedness measures by companies and NGOs are based on voluntary participation. Together the National Emergency Supply Agency and the importing companies maintain a stockpile of imported fuels that satisfies the demand for 5 months of normal consumption (ibid.).

Private companies and to some extent the NGOs are deemed important partners especially from the military’s point of view. The Finnish Defence Force’s logistics is supported by ‘cooperation partners, both in the private and public sector’, and the cooperation has been deepened by ‘logistics exercises together, developed partnership management mechanisms and partner companies’ preparedness planning, and the creation of a situational picture’ (Government of Finland 2021a, p. 24).

Mentions of the individual level cannot be found in government level or lower-level documents. Only a minor implicit remark was found regarding reserving fuel for transportation in the lower-level documents: ‘If you drive a car, keep the tank at least half full or a reserve fuel container available’ (The Finnish National Rescue Association 2023b). This is not deemed a problem because extending obligatory measures to citizens was deemed both unnecessary and not possible according to current legislation (Respondent 3). Thus, individual’s preparedness is based on voluntarism: ‘[The authorities] aim to give advice [to the citizens] but it [the preparedness] is never the individual citizen’s responsibility. This means that you [the citizen] has the freedom to act on her own.’ (Respondent 3).

Also, according to the respondents, the Finnish authorities have been utilising the information obtained in the Partnership for Peace cooperation with NATO from the beginning of the cooperation in 1990s (Respondent 3). Since the CSM was considered to cover the NBRs in all parts (Respondents 2 and 3), the substance in the NBRs was not considered a problem.

4.6 Large-scale population movements

Finnish authorities consider that the preparedness for *large-scale population movements* consists of two main aspects: large-scale movement of migrants over the border and large-scale evacuation of Finnish residents (Respondent 4). The Security strategy for society covers the evacuation of Finnish residents by the strategic task of ensuring proper housing, which consist of ‘[l]egislative and administrative preparedness to resettle large numbers of people in an emergency’ (Government of Finland 2017, p. 74).

The NGOs have an important role in the preparedness for large-scale population movements. The Finnish Red Cross is mentioned in multiple occasions and has an agreement with the authorities ‘on support services concerning the reception of asylum seekers and on the maintenance of a continuous reception preparedness’ (Government of

Finland 2017, p. 49). Its and other NGOs' and private companies' role in the large-scale immigration of 2015 was deemed important in several interviews: 'Companies and NGOs, such as the Finnish Red Cross, operate a major part of our immigrant reception centers.' (Respondent 4).

The individual citizens were not included in the government level documents, and only minor implicit remarks were found in the lower-level documents regarding voluntarily accommodating immigrants at home (for example: Ministry of the Interior n.d.). The experts did not see this as a problem, and it was deemed that the NGOs were the right means to organise the individuals' work (Respondent 4).

4.7 Ability to deal with mass casualties

The *ability to deal with mass casualties* is well covered by several strategic tasks under three vital functions. This includes maintaining emergency response centres and rescue services in order to 'contribute to the preparedness of society for incidents and catastrophes in all circumstances' (Government of Finland 2017, p. 47). The material preparedness is guaranteed by '[o]bligatory and emergency stockpiles of pharmaceuticals as well as emergency stockpiles of medical equipment and supplies' (ibid, p. 69). It is also noted that 'regarding the use of the (medical) materials and their procurement, also the requirements of cooperation with the Finnish Defence Forces have to be considered' (Ministry of Economic Affairs and Employment 2022, p. 42).

The level of NGOs and private companies is utilised in two aspects: stock-piling and voluntary preparedness. Pharmaceutical companies are a rare sector in Finland that is under legal obligation of preparedness to for example 'stockpile pharmaceutical substances and products' (Government of Finland 2017, p. 78).

The volunteers are stated to be in an 'important role' in 'rescue operations, in tasks supporting the authorities and in supporting independent preparedness' (Government of Finland 2017, p. 19). The volunteer fire brigades offer an illustrative example as they participate in approximately 60% of the rescue tasks (Ministry of the Interior 2021, p. 23).

The individuals' level is covered in the lower-level documents in three main ways: readiness to shelter indoors, personal medical stockpile, and training first aid skills. The readiness to shelter indoors is mentioned in the 72 h concept and is an important part of preparedness against chemical, biological, radiological, and nuclear threats. Most civil defence shelters are in residential buildings' basements (The Finnish National Rescue

Association 2023a). It is advisable to have the 'necessary drugs, first aid supplies and iodine tablets' at home as part of the home emergency food supply (Finnish Red Cross 2023).

5 Discussion

Overall, the NBRs are well covered by the Finnish CSM on the national and NGOs and private companies' level. The Finnish CSM can be deemed to be much broader than the NBRs. Regarding five of the seven NBRs, individuals were also well covered, and the two not being covered were not considered a problem in the expert interviews as individuals mainly have a minor contribution, usually on a voluntary basis. Table 3 presents the main aspects of the NBRs in the CSM.

Three main remarks can be made on the differences between CSM and the NBRs: the importance of volunteer cooperation, the individuals' participation, and the somewhat different scope and timeframe of the CSM and NBRs.

First, the Finnish CSM is foremost a volunteer cooperation model. This is highlighted in research literature where the cooperation of the authorities and other actors is defined as a major aspect of the CSM (Valtonen and Branders 2021), and the empirical findings support this. The Finnish model builds on the idea that cooperation is in most parts based on volunteerism regarding both the NGO/private companies' level and the individuals. In some occasions, legal obligations are enforced upon actors other than authorities, but volunteerism is mostly seen as a positive part of the model. Although mentioned in the NATO documents (NATO 2021b), the cooperation of different levels is much more integrated into the Finnish model and mentioned throughout the strategy documents. It can be argued that building on a distributed network with many different involved businesses and organisations can help to enhance overall resilience. However, this also comes with its own challenges in the form of for instance communication problems, competition for scarce resources, and changing business situations. Thus, to keep the volunteer parties involved requires constant cooperation and monitoring, which necessitates two-way communications and at least some degree of data sharing to allow parties to contribute to resilience and preparedness most effectively.

Second, individuals are seen as active actors in the Finnish model. Their involvement is organised through the multitude of organisations. The objectives for individuals rather aim to maintain the civilian connections and functions because this enhances the probability of the

Tab. 3: The main aspects of the NBRs in the CSM

NBR	National	Private/NGO	Individual
Continuity of Government	<p>Authorities as main actors</p> <ul style="list-style-type: none"> • Compiling and analysing information • Alleviating fear and anxiety within the society • Building trust in authorities • Authorities should not enhance learned helplessness in society 	<p>NGOs and companies in auxiliary role and messengers</p> <ul style="list-style-type: none"> • Joint preparedness planning • NGOs as two-way messengers • Training and reliable communication 	<p>Individuals as ‘active survivors’ Instructions</p> <ul style="list-style-type: none"> • Back-up communication system such as battery radio • Strengthening ‘community spirit’
Resilient Energy Supplies	<p>Authorities in supplementary role</p> <ul style="list-style-type: none"> • Share majority to ensure power to decide (National grid and natural gas transmission networks) • National stock (fuels, coal, oil products, and natural gas) 	<p>Private sector in leading role</p> <ul style="list-style-type: none"> • Maintaining communication network • Underground cabling and building additional circular connections • Leasing of LNG terminal • Preparedness stock for district heating companies, energy importer companies, and energy suppliers 	<p>Individuals as ‘active survivors’ Instructions</p> <ul style="list-style-type: none"> • How to cope with power outage • How to save energy
Resilient Civil Communications Services	<p>Authorities as service users</p> <p>Information services (for situational awareness and decision-making capacity)</p>	<p>Private sector as service providers</p> <ul style="list-style-type: none"> • Ensuring critical services (government information services, payment transfer systems, and health care systems) • Reliability of transport and communication infrastructure (data communication links and cyber-security measures)+ 	<p>Individuals as ‘active actors’ Instructions</p> <ul style="list-style-type: none"> • How should electronic devices be protected • Battery radios as means for complementary communications
Resilient Food and Water Supplies	<p>Authorities as observers and stock keepers</p> <ul style="list-style-type: none"> • Monitoring (food and water safety and production situation) • Keeping safety stock (grains for 6 months) 	<p>Private sector as producers</p> <ul style="list-style-type: none"> • Ensuring supply (functioning of supply chain) • Preparedness action (physical security and cyber-security) 	<p>Individuals as ‘active survivors’ Instructions</p> <ul style="list-style-type: none"> • Home emergency food supply • 72 h concept
Resilient Civilian Transportation Systems	<p>Authorities as legislators and stock keepers</p> <ul style="list-style-type: none"> • Keeping safety stock (fuels for 5 months) 	<p>Private sector as service providers</p> <ul style="list-style-type: none"> • Services (military logistics partnerships and civilian logistics) • Preparedness (planning and joint exercises) 	<p>Individuals in a minor or non-existent role</p> <ul style="list-style-type: none"> • Voluntary: keep car tank at least half full
Ability to Deal with Large-Scale Population Movements	<p>Authorities as planners and service users</p> <ul style="list-style-type: none"> • Evacuation of Finnish residents (preparedness planning) • Large-scale population movements over border (preparedness planning) 	<p>Private sector as service providers</p> <ul style="list-style-type: none"> • Operating immigrant reception centres • Services for immigrants 	<p>Individuals in a minor or non-existent role</p> <ul style="list-style-type: none"> • Volunteer service coordinated by NGOs
Ability to Deal with Mass Casualties	<p>Authorities as service providers and stock keepers</p> <ul style="list-style-type: none"> • Emergency preparedness (emergency services) • Safety stocks (medical material also in cooperation with the Finnish Defence Forces) 	<p>Private sector as service providers and stock keepers</p> <ul style="list-style-type: none"> • Services (voluntary rescue services) • Safety stocks (Pharmaceuticals) 	<p>Individuals as ‘active survivors’ and active participants in the NGOs Instructions</p> <ul style="list-style-type: none"> • How to shelter indoors • First aid supplies • First aid skills

CSM, comprehensive security model; LNG, liquefied natural gas; NGO, non-governmental organizations.

society to function normally and helps maintain the continuity of government for instance. For some of the NBRs, it can also be argued that the individual's objective is to be self-sufficient enough not to burden society's resources, which are needed for the armed forces and other authorities. This applies especially to the NBRs of energy supplies, food and water, ability to deal with mass casualties, and resilient civilian transportation systems. Additionally, it must be noted that the individuals' involvement is not obligatory in any NATO source encountered. It is a Finnish choice to include the individuals.

Third, the scope and timeframe of the CSM and NBRs are different. The CSM covers a broader scope than the NBRs, which is understandable because the NBRs are mainly aimed to support military preparedness and the Finnish CSM, on the contrary, covers all-of-society threats, defence capability being only one of the seven vital functions. It can be summarised that '[c]omprehensive security is a hybrid solution to hybrid threats' (Respondent 1). The timeframe of preparedness is different because the CSM – at least its internal security parts – seems to have more emphasis on crisis prevention than the NBRs. This includes, for example, better access to health services (Ministry of the Interior 2021, p. 39), prevention of bullying (ibid, p. 40), and prevention of racism (ibid, p. 41), which are all considered to have a security aspect. This is both a matter of different timeframes and different scopes of the CSM and the NBRs. Prioritising prevention as a strategy for internal security makes sense as this is under the sphere of national influence. By contrast, issues of national resilience in the NATO context are often against external threats, which are more difficult to prevent. Therefore, it is understandable that the NATO requirements are more active measures against prevailing threats or at best aimed to build deterrence.

6 Conclusions

All the NBRs are generally covered in the Finnish CSM. The government level documents cover the national and private companies and the NGO level. Lower-level documents cover all but two NBRs on individual level. However, the corresponding ministries' experts did not consider this as a problem because the NBRs are covered on a higher level and individuals' contributions are considered to be fairly minor.

All three levels of actors are involved regarding most of the NBRs. The authorities work under the obligation of law and are involved in all seven NBRs. Their role involves for example preparedness coordination, maintaining

legislation, and upholding preparedness stocks in some cases. The NGOs and private companies are involved regarding all the NBRs. Their tasks include maintaining preparedness stocks, pre-contracting partnerships, and organising volunteer work. Most of the preparedness is voluntary, with the exceptions of the preparedness stock obligation regarding fuels and medicine for example. The individuals are advised to be self-sufficient during crisis and to cooperate with authorities per the NGOs. This is not a legal obligation, but the individuals are anyhow deemed to have their own responsibility especially in the beginning of a crisis.

The results of this paper point out that it can be considered whether individual citizens could have a broader preparedness role regarding the NBR ability to deal effectively with uncontrolled movement of people and resilient civil transportation systems. For the former, this could mean evacuation preparedness, for example, knowing roughly the planned evacuation area. For the latter, it could be considered, for example, should vehicle owners be notified on a larger scale, if their vehicles are reserved for crisis time service by the Finnish Defence Forces. However, the present model, where individuals' work is organised through NGOs can be deemed functional, and thus, all the NBRs might not have to have individual citizens as actors.

The major limitations of this paper are that it omitted the European Union perspective on resilience and did not consider whether the actual requirements of the NBRs are fulfilled – especially on the organisational and citizens' level. Thus, the results cannot be interpreted to suggest that the Finnish private businesses, for example, would have a sufficient level of preparedness. Rather it points out that the CSM aims to incorporate the businesses as actors in the model. These aspects open avenues for future research. Comparing the CSM and European Union resilience legislation and analysing the borders of NATO's and EU's resilience requirements would enhance understanding of the present state of societal resilience. Also, the present state of preparedness of organisations – including national and local NGOs – and citizens could be assessed to gain a better view of the level of Finnish resilience. Further research should include a more detailed analysis of businesses and organisations to gain sector-specific understanding of preparedness, both within Finland and in other NATO nations. While the present study focuses on the national level, for any nation to fully address the NBRs and NATO's broader objectives surely necessitates close collaboration with the private and third sector, and these interactions should be considered in future studies of this topic.

Lastly, it emerged in the interviews that the reception of the concept of resilience has been somewhat divided among the government experts. Different perceptions of the concept might affect the Finnish society's preparedness especially when bearing in mind the fast schedule of joining NATO. There is a risk that the concept of resilience would be adapted as an un-defined buzzword, and in the worst case, it could remove some time-honoured and well-established Finnish concepts that are currently used. Thus, a common understanding of resilience should be established if the concept of resilience is taken into more common use.

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Appendix

Appendix 1. Definitions of the NBRs

	NATO (2021b) Enhancing the Resilience of Allied Societies Through Civil Preparedness	Meyer-Minnemann (2016) Resilience and Alliance Security: The Warsaw Commitment to Enhance Resilience
Continuity of Government	‘An assured continuity of government and critical government services: for instance, the ability to make decisions, communicate them and enforce them in a crisis’ (p. 8) ‘Strengthen the democratic resilience of our societies’ (p. 17)	‘Continuity of Government: maintaining at all times the ability to make decisions, communicate them, and enforce them, and to provide essential government services to the population.’ (p. 92)
Resilient Energy Supplies	‘Resilient energy supplies: back-up plans and power grids’ (p. 8)	‘Resilient energy supplies: ensuring that energy supply, including national power grids, are secure and that nations maintain the necessary prioritization arrangements and redundancy.’ (p. 92)
Resilient Civil Communications Services	‘Resilient civil communications systems: ensuring that telecommunications and cyber networks function even under crisis conditions’ (p. 8) ‘reliable 5G network and efficient options to restore it if need be’ (p. 8)	‘Resilient Civil Communications Services: ensuring that telecommunications and cyber networks remain functional even in demanding conditions and under attacks.’ (p. 93)
Resilient Food and Water Supply	‘Resilient food and water resources: ensuring these supplies are safe from disruption or sabotage’ (p. 8)	‘Resilient Food and Water Supply: ensuring sufficient supplies are available to both civilians and the military, and safe from disruption of sabotage.’ (p. 93)
Ability to Deal with Large-Scale Population Movements	‘The ability to deal effectively with the uncontrolled movement of people.’ (p. 8)	‘Ability to Deal with Large Scale Population Movements and to be able to de-conflict such movements from potential national or Alliance military deployments and other requirements.’ (p. 93)
Ability to Deal with Mass Casualties	‘The ability to deal with mass casualties: ensuring that civilian health systems can cope and that sufficient medical supplies are stocked and secure’ (p. 8)	‘Ability to Deal with Mass Casualties: ensuring that health systems can cope even in very demanding situations when there might be simultaneous pressure on civilian and military health care capabilities.’ (p. 93)
Resilient Civilian Transportation Systems	‘The functioning of transport systems: ensuring that NATO forces can move across Alliance territory rapidly and that civilian services can rely on transportation networks, even in a crisis’ (p. 8)	‘Resilient Civilian Transportation Systems: ensuring that NATO forces can move across Alliance territory rapidly and that civilian transportation networks remain functional and effective to support civil and military requirements even when challenged or attacked.’ (p. 93)