



ANVIL Deliverable 4.2: Final Analytical Report

Critical Findings and Research Outlooks

Project full title: 'Analysis of Civil Security Systems in Europe'

Grant agreement no.: 284678

Lead beneficiary for Deliverable 4.2: Institute for Peace Research and Security Policy at the University of Hamburg (IFSH)

Dissemination level: Public

Authors: Raphael Bossong, Hendrik Hegemann (IFSH)

Expected delivery date: 28 February 2014

Actual delivery date: 28 February 2014

Table of Contents

1 Introduction.....	2
2 Civil Security Systems in Europe: Critical Findings and Research Outlooks	3
2.1 European trends vs. local conditions: Transformation, convergence and diversity	3
2.2 Different worlds of civil security? The ambivalent role of culture.....	5
2.3 Concepts matter! Terminological innovation and confusion in EU civil security.....	6
2.4 Beyond civil defence: The future role of the military in civil security.....	8
2.5 How much (de)centralisation do we need? Diverging models	10
2.6 Towards a multi-hazards approach: Conceptual and practical challenges	11
2.7 Risk management and risk analysis: Common principle or fashionable buzz-word?	13
2.8 Privatising civil security? The diverse roles of citizens and the private sector	14
2.9 Quality is what actors make of it: The contentious assessment of civil security systems	15
2.10 More bang for the buck? Efficiency and the diffuse costs of civil security	17
2.11 Cooperation under diversity: Towards a bottom-up learning approach	18
2.12 Governing European civil security: The EU as an integrated civil security actor?	19
3 Conclusion	20
4 References	21

1 Introduction

National and regional civil security systems in Europe display a wide variation in cultures, norms, policies and structures. States and regional organisations have organised very differently in their efforts to protect citizens from a variety of threats to their security and safety. To provide a better understanding of this diversity, the ANVIL project analysed a total of 22 European countries and eight regional organisations according to a multi-faceted mapping protocol, which included cultural and historical aspects, legal, institutional and operational factors, the relationship with citizens and the private sector, the role of the EU and the measurement of quality.

Overall, it was shown that administrative responsibilities, legal frameworks and operational practices continue to differ markedly, backed up by national cultural contexts and historical experiences. European states are, on average, well-prepared for most emergency and disaster management tasks, and there are multiple equifinal methods of organizing this core state responsibility. An appreciation for structural, historical and cultural diversity is especially important, since civil security systems depend on public legitimacy and need to be deeply embedded in national social and political institutions. However, the project also underlined a number of shared challenges to national civil security systems, such as the continuous recalibration between centralised and decentralised crisis management structures or the role of military actors under conditions of growing civilian needs and management structures. Furthermore, technical or administrative reforms in areas such as risk management also invite comparative assessment and mutual learning in a bottom-up framework. Based on the results from ANVIL case studies and the resulting synthesis reports as well as discussions with stakeholders, this report embeds the empirical results of ANVIL in wider literatures and research agendas and aims to set out further research avenues in the area of European civil security.¹

¹ The ANVIL empirical findings and policy recommendations for the EU are set out in detail in separate project deliverables and will not be discussed in full depth in this report. All frameworks, reports and case studies are available via the ANVIL homepage: www.anvil-project.net.

2 Civil Security Systems in Europe: Critical Findings and Research Outlooks

This report presents twelve critical findings from the ANVIL project that lead to further research needs. The selection reflects the results from the ANVIL synthesis reports as well as discussions with selected stakeholders from member states and regional organisations during an ANVIL workshop in London in November 2013. It does not offer a comprehensive overview and literature review of each thematic cluster, but refers to current debates (t Hart and Sundelius 2013) and some ongoing research projects that might contribute to addressing the respective questions. The identified areas concern:

1. The exact relationship between pressures for convergence and national diversity
2. The different effects of the role of culture in civil security
3. The use and evolution of different concepts in European civil security
4. The transforming role of the military in crisis and disaster management
5. The effects on and of centralisation and decentralisation in civil security
6. The driving and inhibiting factors in the emergence of multi-hazards approaches
7. National practices of risk assessment and risk management
8. The divergent roles of citizens and the private sector
9. The costs of civil security and the measurement of efficiency
10. The different indicators and understandings of quality and performance
11. Mechanisms of learning and best practice exchange under conditions of diversity
12. The evolution of the EU's role and its potential as an integrated civil security actor

2.1 European trends vs. local conditions: Transformation, convergence and diversity

National case studies conducted in ANVIL consistently highlighted the tension between larger transformation processes and pressures for convergence on the one hand and the persistence of diverse local traditions and structures on the other hand.

Since the end of the Cold War and continuing during the ANVIL period of examination between 2000 and 2012, all systems underwent considerable reform. Reflecting the transformation from military-focused civil defence systems since the end of the Cold War, crisis management now is firmly geared towards dealing with natural disasters and other civilian crises, including new and complex risks like critical infrastructure failure with potential trans-boundary ramifications. New concerns have thus supplemented or even replaced the dominant fear of nuclear war in Europe. The ensuing imperatives for change resulted in a number of cross-national developments evidenced by the trend towards multi-hazards approaches, a clear civilian primacy, some cross-national borrowing in areas like risk

assessment or updated functional legislation (see sections below for details). Yet, when looking at the details it becomes apparent that the degree of these observable changes and their exact causal drivers are hard to pin down. Furthermore, transformation and convergence are uneven and continue to persist alongside structural diversity. ANVIL case studies show that there are important differences when it comes to the form, understanding and consequences of transformation. Differences encompass diverse definitions of crises, a divergent use of major concepts like multi-hazards and risk management or varying domestic roles of the military. It is also contested in how far these transformations take place only at the conceptual and symbolic level or are implemented in a coherent manner across civil security systems and actually trickle down to the operational level.

This finding speaks to the extensive body of research on policy convergence and diffusion. Scholars working in this field typically identify some signs for the diffusion of ideas and adoption of comparable policies across borders based on shared concepts or beliefs in the legitimacy and effectiveness of certain institutional and political arrangements, but also highlight local path dependency, diverse (bottom-up) reform processes and generally caution against mono-causal explanations for change (Heichel et al. 2005). This also applies in the case of Europeanization and areas of full EU competence, where there may have been a stronger expectation of harmonisation and convergence due to the comparatively strong institutional and legal framework. By now, there is extensive evidence of the complexity and differential depth of national adaptation processes to European requirements, which are strongly conditioned by domestic politics, national administrative capacities and cultural legacies (Exadaktylos and Radaelli 2011).

This level of complexity evidently applies to the area of civil security, not least as EU competences remain comparatively limited. The EU boasts increasing legal and institutional capacities in police and criminal justice cooperation (the old “Third Pillar”), which result in multiple horizontal and vertical cooperation dynamics (Den Boer 2010). However, its competences in the core field of civil protection and disaster management, which constituted the empirical focus of ANVIL, remain mostly limited to a supportive and coordination role (see also further below), though there are some more established regulatory powers in related areas like flood protection or food safety. Processes of convergence among European national civil security systems are therefore either mostly driven by separate endogenous developments, or by wider voluntary or ‘soft’ governance processes that include the EU as well as other international organisations and professional networks (Boin and Ekengren 2009; Hollis 2010).

Yet precisely due to the fact that national transformation processes in civil security systems remain contested, further research on key dynamics and differential mechanisms is essential and promising. In particular, studies and projects could conduct single or comparative case studies of how certain

states react to specific external shocks and/or external governance instruments in various aspects of civil security, such as emergency health care or critical infrastructure protection, to arrive at a more fine-grained analysis of the importance of transnational issue dynamics vs. national institutional and political contexts. For instance, one EU research project on such comparative processes of change is currently conducted in the area of policing.²

2.2 Different worlds of civil security? The ambivalent role of culture

The tension between global convergence pressures and the persistence of local traditions and structures leads to a related debate on the role of national historical and cultural legacies in security policy and institutions. In some areas and dimensions the ANVIL findings revealed patterns that resemble ‘typical’ cultural clusters in Europe, but classifications are not uniform and clear-cut. For example, the preferred degrees of centralization and decentralization show a classic differentiation between Northern and North-Western countries that tend towards decentralization and Eastern and South-Eastern states displaying more centralised systems (section 2.5). Other typical cross-country cultural influences are visible in the distinct Nordic principle of ‘conformity’, according to which state and society operate under normal legal and political standards even during crisis situations, or the marked role of formal voluntary organizations in neocorporatist countries, such as Austria. However, in general, national security cultures and idiosyncratic experiences seem to be more important than regional clusters or commonly perceived threats and hazards. Individual case studies point to the case-specific relevance of distinct cultural factors for the emergence of specific national styles and legacies. This becomes visible, for example, in different traditions regarding the domestic role of the military, which are heavily shaped by a country’s past experiences. These indicative cultural patterns should not be reified, however, and may be overwritten by other functional and structural determinants of security policies and institutions.

Hence, the ANVIL results indicate that culture exercises a strong influence on civil security systems in Europe, but does so in a rather case-specific and contingent manner. This opens further avenues for research. First, one might ask how coherent and robust the ‘cultural clusters’ identified for some countries and some aspects actually are. Other research on compliance with EU law, for example, even suggests that there are indeed different ‘worlds’ among EU member states (Toshkov 2007; Falkner and Treib 2008), which condition performance across all policy areas. In other words, are there general state legacies and roles of public institutions that cut across the specificities of national security systems?

² <http://composite-project.eu/>

Conversely, future research should shed more light on how exactly culture influences the development of each specific civil security system. From a sociological and cultural perspective, it has long been highlighted that collective beliefs and identities are crucial for the perception of societal risks and appropriate countermeasures (Douglas and Wildavsky 1982; Lodge 2009). From the perspective of security studies, the concept of strategic or national security culture highlights that ideas, perceptions and norms of military and foreign policy elites are deeply embedded in history and can determine a country's approach to the outside world (Meyer 2006; Kirchner and Sperling 2010). The field of civil security presents itself as an interesting research area from both perspectives. National emergency management structures have progressively come under civilian control (see also further below), but remain strongly linked to state institutions and executive elites that may share the same deeply embedded notions as military and foreign policy actors. Furthermore, the very notion of civil security and the changing demands of disaster management have generated heated debates on the kinds of risks and threat scenarios that have come to the fore over the last decade (De Goede 2008; Boyle and Haggerty 2012). To prevent a static and overly structural approach to culture, recent scholarship would lead us to include not only explicit statements of cultural beliefs and norms, but also more widely embedded "practices" of security actors (Neumann 2005; Bigo 2011). Research could also take into account public perceptions and views beyond elites and practitioners.

2.3 Concepts matter! Terminological innovation and confusion in EU civil security

During the ANVIL stakeholder meeting in London, practitioners pointed out that "concepts matter" as a common point of orientation even if universal standardisation may often be neither possible nor desirable (as can be inferred from the cultural and structural diversity just outlined). As an example for the use of common terminologies, they cited efforts in NATO for interoperable concepts and standards for planning and operational command. In general, the basic assessment among stakeholders was that some mutual awareness and understanding may be helpful to foster cooperation and exchange. These statements directly refer to a key finding of ANVIL, which concerns the prevailing diversity and partial confusion in European civil security terminology.

ANVIL found that, on an abstract level, there seems to be a basic shared understanding of what constitutes a crisis in European countries. National definitions typically stress that a crisis refers to situations that affect a large number of people, infrastructures, goods or other values and require some form of coordination above normal emergency structures. Beneath these broad commonalities, however, differences across case studies are considerable, ranging from mere terminological divergences to different formal procedures for crisis management that hinge on

specific definitions. Most case studies document the use of other general terms like ‘disaster’, ‘accident’ or ‘emergency’ while ‘crisis’ is often used as a more programmatic concept in the context of crisis management. Yet, the threshold of what is labelled a crisis is interpreted very differently, which is linked to different degrees of formalisation and legal consequences, such as the upscaling of operational competences or the granting of exceptional emergency powers.

The EU’s difficulties with translating the general Treaty commitment to mutual assistance (Solidarity Clause) into a more specific legal and institutional mechanism (Konstadinides 2013) may at least partially be explained by this deficit. Conversely, the relatively successful sharing of assets for disaster management in the European civil protection mechanism may be seen as evidence for the fact that operational cooperation may take place in absence of a fully standardized conceptual or legal language. More detailed case studies of cross-national cooperation should illuminate the real deficits and needs in this regard (Stefanelli and Williams 2011). In this context, the US Federal Emergency Management systems and its efforts and challenges to develop a more standardized doctrine for response management may be used as an illustrative comparison (Birkland and DeYoung 2011).

Beyond the definition of crisis, the very notion of the field of civil security remains unclear and ambiguous, which may hamper the formation of expert networks, learning processes and governance structures for cross-cutting security challenges. ANVIL findings suggest that the term ‘civil security’ itself is seldom used in national discourses, apart from some examples such as the German security research programme. It also exists alongside other frequently used terms like ‘societal security’, which is particularly prominent in the Nordic countries, or the term ‘homeland security’ coined in the US.³ These different terms obviously seek to highlight the general emergence of more comprehensive multi-hazard approaches that move beyond sectoral approaches and the military-dominated concepts of the Cold War. However, their exact meaning, their specific differences and the reasons for their varying use are not always well understood and there remains some room for interpretation. Moreover, they exist alongside more established terms like ‘civil protection’, ‘civil defence’ or ‘crisis management’, which sometimes translate differently into national languages and can be related to important constitutional and operational consequences.

The same holds true for other prominent concepts, such as ‘risk’ and ‘resilience’. In line with other researchers that highlight the ambiguous meaning of resilience (Bourbeau 2013; Joseph 2013; Prior and Hagmann 2014), ANVIL case studies showed that resilience is particularly prominent in the United Kingdom but taken up to very different degrees in other countries and with potentially

³ <http://societalsecurity.eu/>

varying meanings. Risk management practices, such as comprehensive risk analyses, also are fairly established in some civil security systems, such as the Netherlands and the United Kingdom, but largely uncommon in many others. This can go along with very different kinds of practices of risk management and risk assessment (see section 2.7).

Security research could therefore look into the conceptual history of the different terms, map their use in different national contexts, identify commonalities and differences, and develop options for common terminologies. This might take a rather practical form and involve mutual exchanges over concepts or the development of glossaries. At the same time, research in this direction would also be of direct relevance to academic debates in the field of (Critical) Security Studies. Here, scholars have conducted conceptual and discursive analyses of terms like ‘security’ (Buzan and Hansen 2009; Balzacq 2010) and ‘resilience’ (Kaufman 2012), showing that the meanings of these concepts are not self-evident but depend on social interpretations and constructions and can be subject to change. To take this scholarship seriously, future research should also look into the actors that push forward specific concepts and practices – or certain interpretations thereof – and the potential social and political implications of such moves. Though the bulk of the literature has focused on other areas, there are some explicit studies on ‘societal security’ and ‘civil protection’ that highlight the emergence of these concepts in the post-Cold War context and their role in the transformation of security policies and structures (Alexander 2002; Brimmer 2006; Waever 2008).

2.4 Beyond civil defence: The future role of the military in civil security

All civil security systems investigated in the ANVIL project are primarily civilian, which reflects the wider structural transformation of civil defence systems since the end of the Cold War. Across all studied countries, command and coordination typically resides with civilian authorities at the level of government designated by respective national laws and traditions. The trend towards civil control has been especially notable in ‘new’ EU members and candidate countries as the division between civil and military security has historically been less entrenched here. Some of these countries are still in this transition process. However, in all countries studied by ANVIL military forces regularly contribute manpower and logistical capacities, such as helicopters or large groups of personnel for the piling of sandbags, to civil security efforts at the behest of civilian authorities, at least when it comes to exceptional and prolonged crises such as large-scale floods. But independently of differential exposure to risks and threats, the frequency and ease with which the military is employed varies considerably between countries.

Several factors seem to account for the observed diversity. One logical difference lies in the overall resources of a country. Smaller countries or those with fewer resources might be more inclined or even forced to rely on the military for assistance during complex crisis response operations. Further (non-functional) explanatory factors are divergent national traditions, such as varying levels of support for the domestic use of the military and different experiences with war and internal conflict. Countries with a particularly strong tradition of civil defence dating back to the Cold War, such as Switzerland, also have a special view on the issue. A more frequent impact concerns current debates and decisions about the end of militia and conscription systems, declining defence budgets and the general transformation of Western armies, which have generally shifted their focus from territorial defence to international peace missions and interventions. These current discussions and changes may affect the domestic role and availability of the armed forces in different ways and degrees.

Some civil security practitioners indicated that they often do not know much about the military's role in partnering countries even though the military may well be an important factor in actual crisis management cooperation and have indeed played a crucial role during many of the recent major crises in Europe. Indeed, the military does not always play a prominent role in strategic and conceptual debate about crisis and disaster management at the national and EU level. Civil security stakeholders usually engage primarily with their civilian counterparts in other countries. And the integration of military actors in EU policy and decision-making remains fragmented and limited, despite the persistent ambitions for a 'comprehensive approach' to crisis management beyond the EU's borders. In short, there is a significant need to develop more systematic knowledge on the role and the acceptance of armed forces in domestic emergency management, as well as on the potential role in cross-border civil protection activities inside the EU and alongside NATO. To what extent are military forces sufficiently legitimised to undertake civilian crisis response operations or even exercise command and control? Which training, equipment, rules and procedures are required? Which are the trans-boundary crises that might necessitate a military response? And whose armies are going to intervene under which conditions? The global debate on the benefits and limits of military forces in humanitarian assistance and emergency management should also be kept in mind (SIPRI 2008; Brattberg and Sundelius 2011).

From a theoretical perspective, the academic literature on strategic cultures in Europe might be a useful reference source as it has investigated the varying roles and perceptions of armed forces in more 'traditional' military contexts (Giegerich and Jonas 2013). Moreover, there is a considerable amount of research on civil-military relations in crisis management (Norheim-Martinsen 2012; Hynek 2011). Though the bulk of it relates to international interventions during and after violent conflicts,

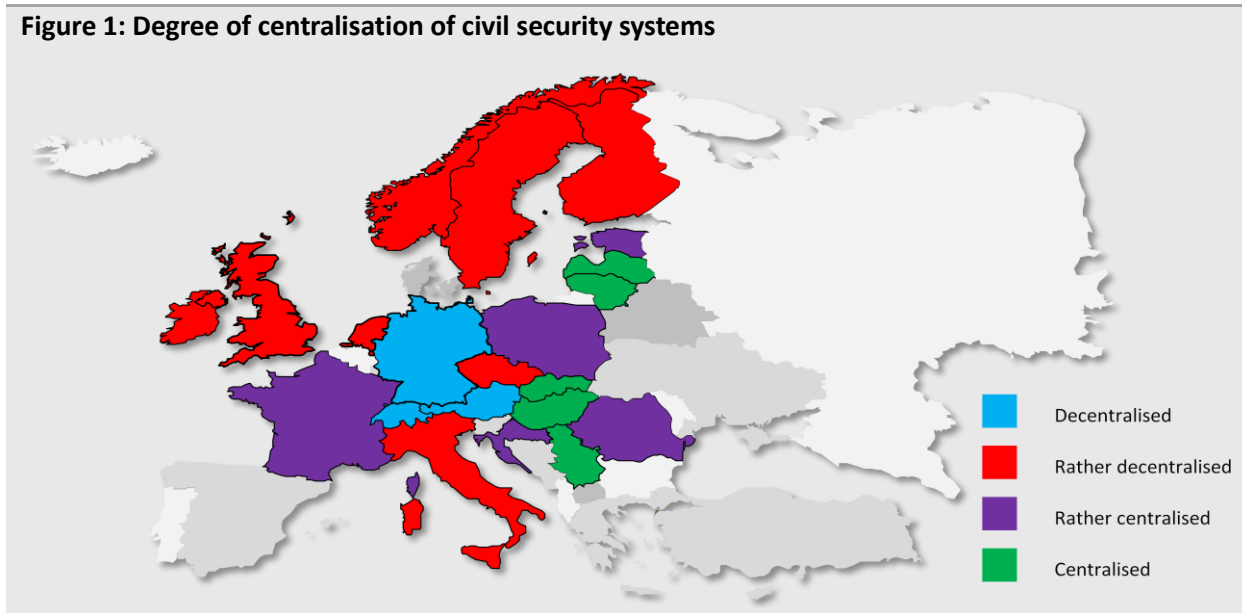
there is reason to believe that civilian-focused crisis management during natural disasters and related events faces at least some similar dynamics and challenges.

2.5 How much (de)centralisation do we need? Diverging models

ANVIL countries cover the full spectrum from decentralised to centralised civil security systems. Generally, civil security in many countries seems to be comparatively more decentralised than other policy fields, such as economic policy. However, the emergence of new complex risks and multi-hazards approaches (see sections 2.1 and 2.6) generally require structures and strategies that stretch across levels and sectors. Hence, it appears that there are pressures for a recalibration of decentralised systems, while ANVIL found no support for the thesis that central steering as such is necessarily superior in crisis management.

From an empirical perspective, ANVIL distinguished four heuristic groups among the studied countries: decentralised, rather decentralised, rather centralised and centralised (see Figure 1). The available evidence indicates that decentralisation is most established in Central/Northern European countries, whereas many 'new' and candidate countries in South-Eastern Europe and the Baltic region have a higher propensity to adopt centralised models. This differentiation also resembles and overlaps with some of the nascent cultural clusters mentioned earlier (see section 2.2). Hence, a more detailed application of cultural analysis to the special question of centralisation might be worthwhile. The coherence of these groups could be further tested across various dimensions and aspects of civil security systems, which may indicate some outliers in specific sectors and aspects of civil security.

Figure 1: Degree of centralisation of civil security systems



Source: ANVIL case studies

Generally speaking, the comparative benefits of centralisation and de-centralisation remain an issue of debate, be it in the wider classical theoretical literature on comparative and fiscal federalism (Burgess 2006) or in the specific field of emergency management or ‘homeland security’ (Birkland and Waterman 2008, Roberts 2008, Chenoweth and Clarke 2010). Specifically, different aspects and functions of crisis management may require different mixes of centralised institutional leadership and more dispersed networked processes (Boin et al. 2013a). On this basis, research that develops a differentiated appreciation for centralised and decentralised components in different phases and tasks of emergency coordination and management should be empirically deepened and applied to different cultural and institutional contexts. Further research is also required on the effects of centralisation and decentralisation of civil security systems on their overall performance and acceptance as well as on current trends in states’ diverse choices for different levels of centralisation and the factors that help to explain them.

2.6 Towards a multi-hazards approach: Conceptual and practical challenges

Despite often bold rhetoric surrounding the goal of a truly ‘multi-hazards approach’⁴ or ‘comprehensive approach’ in crisis and disaster management, ANVIL found that the majority of countries actually display a combination of multi-hazards and specific threats approaches. Moreover,

⁴ Practitioners present at the London meeting indicated their general preference for the term ‘multi-hazards’ as opposed to ‘all-hazards’.

there is often a rhetoric-implementation gap. Most countries tend towards a multi-hazards approach that spans across narrow functional, institutional or legal boundaries in one way or another. Many states also have adopted strategies or created institutions with the explicit goal to put this goal into practice (Caudle and de Spiegeleire 2010). However, all these conceptual classifications seem more a matter of degree, while one can question the practical relevance of the formally distinct approaches. Rather, it can be argued that all countries have elements of multi-hazards and specific threats approaches. In all countries studied by ANVIL, specialised agencies can take the lead when it comes to rare events requiring special knowledge, such as epidemics or radiological accidents.

Nevertheless, there are still notable differences with regard to the threat-specific or multi-hazard distribution of responsibility at higher or national political and administrative levels, for example when it comes to the existence of lead-agencies with comprehensive mandates. During the ANVIL stakeholder workshop in London, practitioners confirmed that there is a basic trend towards multi-hazards approaches, which was generally seen as reasonable. At the same time, officials struggle with the resulting coordination challenges and have difficulties to define the exact meaning and relevance of the concept for their daily work. So there is a difference between the rhetoric and practice of multi-hazards approaches, which requires complex information and coordination processes (Von Lubitz et al. 2008; Kappes et al. 2012).

This finding implies a number of new research questions that could be tackled by future projects. As mentioned earlier, different concepts of security can have a great impact on the shape and direction of security policy (see section 2.3). Hence, it would be interesting to explore how different security officials or other groups (academics, media etc.) understand and interpret the idea of a multi-hazards approach. The possible integration of different governmental and societal stakeholders – which is by now considered a crucial component of effective risk governance (van Asselt and Renn 2011) – is also yet largely unexplored in the context of advanced technical multi-hazard models (Komendantova et al. 2014).

From a theoretical standpoint, one could assume that there might be various differences depending on divergent national strategic cultures, organizational routines, personal experiences, political interests or other factors (see section 2.2). Like for other concepts, one could also examine how the idea of multi-hazards – or specific versions thereof – emerged or was introduced by specific actors in specific national contexts and how they were adapted to local situations. A related question regards the societal and political consequences of the concept and its advertisement, for example for the securitization of various policies. This links back to the lack of public debate on complex multi-hazard models, so that one may perceive a direct trade-off between the public legitimacy of civil security systems and their increasing technical and managerial sophistication (Hagmann and Cavelty 2012).

2.7 Risk management and risk analysis: Common principle or fashionable buzz-word?

A closely related research agenda concerns the drivers of and obstacles to comprehensive risk management at the EU and member states level. The EU's ambitions to develop such an overarching approach to risk management manifests itself both in the EU Internal Security Strategy and the associated EU ambition to arrive at a comprehensive risk prevention strategy – including the Commission's guidelines for national risk assessments in crisis and disaster management – as well as in the more technical regulation for coherent risk management in EU flood management, which has already led to some research and knowledge transfer projects (EXIMAP 2007; de Moel 2009).

Risk-based planning and formalised risk assessments have proliferated to very different degrees and in different ways across ANVIL countries. Switzerland, for example, has taken a number of steps to advance explicit risk-based planning for natural hazards management at various levels of government, including the use of special tools and guidelines, and requires agencies to check their investments based on risk calculations, while commitments and requirements in other countries vary strongly. Many countries also run risk assessments of some form and at some level, but the degree of regularity and formalisation differ significantly and many countries restrict themselves to sector-specific or regional efforts. Moreover, it is very difficult to assess how far countries actually make substantive practical use of such formal risk assessments and risk-based planning. Current sociological analyses support the expectation of differential use and penetration of risk governance models in Europe (Rothstein et al. 2013; Krieger 2013).

Nevertheless, national practitioners at the ANVIL stakeholder meeting in London expressed the general view that risk assessments are basically accepted as an important tool and could constitute a basis for further EU cooperation. Thus, further research clearly is needed. More fine-grained research projects could examine the exact factors and mechanisms influencing comprehensive integrated risk policies at the national level, as has been done for the specific case of flood risk assessments (de Moel et al. 2009; Müller 2013). And as touched upon above, risk assessments raise some more normative and political issues as critics have pointed to the inherently contested and contingent nature of views about risks, the potential depoliticizing effects of expert assessments as well as negative consequences through dramatisation and a comprehensive image of fear and vulnerability (Hagmann and Dunn Cavelty 2012). Hence, studies could not only investigate ways and mechanisms of implementing concepts based on risk and resilience at the EU and national levels, but also interrogate the actual societal and political impact of risk assessment and debate alternatives for more transparent and deliberative models.

2.8 Privatising civil security? The diverse roles of citizens and the private sector

Citizens, private companies and societal non-profit organisations play a central role in European civil security. ANVIL case studies offer three critical findings in this area: a general reluctance to outsource core crisis management tasks to private companies, a strong but diverse use of voluntary organisations and a rather passive but generally positive relationship with citizens. There are still important questions in all of these areas.

First, in most ANVIL countries outsourcing in crisis management is not a major trend. Private companies usually play a limited role based on legal safety requirements and special tasks in local emergency management around production facilities or infrastructures. Some smaller 'new' member states with weaker capacities seem to be comparatively more interested in striking partnerships between governmental agencies and profit-oriented private entities. Moreover, one can discern a nascent trend towards increased coordination and networking with for-profit actors with regard to 'new' security areas, such as critical infrastructure protection and cyber-security. These areas call for the inclusion of specialised knowledge and enhanced outreach to the developers and operators of the central technologies and infrastructures.

For future research, it would be interesting to learn more about the reasons for the reluctance in outsourcing because general wisdom would suggest that new security challenges lead to new private forms of security governance (Bryden and Caparini 2006). Furthermore, the emergence of new forms of networked interaction raises important questions, for example regarding the need and opportunities for self-organising networks beyond formal public-public private partnerships (Dunn Cavelty and Suter 2009).

Second, voluntary organisations make an important contribution to civil security provision in most ANVIL countries. The degree of organisational coherence and formalisation of cooperation between public agencies and societal actors, however, varies considerably. Especially Central European states with neocorporatist traditions, such as Austria and Hungary, embrace the formalized inclusion of officially registered organisations with large membership and see this as one of the core strengths of their systems. Conversely, other countries, like the UK, prefer informal ad-hoc forms of voluntary participation. In some South-Eastern states, namely Romania and Serbia, we find more ambivalent attitudes regarding voluntary engagement going back to volunteerism campaigns during Communist rule. But also some of the 'old' member states with strong formal volunteerism are struggling to preserve high level of organised voluntary engagement due to social challenges such as demographic

change or growing workloads. Here, research on innovative forms of voluntary engagement within and beyond formal organisations would be highly relevant.

Third, ANVIL case studies indicate that citizens expect governments to ensure a basic degree of protection, but disasters are not among the major concerns of citizens in ANVIL countries. Beyond this relative sense of safety, levels of concern are higher in some countries (especially many 'new' members and Italy) while citizens in the Netherlands and Scandinavian countries are least concerned. Support for civil security systems tends to be rather high.

Our findings suggest an overall low level of information among citizens regarding crisis preparedness and response, with an EU average of around 27 per cent according to Eurobarometer data. This goes hand in hand with rather passive communication and education about preparedness and response. On the one hand, this indicates a certain lack of public interest and awareness, but it may also be interpreted as a sign of resilience and the ability of European societies to resist alarmist attitudes. Broader public opinion research beyond Eurobarometer data would be a helpful addition here.

2.9 Quality is what actors make of it: The contentious assessment of civil security systems

The ANVIL case studies did not discover drastic differences in the performance and results of civil security systems or strong correlations between specific systems properties and the overall quality of crisis management. Many national stakeholders see some room for improvement in certain areas such as coordination, warning or forecasting, or have drawn case-specific lessons from past experiences. However, there seems to be a broad agreement among national practitioners and citizens that their systems are generally well prepared to deal with the crises typically occurring on their country's territory. Moreover, ANVIL did not find evidence for fundamental problems in the legitimacy of civil security systems. The level of open contestation and politicization in the field of civil security appears to be rather low and there were only few instances of major political turmoil, such as resignations of government members, relating to specific crisis response operations. Systems of legal control are widely in place and there seems to be a sustained and significant level of public support for civil security systems, notwithstanding some contentious issues such as the domestic role of the military that require open public debate in democratic societies.

The most striking ANVIL finding regarding the question of quality may rather be the lack of agreement about appropriate procedures and indicators. Some countries occasionally refer to technical international standards, such as the HYOGO Framework for Action, or to formalised

thresholds like reaction times for emergency services.⁵ Such indicators might offer some orientation and are also increasingly used in the European context, as evidenced by the recent EU peer evaluation of the UK according to the Hyogo Framework.⁶ At this point in time, the available standards are either too much geared towards the global UN agenda or too technically abstract to allow for systematic assessments of a system's overall quality in the European context. The lack of consensus is accentuated by the fact that there are very diverse evaluation and learning cultures. Some countries have standardised and frequently used procedures for post-crisis and structural evaluations, whereas other countries prefer case-specific ad-hoc assessments. These diverse practices apparently represent public and administrative traditions and expectations, which cannot be captured in general standardized evaluation processes or benchmarks.

The question of quality and performance therefore is likely to remain an important area of research, even if definite findings or consensual agreements might indeed be hard to achieve. This issue is also of high practical importance for the EU, for example when thinking about opportunities for the exchange of 'best practices' under conditions of diversity (see section 2.11). The available literature suggests some starting points for future efforts as researchers and practitioners in many areas have grappled with these and related questions. For example, over the last two decades or so there has been a palpable move towards 'evidence-based policy' and performance assessments, which has been especially strong in the United Kingdom. The basic idea has been to improve public policy and administration through the use of scientific evidence beyond partisan politics. There have been calls and attempts to apply this kind of thinking to a number of areas, including crime prevention and counterterrorism. However, there has also been widespread criticism by observers pointing to the contested, fallible and biased nature of evidence and a potentially undemocratic tendency towards de-politicisation (Naughton 2005; Radin 2006; Lum and Kennedy 2012). Future research might want to look at these efforts to draw more detailed lessons about opportunities and limits for the assessments of civil security systems that take into account the diversity of views and traditions identified by ANVIL as well as broader political and societal implications. For this purpose, one could also look to the field of regime theory in international relations research, where methods and theories for the study of effectiveness have reached a certain level of maturation and sophistication, though important pitfalls clearly persist here as well (Young 1999; Hegemann et al. 2013).

⁵ <https://ec.europa.eu/digital-agenda/sites/digital-agenda/files/WHO.pdf>

⁶ <http://www.unisdr.org/we/inform/publications/32996>

2.10 More bang for the buck? Efficiency and the diffuse costs of civil security

ANVIL found that efficiency assessments are one of the least developed dimensions of national civil security systems. Only a few countries have even begun to collect more systematic data and to use investment review instruments; implementation of financial reviews remains sketchy and uneven. Despite occasional calls that more resources should be provided for the management of new and complex threats, such as critical infrastructure failure, the overall perception seems to be one of relatively adequate levels of expenditure with regard to typical threats, so that efficiency does not frequently feature as a core concern.

Strikingly, most ANVIL case studies note that even governments do not have a clear overview of the spending on civil security and crisis management. This is due to inherent difficulties of measurement but also to the fact that civil security in many cases is not a coherent political and administrative field. Rather, it is a cross-cutting task with fuzzy borders that, depending on the definition, infiltrates several other political and administrative fields, such as public health, transportation or energy. Moreover, the common decentralisation of crisis management often leads to multi-level financing, with regions and/or municipalities playing an important part in the financing scheme.

The scarcity of efficiency assessments also seems to indicate normative and political pitfalls. Mundane, run-of-the-mill bureaucratic politics complicates the allocation of scarce resources among competing agencies and levels according to clear agreed-upon indicators. Applying cost-effectiveness criteria to the protection of life and other essential goods may also create discomfort among many citizens. Moreover, the relationship between spending levels and levels of protection is not always evident. As a consequence, there are no accepted assessment standards allowing for clear statements regarding the delicate balance between the need to protect societies and prevalent fiscal constraints. Hence, any general baseline for desired or 'optimal' spending levels is likely to be contested on normative and functional grounds.

Efficiency so far remains a widely neglected field of research. A rather basic but nevertheless groundbreaking task would be to take first steps towards the generation of reliable and comprehensive data and numbers for financial spending in the area of civil security. Such an effort, however, will very likely depend on conceptual work defining what is actually meant by civil security systems and which levels and activities have to be incorporated. In a second step, research could investigate more closely the different concepts and understandings of efficiency that actors in different national, professional and institutional contexts hold in order to identify and carve out areas for further debate and exchange. Moreover, there has been an interesting and particularly

controversial debate about the question of efficiency in the realm of counterterrorism policy where some researchers have tried to identify specific indicators and methods to conduct cost-benefit analyses and assess the efficiency of various counterterrorism measures and programmes (Ungerer et al. 2008; Mueller and Stewart 2011). The experience in the area of counterterrorism shows the imminent political importance of efficiency concerns, but the hitherto practice of evaluations of counterterrorism measures also revealed the danger that they might be used for the *ex post* justification of controversial policies through allegedly neutral evidence. Nevertheless, this research could be particularly interesting for the field of civil security because efficiency (and effectiveness) assessments here are likely to face some of the same functional and normative-political challenges.

2.11 Cooperation under diversity: Towards a bottom-up learning approach

The ANVIL results do not support unequivocal correlations between specific structural characteristics and systems performance in civil security. Thus, there is no single best or ‘one-size-fits all’ model for civil security. This suggests that civil security policies and strategies, which are embedded in deep local knowledge and public support, cannot be imposed from the top. If civil security cooperation is indeed essential in view of increasingly complex trans-boundary crises, European states need to deepen their mutual understanding and be ready to learn from each other. Hence, ANVIL findings support the argument that flexible learning ‘from below’, i.e. from the national and local level of practitioners and affected stakeholders upwards, is the way forward. This is already reflected in existing networking and training activities, such as the EU exchange of expert programme⁷ or the European Fire Academy⁸ that reflect a voluntary approach to network building. In the area of civil security cooperation in the face of trans-boundary threats, the EU would be best placed as promoter and facilitator of cooperation amongst national officials, taking special care to ensure common political goals adopted in Brussels are reconciled with national diversity. In particular, the EU could play a role in the development of a shared framework used to identify lessons learned and ‘best practices’ in a bottom-up manner.

However, the modalities and mechanisms of mutual learning and the exchange of best practices in civil security have not attracted much scholarly and practical attention so far. Learning in general has recently been described as “one of the most under-researched aspects of crisis management” (‘t Hart and Sundelius 2013, p. 455), an observation that relates to a wider complex debate in political sciences (Dunlop and Radaelli 2013). While such learning is a very difficult task at the national level

⁷ http://ec.europa.eu/echo/files/evaluation/2011/CP/Annex_IIIB.pdf

⁸ <http://www.europeanfireacademy.com/>

already, it becomes even more complicated in cross-border settings with differing institutions and often diverse cultural and operational contexts.

There is already scholarship pointing to interesting insights in this respect. For example, the concept of a “community of practice”, which has also been applied to the international context, suggests that direct interaction among practitioners might be particularly helpful to steer practical and targeted bottom-up learning (Lave and Wenger 2007; Adler 2008). This insight could be further elaborated and tested for the case of civil security. Another strand of research on crisis-induced organisational learning (Deverell 2010) also needs to be integrated and linked to nationwide transformation processes. More specifically related to EU security policy, recent research has documented experiences with best practices exchange and peer reviews in EU counterterrorism policy (Bossong 2012; 2013). Here, scholars have pointed to the EU’s potential as a “think-tank” developing and dispersing new knowledge and ideas (Brady 2009). This research highlights possible bottom-up actions in an area characterised by inherent diversity, but results so far also suggest that knowledge and evidence face constraints in highly contentious political environments. Further research into the concrete mechanisms and conditions of such efforts seems warranted and promising. This could also take into account the role of global actions, such as the peer review exercises in the context of the HYOGO Framework for Action mentioned above.

2.12 Governing European civil security: The EU as an integrated civil security actor?

ANVIL has focused on the diversity of national civil security systems in Europe because this is a necessity before well-grounded assessments of transnational cooperation and EU initiatives in this area can be developed. However, it is not only important to study how the EU reacts to and interacts with national civil security systems; research should also look at the EU level itself and see how and in how far the EU is emerging as a distinct and integrated civil security actor. The looming danger from new trans-boundary risks stretching from climate change and critical infrastructure failures to pandemics or terrorist attacks has encouraged calls for more comprehensive preparedness and response mechanisms that protect citizens against multiple hazards and stretch across functional boundaries. The EU has built up corresponding mechanisms for cross-border disaster assistance and crisis management. This is reflected visibly in the ‘Solidarity Clause’ entailed in the Lisbon Treaty, the current revision of the EU civil protection mechanism and the newly created European Emergency Response Cooperation Centre. Moreover, the EU can draw on more established competences for the regulation and facilitation of relevant actions in areas like flood prevention, food safety or the

handling of hazardous substances. Hence, 'civil security' and crisis management seem to be emerging as new and cross-cutting fields of EU security governance.

Yet to date, we know still comparatively little about the growing role of the EU as an integrated 'crisis manager' and provider of civil security – at least when moving beyond the established research agenda on the EU's foreign and security policy. There is some recent research alerting to the emergence of a distinct EU policy-field in internal security and crisis management that deals with various risks and crises. The research focuses on informal and 'soft' instruments such as best practices and peer reviews as well as formal and binding regulations in areas with established EU competences (Kaunert et al. 2012; Boin et al. 2013). The exact shape and meaning of the emerging area of civil security governance are nevertheless still in a state of flux. Further dynamics are also likely to come from the EU global interactions with other crisis management authorities and international organizations.⁹ These interactions, however, also remain little understood and should be brought closer together with the empirical complexity within the EU. ANVIL findings suggest that the EU holds some potential as an actor of civil security governance, but the EU also faces important of challenges and pitfalls that deserve closer scrutiny.

3 Conclusion

ANVIL findings show that civil security systems in Europe have to face a number of new risks and crises and have undergone a process of considerable transformation since the end of the Cold War. In this context, ANVIL suggests a specific role for the European Union as a facilitator and promoter of transboundary cooperation taking into account the prevailing diversity in European civil security systems through a bottom-up approach. Thus, civil security is a dynamic and increasingly important area, but it is often overlooked by academic social science research as well as strategic debates in security policy. Based on the ANVIL results and discussions with stakeholders, this report was able to identify a number of questions and issues that might be addressed in future research on European civil security. This ranges from the relationship between larger convergence pressures and the persistence of diverse local traditions and structures or the often confused and contested terminology to new strategies of risk management, the role of private actors or the difficult question of quality and performance. These questions require both critical reflection and practical solutions. Research in all these directions promises interesting insights from academic as well as operational perspectives and should therefore receive the scholarly attention and political support it deserves.

⁹ <http://crisisroomsconference.eu/pro/fiche/quest.jsp;jsessionid=C5wIF5qzfvGr1A33ZpwjiC-v.g!1>

4 References

- Adler, E., 2008. The spread of security communities: Communities of practice, self-restraint, and Nato's post-cold war transformation. *European journal of international relations* 14(2): 195-230.
- Alexander, D., 2002. From civil defence to civil protection – and back again. *Disaster prevention and management* 11(3): 209-213.
- Balzacq, T., ed. 2010. *Securitization theory: how security problems emerge and dissolve*. London: Routledge.
- Bigo, D., 2011. Pierre Bourdieu and international relations: Power of practices, practices of power. *International political sociology* 5(3): 225-258.
- Birkland, T., and Waterman, S., 2008. Is federalism the reason for policy failure in Hurricane Katrina?" *Publius: The journal of federalism* 38(4): 692-714.
- Birkland, T. A., and DeYoung, S.E., 2011. Emergency response, doctrinal confusion, and federalism in the deepwater horizon oil spill. *Publius: The journal of federalism* 41(3): 471-493.
- Boin, A., Busuioac, M., and Groenleer, M., 2013. Building European Union capacity to manage transboundary crises: Network or lead-agency model? *Regulation & Governance* (Early View).
- Boin, A., Ekengren, M., and Rhinard, M., 2013. *The European Union as crisis manager: Patterns and prospects*. Cambridge: Cambridge University Press.
- Boin, A. and Ekengren, M., 2009. Preparing for the world risk society: Towards a new security paradigm for the European Union. *Journal of contingencies and crisis management* 17(4): 285-294.
- Bossong, R., 2012. Peer reviews in the fight against terrorism: A hidden dimension of European security governance? *Cooperation and conflict* 47(4), 519-538.
- Bossong, R., 2013. EU cooperation on terrorism and violent radicalization: Frustrated ambitions or new forms of EU security governance? *Cambridge Review of International Affairs* (Online First).
- Bourbeau, P., 2013. Resiliencism: Premises and promises in securitisation research. *Resilience* 1(1): 3-17.
- Boyle, P., and Haggerty, H.D., 2012. Planning for the worst: Risk, uncertainty and the Olympic Games. *The British journal of sociology* 63(2): 241-259.
- Brattberg, E., and Sundelius, B., 2011. Mobilizing for disasters: Comparing US and EU approaches to the 2010 Haiti earthquake. *Journal of homeland security and emergency management* 8(1).
- Brady, H.. 2009. *Intelligence, emergencies and foreign policy: The EU's role in counterterrorism*. London: Centre for European Reform.
- Brimmer, E., 2006. From territorial security to societal security: Implications for the transatlantic outlook. In: E. Brimmer, ed., *Transforming homeland security: US and European approaches*. Washington: Center for Transatlantic Relations, 25-42.
- Bryden, A., and Caparini, M., eds., 2006. *Private actors and security governance*. Zurich: Lit.
- Burgess, M., 2006. *Comparative federalism: Theory and practice*. London and New York: Routledge.
- Buzan B., and Hansen, L., 2009. *The evolution of international security studies*. Cambridge: Cambridge University Press.
- Caudle, S., and de Spiegeleire, S. 2010. A new generation of national security strategies: Early findings from the Netherlands and the United Kingdom. *Journal of homeland security and emergency management* 7(1): 1-35.

- Chenoweth, E., and Clarke, S.E., 2010. All terrorism is local: Resources, nested institutions, and governance for urban homeland security in the American federal system. *Political research quarterly* 63(3): 495-507.
- De Goede, M., 2008. Beyond risk: Premediation and the post-9/11 security imagination. *Security dialogue* 39(2-3): 155-176.
- de Moel, H., van Alphen, J., and Aerts, J. C. J. H. , 2009: Flood maps in Europe: Methods, availability and use. *Natural Hazards & Earth System Science* 9(2): 289-301.
- Den Boer, M., 2010. Towards a governance model of police cooperation in Europe: The twist between networks and bureaucracies. In: F. Lemieux, ed., *international police cooperation: Emerging issues, theory and practice*. Cullompton: Willan Publishing, 42-61.
- Deverell, E., 2010. *Crisis-induced learning in public sector organizations*. Stockholm: Elanders Sverige.
- Douglas, M., and Wildavsky, A., 1982. *Risk and culture: An essay on the selection of environmental and technological dangers*. Berkeley et al.: University of California Press
- Dunlop, C. A., and Radaelli, C.M., 2013. Systematising policy learning: From monolith to dimensions. *Political studies* 61(3): 599-619.
- Dunn Cavelty, M., and Suter, M., 2009. Public-private partnerships are no silver bullet: An expanded governance model for critical infrastructure protection. *International journal of critical infrastructure protection* 2: 179-187.
- Exadaktylos, T., and Radaelli, C., 2011. *Research design in European studies: Establishing causality in europeanization research*. Basingstoke: Palgrave Macmillan.
- EXIMAP, 2007. *Handbook on good practices for flood mapping in Europe*. European exchange circle on flood mapping. Brussels: EXIMAP.
- Falkner, G., and Treib, O., 2008. Three worlds of compliance or four? The EU-15 compared to new member states. *Journal of common market studies* 46(2): 293-313.
- Giegerich, B., and Jonas, A., eds. 2013. *Strategic cultures in Europe: Security and defence policies across the continent*. Wiesbaden: Springer VS.
- Hagmann, J., and Dunn Cavelty, M., 2012. National risk registers: Security scientism and the propagation of permanent insecurity. *Security Dialogue* 43(1): 79-96.
- Hegemann, H., Heller, R., and Kahl, M. eds., 2013. *Studying 'effectiveness' in international relations: A guide for students and scholars*. Opladen: Barbara Budrich.
- Heichel, S., Pape, J., and Sommerer, T., 2005. Is there convergence in convergence research? An overview of empirical studies on policy convergence. *Journal of European public policy* 12(5): 817-840.
- Hollis, S., 2010. The necessity of protection: Transgovernmental networks and EU security governance. *Cooperation and conflict* 45(3): 312-330.
- Hynek, N., 2011. EU crisis management after the Lisbon Treaty: Civil-military coordination and the future of the GCHQ. *European Security* 20(1): 81-102.
- Joseph, J., 2013. Resilience in UK and French security strategy: An Anglo-Saxon bias? *Politics* 33(4): 253-264.
- Kappes, M., et al., 2012. Challenges of analyzing multi-hazard risk: A review. *Natural hazards* 64(2): 1925-1958.
- Kaunert, C., Léonard, S., and Pawlak, P., eds., 2012. *European homeland security: A European strategy in the making?* London: Routledge.

- Kirchner, E., and Sperling, J., 2010. *National security cultures: Patterns of global governance*. London and New York: Routledge.
- Komendantova, N., et al., 2014. Multi-hazard and multi-risk decision support tools as a part of participatory risk governance: Feedback from civil protection stakeholders. *International journal of disaster risk reduction* ONLINE FIRST(<http://www.sciencedirect.com/science/article/pii/S221242091300068X>).
- Konstadinides, T., 2013. Civil protection cooperation in EU law: Is there room for solidarity to wriggle past? *European law journal* 19(2): 267-282.
- Krieger, K., 2013. The limits and variety of risk-based governance: The case of flood management in Germany and England. *Regulation and governance* 7(2): 236-257.
- Lave, J., and Wenger, W., 2007. *Situated learning: Legitimate peripheral participation*. 17th ed. Cambridge: Cambridge University Press.
- Lodge, M., 2009. The public management of risk: The case for deliberating among worldviews. *Review of policy research* 26(4): 395-408.
- Lum, C., and Kennedy, L.W., eds., 2012. *Evidence-based counterterrorism policy*. New York et al.: Springer.
- Meyer, C., 2006. *The quest for a European strategic culture: Changing norms on security and defence in the European Union*. Basingstoke: Palgrave Macmillan
- Müller, U., 2013. Implementation of the flood risk management directive in selected European countries. *International Journal of Disaster Risk Science* 4(3): 115-125
- Mueller, J.E., and Stewart, M.G., 2011. *Terror, security and money: Balancing the risks, benefits and costs of homeland security*. Oxford: Oxford University Press.
- Naughton, M. 2005. 'Evidence-based policy' and the government of the criminal justice system: Only if the evidence fits. *Critical Social Policy* 25(1): 47-69.
- Neumann, I., 2005. Grand strategy, strategic culture, practice: The social roots of Nordic defence. *Cooperation & Conflict* 40(1): 5-23.
- Norheim-Martinsen, P.M., 2012. *The European Union and military force: Governance and strategy*. Cambridge: Cambridge University Press.
- Prior, T., and Hagmann, J., 2014. Measuring resilience: Methodological and political challenges of a trend security concept. *Journal of risk research* 17(3): 281-298.
- Radin, B.A., 2006. *Challenging the performance movement: Accountability, complexity, and democratic values*. Washington: Georgetown University Press
- Roberts, P. S., 2008. Dispersed federalism as a new regional governance for homeland security. *Publius: The journal of federalism* 38(3): 416-443.
- Rothstein, H., Borraz, O., and Huber, M., 2013. Risk and the limits of governance: Exploring varied patterns of risk-based governance in Europe. *Regulation and Governance* 7(2): 215-235;
- SIPRI, 2008. *The effectiveness of foreign military assets in natural disaster response*. Stockholm: SIPRI. http://books.sipri.org/product_info?c_product_id=358.
- Stefanelli, J. N., and Williams, S., 2011. Disaster strikes: Regulatory barriers to the effective delivery of international disaster assistance within the EU. *Journal of international humanitarian legal studies* 2(1): 53-83.
- t'Hart, P., and Sundelius, B., 2013. Crisis management revisited: A new agenda for research, training and capacity building within Europe. *Cooperation and conflict* 48(3): 444-461.

- Toshkov, D., 2007. In search of the worlds of compliance: Culture and transposition performance in the European Union. *Journal of European public policy* 14(6): 933-959.
- Ungerer, C., Ergas, H., Hook, S., and Stewart, M., 2008. *Risky business: Measuring the costs and benefits of counter-terrorism spending*. Special Report 18. Barton: Australian Strategic Policy Institute.
- van Asselt, M. B. A., and Renn, O., 2011. Risk governance. *Journal of risk research* 14(4): 431-449.
- Von Lubitz, D. K. J. E., et al., 2008. 'All hazards approach' to disaster management: The role of information and knowledge management, Boyd's OODA Loop, and network-centricity. *Disasters* 32(4): 561-585.
- Waever, O., 2008. The changing agenda of societal security. In: HG Brauch et al., eds. *Globalization and environmental challenges: Reconceptualizing security in the 21st century*. Berlin et al.: Springer, 581-594.
- Young, O. ed., 1999. *The effectiveness of international environmental regimes: Causal connections and behavioral mechanisms*, Cambridge: MIT Press.