CRN REPORT

Focal Report 2

Risk Analysis

Integrated Risk Management and Societal Security

Zurich, May 2009

Crisis and Risk Network (CRN)
Center for Security Studies (CSS), ETH Zürich

Commissioned by the Federal Office for Civil Protection (FOCP)

Purpose: As part of a larger mandate, the Swiss Federal Office for Civil Protection (FOCP) has tasked the Center for Security Studies (CSS) at ETH Zurich with compiling "focal reports" (Fokusberichte) on critical infrastructure protection and on risk analysis to promote discussion and provide information about new trends and insights.

Authors: Sergio Bonin, Christoph Doktor, Beat Habegger
© 2009 Center for Security Studies (CSS), ETH Zurich.

Contact:
Center for Security Studies
Seilergraben 45-49
ETH Zürich
CH-8092 Zürich
Switzerland
Tel.: +41-44-632 40 25

crn@sipo.gess.ethz.ch
www.crn.ethz.ch

TABLE OF CONTENTS

INTRODUCTION

The Task

The analysis and evaluation of risks and threats relevant to the civil protection system is among the key responsibilities of the Swiss Federal Office for Civil Protection (FOCP). As part of a larger mandate, the FOCP has tasked the Center for Security Studies (CSS) at ETH Zurich with producing two annual 'focal reports' (Fokusberichte) on risk and vulnerability analysis.

According to this mandate, the focal reports are compiled using the following method: First, a 'scan' of the environment is performed with the aim of searching actively for information that helps to expand and deepen the knowledge and understanding of the issue under scrutiny. This is a continuous process that uses the following sources:

- Internet Monitoring: New and/or relevant publications and documents with a focus on risk and vulnerability analysis are identified and collected.
- Science Monitoring: Relevant journals are identified and screened, and relevant articles evaluated.
- Government Monitoring: Policy documents with relevance to Switzerland from various countries and from international inter- and nongovernmental organizations are identified.

Second, the material thus collected is filtered, analyzed, and summarized in the focal reports. Focal Report 1 on risk analysis was published in November 2008 and can be downloaded from the website of the Crisis and Risk Network CRN (www.crn.ethz.ch).

The Structure of the Focal Report

The second focal report at hand is structured as follows:

1. In the first part, the main characteristics of what is called "Integrated Risk Management" (IRM) are briefly outlined. The focus on IRM has recently attracted a lot of interest, particularly among international organizations and private companies in the insurance business. Prominent examples include the Organisation for Economic Co-operation and Development (OECD), the World Economic Forum, and the re-insurer Swiss Re. Documents published over the course of the last two years – some as recent as March 2009 – serve as the basis for briefly sketching the main features of this new trend in public sector risk management. This is followed by an annotated bibliography that summarizes important source documents.

2. In the second part, the concept of Societal Security as used in three Nordic countries – Sweden, Norway, and Finland – is explored through the analysis of key primary government sources. It refers to the conceptual and structural efforts undertaken to reorganize the 'total defense' concept that was applied during the Cold War. Societal security as a concept is a further development of 'total defense'. As a response to modern threats, it aims to protect the political and social system, institutions, the population, and the critical infrastructure in a networked effort of all state, economic, and social resources, and to mitigate the effects of crises that may materialize. An annotated bibliography again summarizes the most important source documents.

1   INTEGRATED RISK MANAGEMENT

Background

In the last 20 years, several political, societal, environmental or economic developments as well as the increased interconnectedness and complexity of modern societies have challenged the conventional conception of security. Many new security challenges share some common characteristics, as they are highly uncertain in terms of their origin, occurrence, and impact, and as they call into question previous operating modes of our societies in many ways.

To this day, policy-makers, security officials, and experts struggle to address this transformed risk landscape adequately. Government efforts often focus on particular types of hazards or on specific tasks or stages within the wider risk management cycle. The fact that the responsibilities of government departments in many countries have developed organically rather than by design leads to highly specialized competencies at the various horizontal and vertical levels of government. As a result, many actions are uncoordinated or redundant, and potential synergies cannot be used.

The rather new concept of *Integrated Risk Management (IRM)* offers a possible solution for overcoming some of these problems. IRM aims at integrating the risk management processes in many respects. Such an integrated approach requires comprehensive collaboration among public authorities at all levels of government as well as between public and private actors. Moreover, society must be engaged in dialog to reach a certain degree of consensus, for example, on acceptable levels of residual risk in light of limited resources. Establishing efficient integrated risk management is a demanding task that requires questioning and eventually altering institutionalized roles and responsibilities as well as the present allocation of resources. This process may be jeopardized by actors focusing on their individual mandates or by the inability to exchange information effectively and to leverage the expertise of public agencies.

Several organizations involved in risk analysis and management have recently published reports on Integrated Risk Management and related concepts. Unless otherwise stated, the following paragraphs on IRM draw mainly on these sources:

- Organisation for Economic Cooperation and Development (2009): I*nnovation in Country Risk Management. In: OECD Studies in Risk Management*; Paris.
- Swiss Re (2009): *Country Risk Management: Making Societies More Resilient (Focus Report)*. Zurich.
- World Economic Forum (2007): *Global Risks 2007: A Global Risk Network Report*. Cologny / Geneva; and: World Economic Forum (2008): *Global Risks 2008: A Global Risk Network Report*. Cologny / Geneva.

This focal report assesses the possibilities and the obstacles involved in the move towards a more integrated risk management process. We have structured the various perspectives into four categories that illustrate the multi-faceted character of IRM and for which increased integration may be pursued; these are:

- Hazards;
- Concepts,
- Actors, and
- Society.

These perspectives are discussed in the first part of this report that follows.

All-hazards risk portfolio

The concept of Integrated Risk Management (IRM) is inextricably linked to the adoption of an *all-hazards approach*. In the framework of such an all-hazards policy in governmental risk management, a comprehensive view on all potential sources of risks is applied, encompassing natural and technological hazards as well as deliberate acts of damage. An all-hazards approach aims at achieving an effective overall view on a country's risk portfolio in order to streamline the respective policy options and outcomes. It requires the cooperation of the various actors involved in assessing and addressing the diverse set of risks and vulnerabilities that a country faces.

One of the main benefits of an all-hazards risk management process is the possibility to deploy multiple public agencies as flexible assets that may be used in a variety of situations, rather than rigidly defined areas of responsibility that are only feasible in specific disaster scenarios. There is a far-reaching difference in the focus of these two strategies: While the latter is based on an *anticipatory strategy* that focuses on specific pre-defined hazards, the former is designed to respond to a variety of incidents, amounting to a *resilience strategy*.[1] The narrow focus of the anticipation strategy brings with it the risk of failure in case an incident does not correspond to the established guidelines, whereas it is likely that conceptual, logistical, technical, and mental flexibility will diminish the effects of surprise in case of an emergency.

In addition, all-hazards approaches are likely to improve the actual emergency response by clarifying the roles and responsibilities of the various agencies and authorities involved as well as by improving communication and coherency of action.

In order to overcome the tendency to work within clearly defined borders and achieve a high-level of cooperation across society, governments are required to foster

- the coordination of highly specific expertise from various public and private sources;
- the development of information-sharing mechanisms;
- the improvement of data integration and analysis capacities; and
- the training of personnel as well as multi-agency exercises.[2]

If successful, this enables policy-makers to prioritize investments and interventions across the entire risk portfolio as well as to define an acceptable level of risk for different types of assets in view of limited resources. Elements that are crucial to the success of an all-hazards risk policy include interagency planning and cooperation as well as the integration of information from a broad range of government bodies as well as societal and private actors.

Conceptual perspective on IRM

The pursuance of an IRM approach is linked to a comprehensive risk management *process* with distinct stages. The process orientation as well as the coordination of actors within the established procedure is crucial, as the spectrum of relevant country risks is never static, but subject to ongoing developments. Such a process can foster a shared understanding of risk that contributes to the shaping of political opin-

---

1   Cf. George Avery (2004): Bioterrorism, Fear, and Public Health Reform: Matching a Policy Solution to the Wrong Window. In: Public Administration Review, Vol. 64, No. 3; pp. 275–88.

2   Cf. OECD (2009), pp. 8–10.

ions and the creation of a societal consensus as regards the prioritization of risks.

The suggested process is a somewhat idealized approach to risk analysis and management that must evidently be adapted to the respective institutional circumstances. Basically, the integrated risk management process consists of four stages:[3]

1. Identification:
    The identification of risks is a continuous process that includes the elaboration of potential risk scenarios across all categories of hazards, i.e. political, economic/financial, technological, environmental, and societal/health risks as well as their interconnectedness. Also required is a constant review of the changing risk landscape. Early risk identification helps decision-makers to prevent risks from developing into emergencies.

2. Assessment:
    The assessment includes the qualitative and quantitative classification of risks, based on an estimation of the likelihood of their occurrence and the severity of their potential impact. At this stage, risks must be structured, evaluated, and prioritized. Furthermore, the interdependence of risks must be assessed.

3. Mitigation:
    Risk prevention and mitigation aims at reducing or avoiding a risk by various means, e.g., early warning systems, design specifications, legal provisions, or security and safety measures. The two previous steps are particularly relevant insofar as

they provide decision-makers with information for deciding on risk mitigation measures.

4. Adaptation:
    The adaptation to risks that have occurred or are unavoidable requires extensive planning and financial means. It includes reconstruction measures, the financing of economic losses, contingency planning, etc.

In addition, according to the OECD, many corporate risk management approaches include systematic *evaluation of mitigation measures* and the *consideration of lessons learned* from a crisis. This fifth step facilitates the assessment of the effectiveness of measures taken as well as the re-evaluation of the risk landscape in light of strengthened capabilities.[4] However, many country risk management systems lack such a feature or merely deal with these questions on an ad-hoc basis. The implementation of a re-evaluation process might improve the general handling of risks.

Integration of actors

In order to implement an integrated, all-hazards-based IRM process, the relevant actors from all levels of government and beyond must be coordinated and – to a certain extent – unified under the common risk policy in a coherent fashion. Such a *whole-of-government approach* would require newly created or modified institutional structures that facilitate horizontal and vertical policy governance and cooperation, i.e., an inter-ministerial committee and a coordinating body.

One important requirement for IRM is a high-level *inter-ministerial committee* that will take responsibility for the formulation of the strategic risk policy

3   Cf. Beat Habegger (2008): International Handbook on Risk Analysis and Management – Professional Experiences. Zurich: Center for Security Studies (CSS), ETH Zurich, pp. 20–27. And: Roman Boutellier and Vinay Kalia (2006): Enterprise-Risk-Management: Notwendigkeit und Gestaltung. In: Oliver Gassmann and Carmen Kobe (eds.): Management von Innovation und Risiko. Berlin: Springer, pp. 27–43.

4   OECD (2009), pp. 34f.

framework. Inter-ministerial processes are crucial for building consensus among ministries, for the improvement of policy coherence, and for the disbursement of expenditures according to agreed priorities. In case of an actual emergency, such a committee could also take on certain high-level management responsibilities.

Apart from general coordinative tasks, the responsibilities of the *coordinating body* include the standardization of information flows and reporting requirements as well as methodological guidance – for instance, on how to conduct risk assessments. Regarding the institutionalization of the coordinating body, three models can basically be distinguished:[5]

1. The formation of a new "super-ministry" by merging previously separate key government departments;
2. The creation of a rather small, but influential body with a strong mandate and under direct control of the head of government, possibly with focal points in other ministries; or
3. The broadening of an existing government department's mandate to include the coordination of other agencies and the authority to issue directives.

The consolidation of institutions with responsibility for managing certain hazards offers several potential advantages, including the improvement of horizontal policy coherence, the ability to leverage the highly specific expertise of formerly dispersed agencies, and a more efficient allocation of government resources through pooling. However, the integration of all risk management functions might also have some disadvantages. On the one hand, departments not included in reorganization might neglect their risk management duties due to excessive reliance on the newly created structures, which would run counter to the desired effect of fostering a culture of risk awareness across government. On the other hand, creating new structures does not by itself improve information exchange and policy coordination.

The following examples typify the three models regarding the coordinating body: The first model is epitomized by the approach initially taken by the United States with the creation of the Department of Homeland Security (DHS) in 2003. However, there are indications that certain developments in this regard will be reversed under the new Obama administration, e.g., that the DHS will be less involved in the formulation of strategic risk management policies, instead focusing on its duties at the operational level.[6]

Regarding model 2 and to a certain extent also model 3, the creation of the position of a Country Risk Officer (CRO) as a public-sector equivalent to a Corporate Chief Risk Officer has recently been suggested.[7] The CRO would act as a governmental contact point, with responsibility for managing the multi-area risk portfolio and coordinating the various levels of government as well as private-sector involvement. The role of a CRO must not necessarily be vested in one individual, but might also be exercised by a committee or a group of coordinated CROs. An existing institution that could serve as an example of what a CRO might look like is the UK Civil Contingencies Secretariat (CCS), although it deals with a narrower set of hazards compared to what is suggested by the ideas of

---

5   Cf. OECD (2009), p. 11.

6   Cf. Crisis and Risk Network CRN (2009): Homeland Security in der Administration Obama. In: CRN Report: Factsheet. Zurich: Center for Security Studies, ETH Zurich, March.

7   Cf. Swiss Re (2009), World Economic Forum (2008).

establishing a CRO.[8] In the case of Switzerland with its firmly entrenched federal structures, the integration of the various vertical levels of government cannot be achieved with equal ease by installing a new super-authority or the like. Instead, the only practicable way to achieve that effect would be through strong and institutionalized collaboration, building on regular exchange and consensus, i.e., patterned in some form on the aforementioned model 3, possibly including elements of model 2.

Engaging society

IRM further requires a broad outreach to societal actors and extensive *public-private sector cooperation*, including businesses, NGOs, think-tanks, and academia. Society must take part in the process of shaping a consensus as to which risks should be prioritized. In addition, the engagement of society is important, not only because certain high-consequence risks cannot be mitigated by well-trained first responders on their own, but also in order to recover from such an incident as quickly as possible and to minimize its disruptive impact to vital societal functions and the economy.

Measures to this end include enhancing the risk awareness of society, instructions on self-help for the population, and the reinforcement of community resilience and business continuity. In particular, the following actions are conceivable:[9]

- The start of a dialog with the *general public*, e.g., by publishing potential risk scenarios, in order to inform the population about the government's preparatory measures for emergencies, but also to provide advice on how communities, organiza-

tions, families, and individuals themselves may better prepare for crisis situations.

- Inform *local communities and stakeholders* on the particular risks they face and engage them in the pre-formulation phase of vulnerability reduction policies, especially if property and business interests are affected. Some countries, for instance, provide so called "hazard maps" that help communities, businesses, and individuals to understand these risks as well as their consequences.

- Support business resumption and continuity planning in the *private sector* that complements the state's own efforts in order to ensure that critical functions are available during a crisis. Local authorities and business representatives could be trained on how to perform risk assessments on their own and maintain their business operations in case of an emergency.

Conclusions

As we have shown in the focal report, the concept of Integrated Risk Management is one possible approach towards overcoming some of the problems commonly associated with country risk management systems, including cooperation among actors, resource allocation, and information-sharing. Advanced integration offers several potential benefits concerning the four perspectives identified – hazards, concept, actors, and society. Adopting a comprehensive view on a country's risk portfolio by implementing an all-hazards approach streamlines policy options and fosters a culture of resilience in public administrations. In conjunction with the mobilization and coordination of governmental and private-sector expertise, the depth and consistency of risk analysis will likely be increased. The engagement of society in a risk dialog as an additional integrative element, as well as the adoption of a comprehensive risk management process, provide the basis for decisions re-

---

8   Cf. the website at *http://www.cabinetoffice.gov.uk/ukresilience/ccs.aspx*. See also WEF (2008), p. 38.

9   Cf. OECD (2009), pp. 21–4.

garding which risks are relevant, which levels of risk are acceptable, and ultimately on the allocation and prioritization of resources. Finally, an integrated understanding of risk management makes it easier to focus on synergies instead of trade-offs between the partners and sectors involved in the process.

Annotated Bibliography

This annotated bibliography contains a number of government reports and other policy documents identified as part of the scan described in the introduction to this focal report.

European Commission (2009): A Community Approach on the Prevention of Natural and Man-Made Disasters.

The objective of this communication is to identify measures that could be included in a community strategy for the prevention of natural and man-made disasters, building upon and linking existing measures. Proposed actions focus on areas where a common approach is more effective than separate national approaches, such as developing knowledge, linking actors and policies, and improving the performance of existing instruments for community disaster prevention. The document contributes to the implementation of the Hyogo Framework for Action 2005–2015. It does not cover conflict-related complex emergencies or acts of terrorism.

Organisation for Economic Cooperation and Development OECD (2009): Innovation in Country Risk Management. In: OECD Studies in Risk Management. Paris.

The OECD study on innovation in country risk management discusses recent developments in the risk management processes of select countries, namely in Canada, Japan, the Netherlands, Singapore, the United Kingdom, and the United States. It gives an overview of the all-hazards risk management institutions and policies in the six countries investigated. The report points out innovative approaches in the field, such as multi-risk identification and assessment, the reorganization of risk management structures, the creation of collaborative public and private

partnerships, the allocation of government resources, the reinforcement of resilience and business continuity, the avoidance of harmful domino effects, and others. Conclusions are provided to highlight challenges that the six countries continue to confront in their efforts to implement recently adopted reforms.

Swiss Re (2009): *Country Risk Management: Making Societies More Resilient (Focus Report). Zurich.*

This focus report shows that integrated risk management approaches can help countries identify and prepare for risks. Such an integrated all-hazards approach demands a high level of coordination across governmental, political, and private-sector bodies. The report suggests that a country risk officer could be responsible for managing such a prioritized risk landscape, taking a holistic approach to risk before events occur and ultimately reducing the burden of risk to society.

UN International Strategy for Disaster Reduction ISDR (2008): *Towards National Resilience - Good Practices of National Platforms for Disaster Risk Reduction.*

Governments increasingly recognize the need for comprehensive multi-stakeholder and multi-sectoral national coordinating mechanisms – so called National Platforms for Disaster Risk Reduction – to reduce, prevent, and manage the impact of natural hazards. A total of 45 countries have already launched national platforms for disaster risk reduction, and several others are in the process of establishing them. They contribute to the implementation of the Hyogo Framework for Action 2005–2015. In an effort to inspire and support the birth of new national platforms, and also to strengthen existing ones, the report provides nine case studies of national platforms,

including China, Germany, Iran, Switzerland, and others.

World Economic Forum (2007): *Global Risks 2007: A Global Risk Network Report. Cologny/Geneva.*
World Economic Forum (2008): *Global Risks 2008: A Global Risk Network Report. Cologny/Geneva.*
World Economic Forum (2009): *Global Risks 2009: A Global Risk Network Report. Cologny/Geneva.*

The Global Risks Report, released annually prior to the World Economic Forum's Annual Meeting in Davos, is the flagship publication of the Global Risk Network. The report, published for the fifth time in January 2009, is the result of collaboration with strategic partners such as Citigroup, Marsh & McLennan Companies, Swiss Re, Zurich Financial Services, and the Wharton School Risk Center. Furthermore, a wider group of experts from business, government, academia, and think-tanks participate in several various workshops and discussions and provide expertise and insights to the final report. The core idea of this annual report is to discuss changes occurring in the global risk landscape and to identify those global risks that can be expected to play a crucial role in the upcoming year. The report also explores the interconnectedness of risks and considers how strategies for the mitigation of global risks might be structured.

Avery, George (2004): *Bioterrorism, Fear, and Public Health Reform: Matching a Policy Solution to the Wrong Window. In: Public Administration Review, Vol. 64, No. 3; pp. 275–88.*

During the 1990s, terrorist actions using biological weapons and the fear that rogue states possessed such weapons placed bioterrorism on the political agenda, a policy window widened by the September 11 attacks. Advocates for improving the U.S. public health infrastructure attempted to use this window

to obtain the resources necessary for modernization. This article examines those efforts and identifies significant problems arising from a mismatch between the goals of public health policy entrepreneurs and the policy window used to address them. By defining bioterrorism as a security rather than a public health issue, policy entrepreneurs squander the opportunity to institute broad-based reforms that would improve not only the ability to manage a terrorist incident, but also meet other public health needs. The bioterrorism program proves a useful case study in how the goals of policy entrepreneurs can be displaced by attaching policy preferences to the wrong policy stream.

Boutellier, Roman and Vinay Kalia (2006): Enterprise-Risk-Management: Notwendigkeit und Gestaltung. In: Oliver Gassmann and Carmen Kobe (eds.): Management von Innovation und Risiko. Berlin: Springer, pp. 27–43.

The authors provide a rationale for establishing a holistic approach to enterprise risk management. They claim that the excessive focus on technical risks as well as the approach to tackle each set of risks separately is no longer effective. Instead, a more comprehensive approach, which puts business-oriented risks at the same level as technically-oriented risks, is needed. Furthermore, the authors sketch briefly the main steps in dealing with risks, from eliminating to reducing to transferring to retaining risks, and integrate them in an overall risk management process.

Habegger, Beat (2008): International Handbook on Risk Analysis and Management – Professional Experiences. Zurich: Center for Security Studies (CSS), ETH Zurich, pp. 20–27.

This is the introduction to an edited volume that provides insight into professional practices and methodical approaches of risk analysis and management. In a 12-chapter publication, experts from civil defense organizations, intelligence services, the armed forces, and the financial and insurance sectors explain how they handle risk and uncertainty by identifying upcoming issues, assessing future threats and implementing effective mitigation policies.

Power, Michael (2005): Organizational Responses to Risk: The Rise of the Chief Risk Officer. In: Hutter, Bridget / Power, Michael (eds.): Organizational Encounters with Risk. Cambridge: Cambridge University Press, pp. 132-148.

This article is part of an edited volume that discusses organizational encounters with risk, ranging from errors and anomalies to outright disasters. The editors argue that in a world of increasing interdependence and technological sophistication, the problem of understanding and managing such risks has become ever more complex. Therefore, organizations must often reform and reorganize themselves to respond to crises and to deal with the paradox of managing the potentially unmanageable. Leading experts on risk management raise important questions about how risk can be understood and conceived by organizations, and whether it can be "managed" in any realistic sense at all. Michael Power, who is Professor of Accounting and a co-director of the ESRC Centre for Analysis of Risk and Regulation (CARR) at the London School of Economics and Political Science, analyzes the rise of the chief risk officer (CRO) concept since its first appearance at the company of GE Capital in 1993. In his contribution to the edited volume, he addresses a number of key questions: Who are the CROs and what background and knowledge do they have? Are CROs a functional response to real risks or a passing management fad? What is the status of this role and its function in relation to other corporate control activities?

2 SOCIETAL SECURITY – A NORDIC APPROACH TO MEET MODERN SECURITY CHALLENGES

Background

The term 'societal security' encompasses the conceptual and structural efforts undertaken to reorganize the 'total defense' concept that was applied in the Nordic countries during the Cold War in a way that is commensurate to the modern risks and threats. The 'total defense' system was designed by the Scandinavian countries to mobilize all necessary societal resources in order to support military defense and mitigate the consequences of possible war. Civil support for military defense was a cornerstone of this system. 'Societal security' as a concept is a further development of 'total defense'. As a response to modern threats, it aims to protect the political and social system, institutions, the population, and the critical infrastructure in a networked effort of all state, economic, and social resources, and to mitigate the effects of any crisis that may materialize. As a key part of national security system, 'societal security' is a civil and civilian concept that potentially covers all non-military risks and threats to society.

Definition and Concept

There is no single definition of 'societal security'. A Norwegian parliamentary report defines the concept of 'societal security' rather broadly as:

> "Society's ability to maintain critical societal functions, to protect the life and health of the citizens and to meet the citizens' basic requirements in a variety of stress situations"[10]

In order to describe 'societal security' more concretely, the following features can be identified with regard to a common understanding of this approach in the Nordic countries, regardless of certain national variations in the implementation of the concept:

- Societal security acknowledges the growing array of threats that populations are faced with today. While classical security concepts were geared toward protecting national borders and the population from state-based enemies and external attacks, *societal security* focuses on threats to society's essential functions.
- Societal security as a concept uses an 'all-hazards' approach. It is not connected to any specific scenario or threat, but embraces all possible risks and hazards that a society may face. This implies that all sectors must address the challenges of protecting individuals and society's critical systems from modern-day threats in a comprehensive way. Public, private, and military actors are each seen as individual elements to be mobilized as a part of an overall response to severe societal disruptions.
- The approach aims to replace the state-centric and sector-specific perspectives on security and wants to help to reorient perceptions of how to protect domestic populations, because mobilization for societal security in the modern world is a cross-sectoral, cross-border, and multi-level task.[11]

Societal Security System

Main Principles

Based on the Nordic experiences with the 'total defense' system during the Cold War, societal security is conceived as a bottom-up framework, which means that local capabilities constitute the basis for society's ability to manage crises. In the framework of societal security, military forces and tools are to be

---

10   Parliamentary Communication no. 17 (2002): Societal Security: The Path to a Less Vulnerable Society.

11   See Rhinard, Mark (2007): Societal Security: An Emerging Role for the European Union. In: Building Societal Security in Europe: the EU's role in managing emergencies, Working Paper No. 27. Brussels: European Policy Centre (EPC), p. 12.

used when the sovereignty and territorial integrity of the nation are at risk, but the concept recognizes that military instruments are not usually appropriate for dealing with most modern threats and risks. In this context, civilian structures have taken on a crucial role in the area of national risk and crisis management. Nevertheless, depending on the nature of the crisis, civilian institutions may still require military support; hence, civil-military cooperation remains one of the key parts of a societal security system. There are three main principles governing the organization of the societal security system in the civilian sphere: responsibility, parity, and proximity or subsidiarity:

1. The principle of responsibility means that the person/authority who ordinarily has responsibility in the relevant area should assume corresponding responsibility during major emergencies or situations of armed conflict.
2. The principle of parity means that as far as possible, during major emergencies or war, public authorities should be organized and located as they are during peacetime.
3. The principle of proximity or subsidiarity means that major emergencies should be managed locally where they occur, by authorized public personnel at the lowest possible decision-making level who are only supported by regional and national authorities when necessary.[12]

Characteristics

Transparency: A societal security system built upon the principles described above has the advantage of

being more transparent, since responsibility is clearly allocated at the local, regional, and national levels of society. Government actors at each of the three levels have a sectoral responsibility, i.e. they are responsible for maintaining their capacity to function at all times.

Coordination: Within each territorial area, there is a designated lead authority that provides coordination both vertically and horizontally. On the national level, the lead authority is the national government, the responsible ministry, or the governmental agency; on the regional level, the lead agencies are the county administrations; and on the local level, the lead agencies are the municipalities.

Cooperation: Major crises often have international causes leading to cascading effects on several sectors of society, policy, and the economy. For this reason, societal security must be pursued on a multi-level and international basis. Cooperation in matters of military and civilian security is crucial, as are close links between the public and private sectors.[13]

In conclusion, the concept of societal security aims to respond to the challenges posed by modern risk and threats by maintaining the principles of the 'total defense' approach, but with more emphasis on civil and civilian aspects, allowing risks such as international terrorism, organized crime, natural disasters, migration, or pandemics to be tackled efficiently. It addresses these problems from the standpoint of the community or individual rather than in terms of the centralized nation-state; it allows policy application to be both very localized and internationalized when required; and it recognizes the important skills and

---

12   See Daniel Hamilton et al. (eds. / 2005): Protecting the Homeland: European Approaches to Societal Security – Implications for the United States. Washington, D.C.: Center for Transatlantic Relations, pp.23f. And: Burgess, J. Peter and Sissel Haugdal Jore (2008): The Influence of Globalization on Societal Security: The Norwegian Context. In: PRIO Policy Brief No. 4/2008, Oslo.

13   See Hamilton et al. (2005), p. 25. Rhinard (2007), p. 14. And: Burgess, J. Peter and Naima Mouhleb (2007): A Presentation of the State of Societal Security in Norway. In: PRIO Policy Brief No. 9/2007, Oslo.

capacities required for a society to meet contemporary security challenges.

Implementation/Practices

The following paragraphs give an overview of the societal functions identified as critical by the three Nordic countries of Sweden, Norway, and Finland. It describes the organizational approaches that have been established in the area of societal security since the end of the Cold War.[14]

Societal functions whose maintenance is critical

Sweden

The new security strategy presented by the Swedish government in 2006 emphasizes societal security. According to this document, societal security is a concept for responding to events and conditions that overtax the capabilities of individuals to cope, and which damage the functionality of society. The general objectives for Swedish security should be to safeguard:

- the lives and health of the population;
- the functionality of society;
- the ability to preserve the fundamental values of the society, such as democracy, law and order, and human rights and freedoms.[15]

Beyond these general objectives of the security strategy, which also imply maintaining a military capability, critical societal functions are defined by the Swedish emergency preparedness and response agencies

as functions that fulfill one or both of the following conditions:

1. A shutdown or severe disruption in the function, on its own or in combination with other similar events, can rapidly lead to a serious society-wide emergency.
2. The societal function is important or essential for responding to an existing serious emergency and minimizing the damage caused by it.[16]

In this context, functions that must be operable for preventative purposes are energy supply, water supply, electronic communications, payment systems, the capability to maintain law and order, the public administration, and health and medical care. Furthermore, crucial elements for emergency or crisis response include the ability to disseminate information to the general public and to coordinate emergency management.[17]
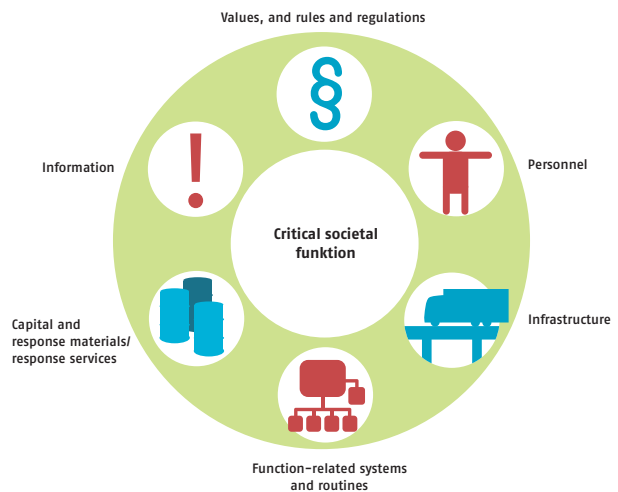

Figure 1: Swedish critical societal functions[18]

---

14   The focus here is on internal security structures and institutions. The international crisis management cooperation of the Nordic states that is also a part of the societal security concept can not be addressed here.

15   Summary of *"Cooperation in crisis – for a more secure society"*, Government Bill 2005/06: 133, p. 6.

16   Swedish Emergency Management Agency SEMA (2008): *Risk and vulnerability analyses – guide for governmental agencies*, p. 17.

17   Swedish Emergency Management Agency SEMA (2007): *Critical Societal Functions*, Fact sheet: Societal Security.

18   SEMA (2008), p. 29.

The Swedish definition of critical societal functions and values whose maintenance is essential, as mentioned above, is to a large extent shared by Finland and Norway. However, some differences can be observed regarding the general understanding of societal security and the vital societal functions.

Norway

In Norway, there is no single national security strategy. Societal security is delimited and defined in different ways in the various official documents that deal with the concept. There is a narrow societal security concept that is similar to the Swedish one and that is based on the same perceptions of society's vital functions. Apart from this, there is also an approach with a much broader scope. Besides critical security areas (incident management, critical infrastructure, information technology, communication, etc.), it also defines as vital to society's security certain policy areas such as health care, the environment, climate protection, sustainable development, and human security, which focus on global issues or crises that threaten individuals and communities worldwide.[19]

Following this extremely broad definition, the notion of 'societal safety' has been introduced in political debates as a broader approach that has interfaces with other security- and safety-related areas such as national security, emergency and incident management, sustainable development, and human security:

However, the difficulty with such a broad approach is that because it contains all aspects related to security and safety in society, it is difficult to grasp and use.[20]

Figure 2: Societal safety and other security- and safety-related areas[21]

Finland

The Finnish government in 2006 published its 'Strategy for Securing the Functions Vital to Security'.[22] It defines the vital functions of society that are comparable with those of neighboring countries. Moreover, the strategy determines the desired end-states of society's vital functions and assigns tasks to ministries. Beyond the functions listed in this strategy paper, Finland has introduced 'psychological crisis tolerance' as an additional category.

According to the Finnish strategy, psychological crisis tolerance refers to the nation's capacity to endure stress in security situations and to overcome the consequences. This vital function is to be preserved by maintaining social integrity, communications, education, cultural identity and the protection of the nation's cultural heritage, religious activities, as well as non-governmental activities focused on bolstering

---

19   See Burgess, J. Peter and Naima Mouhleb (2007).

20   Burgess, J. Peter and Sissel Haugdal Jore (2008).

21   See Einar Olsen et al. (2007): *Societal Safety: Concept, Borders and Dilemmas*. In: Journal of Contingencies and Crisis Management, Vol. 15, No. 2, June 2007; p. 73.

22   Finland (2006): *The Strategy for Securing the Functions Vital to Society*. Government resolution adopted on 23 November 2006.

the nation's resolve to maintain national defense and its crisis tolerance.

The strategy defines the desired end-state of the nation's psychological crisis tolerance as a collective will to uphold national sovereignty and to maintain the population's livelihood and security in all security situations.[23]

Organizations/Structure: Central Role of Coordination

The bottom-up societal security system based on the three principles of responsibility, parity, and proximity assigns to the municipalities a key role in civil emergency and crisis planning, preparation, and management.

Sweden

In Sweden, the municipalities have to conduct risk and vulnerability analyses for all activities that must be maintained when exceptional circumstances arise within the geographical boundaries of the municipality. The municipal authorities are also responsible for cooperation and coordination at the local level.[24]

At the national level, Swedish civil emergency and crisis planning focuses mainly on major crises and emergencies with a national or international dimension. Regarding coordination tasks at the national level, until the end of 2008, the Swedish Emergency Management Agency (SEMA) had a central role in coordinating the activities of governmental agencies and the private sector in the six greater coordination areas regarding the functionality of society, which are: Technical Infrastructure; Transport; Spreading of Hazardous/Toxic Materials (nuclear, biological and chemical); Economic Security (payment systems, transfer systems, etc.); Coordination, Interaction, and Information by area; and Protection, Rescue, and Care.

As the main governmental coordination authority, SEMA could be compared to the US Department of Homeland Security. The agency was responsible for national and international horizon-scanning, which – in addition to the annual risk and vulnerability analyses across all governmental actors – provides a comprehensive threat assessment. Furthermore, the tasks of SEMA included coordinating the dissemination of information to the public and media, coordination of support for the local and regional levels, deciding on cross-sectoral measures and priorities, and international cooperation.[25]

On 1 January 2009, the Swedish Civil Contingencies Agency (MSB) was established. It took over the responsibilities of SEMA, the Swedish Rescue Services Agency, and the Swedish National Board of Psychological Defence. The MSB consists of five departments:

1. Risk & Vulnerability Reduction Department
2. Coordination & Operations Department
3. Training, Exercises & Emergency Preparedness Department
4. Evaluation & Monitoring Department
5. Administration Department

The overall objective of the MSB is to advance and support societal preparedness for emergencies, crises, and disasters and to contribute to reducing the consequences of these when they occur. The MSB therefore has an important role in coordinating

---

23   Ibid., p. 19.

24   Summary of "Cooperation in crisis – for a more secure society, Government Bill 2005/06: 133, p. 10.

25   Ibid., p. 15. See also Hamilton et al. (2005), pp. 22–6.

across and between various sector boundaries and areas of responsibility.

The MSB is responsible for matters related to:

◆ civil protection, meaning public safety in the form of protection from incidents, accidents, and other types of emergencies and disasters,
◆ emergency management, which is defined as a process to reduce loss of life and property and to protect life, property, and the environment from all types of hazards and risks through a comprehensive, risk-based emergency management program of prevention, planning, preparedness, response, and recovery,
◆ civil defense, meaning public safety during wartime,
◆ international humanitarian operations.

The MSB's mandate spans the entire spectrum of threats and risks, ranging from everyday accidents to major disasters and war.[26]

Norway

The structure and responsibilities of Norway's societal security system were organized locally, in analogy to the Swedish model. However, since the 2002 government report "*A Vulnerable Society*", some efforts have been undertaken to centralize the work of civil crisis management, without taking away local responsibility. The idea of establishing a new Crisis and Emergency Department proved not to be feasible. Instead, the Directorate for Civil Protection and Emergency Planning (DSB) was founded in 2003 and has been given special responsibility for societal security in Norway.[27]

The main strategic tasks of the DSB are:

◆ to identify and draw attention to hazards and vulnerability in society, especially in areas of critical importance for society;
◆ to reduce the risk of loss of life, as well as damage to health, the environment, vital public functions, and material assets through preventive work;
◆ to take initiatives to strengthen society's ability to handle accidents and crises, and also to lead and further develop the civil defense sector as a national reinforcement resource;
◆ to be a guiding partner for other stakeholders in the field of civil protection and emergency planning; and
◆ to contribute to placing Norway in a visible position in the international field of civil protection and emergency planning.[28]

In 2005, the DSB was given responsibility for coordinating the supervision of activities, objects, and enterprises that have the potential for causing major accidents. In this respect, the DSB is charged with responding in multiple ways to potential threats and incidents, and with supervising and evaluating risk areas, including the evaluation of critical infrastructure. The DSB regularly publishes its reports on and evaluations of different societal concerns.[29]

Finland

In Finland, there is no main coordinating authority in the area of societal security that is comparable to the Swedish MSB (former SEMA) or the less powerful Norwegian DSB. At the operational level, civil protection and rescue services are organized locally by county and municipal administrations. The Department for

---

26 See http://www.msb.se/en/Civil-contingencies/

27 Burgess, J. Peter and Naima Mouhleb (2007).

28 Directorate for Civil Protection and Emergency Planning (2007): *DSB Annual Report*.

29 Burgess, J. Peter and Naima Mouhleb (2007).

Rescue Services of the Ministry of the Interior acts operationally as the highest national authority that organizes and coordinates national rescue services.

At the national level, the responsibilities in the framework of societal security are divided among several independent authorities or ministries that act together in case of emergencies or crisis. The severity and extent of the situation at hand determines the level at which the state manages and coordinates the crisis.
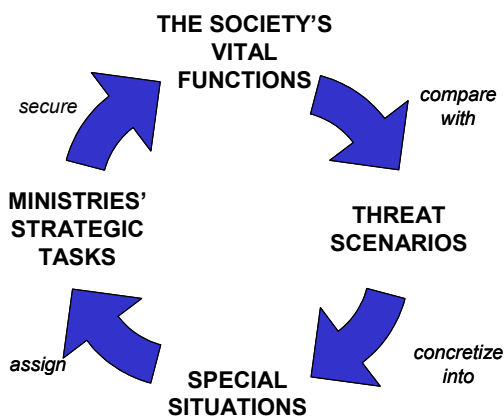

Figure 3: Finnish principle of securing the vital functions[30]

Emergency and crisis preparation is developed on the basis of the scenarios outlining threats that jeopardize society's vital functions, including the most important special situations within each scenario. A ministry with primary responsibility for preparedness and situation management has been designated for each special situation, in accordance with its mandate. Other ministries support the responsible ministry. In order to secure society's vital functions, strategic tasks required by the security environment are assigned to ministries. In the case of a crisis at

the national level, the government is the coordinating authority.[31]

Conclusions

Sweden, Norway, and Finland to a large extent share the same perception of the functions that are vital to society and whose maintenance is therefore critical in the framework of societal security. The concept of societal security reflects the Nordic philosophy that security requires a comprehensive societal effort. Thus, the societal security structures in the three Nordic countries are based on the three principles of responsibility, parity, and proximity. In this bottom-up system, the municipalities have a key role to play in civil emergency and crisis planning, preparation, and management. Corresponding to the subsidiarity principle, local authorities are only supported by regional and national agencies and organizations when necessary. In this context, the societal security concept can also be adopted in federal states where the level of local and regional autonomy is high. However, to ensure the functioning of a national societal security system, effective coordination throughout the sectors and between the public and private actors remains decisive.

---

30   Ibid., p. 4.

31   Finland (2006), pp. 1–4.

Annotated Bibliography

This annotated bibliography contains a number of government reports and other policy documents from the scan described in the introduction to this focal report.

Sweden

Swedish Emergency Management Agency (2008): <u>Risk and Vulnerability Analyses – Guide for Governmental Agencies</u>.

The guide addresses risk and vulnerability analyses as a part of governmental agencies' security efforts and as a means of preventing risks and preparing for exceptional events. It discusses what a risk and vulnerability analysis should embrace and defines critical societal functions from an emergency preparedness perspective. Moreover, the document describes the initial part of the analysis phase (identification of threats/risks) and provides guidance for assessing and ranking identified threats and risks based on their probabilities and consequences.

Summary of Government Bill 2005/06:133: <u>Cooperation in Crisis - For a more Secure Society</u>.

This Summary of Swedish security strategy puts the roles and responsibilities of all parties involved in a coherent framework in order to protect society and citizens in the framework of societal security. Central to this strategy is the emphasis on the security of the society. In the document goals for Swedish security and threats to the Swedish society are defined and the working method described. Its aim is to determine which threats endanger the national security and how to anticipate and meet those threats, irrespective of their origin or nature. The security strategy adopts an integrated approach that encompass-

es the entire chain of security building from activity aimed at prevention and at reducing the vulnerability of society to activity relating to the management and reconstruction when an emergency is over.

Swedish Emergency Management Agency (2007): <u>Critical Societal Functions</u>, Fact sheet.
Swedish Emergency Management Agency (2007): <u>Basic Levels of Security</u>, Fact sheet.

The SEMA fact sheets inform on key concepts of the Swedish societal security system. The papers determine basic levels of security and define critical societal functions. Moreover they give an overview about government's activities to improve the society's security as well as inform the population about authorities' responsibilities for a particular activity in the framework of the national societal security structures.

Norway

Directorate for Civil Protection and Emergency Planning (2007): <u>DSB Annual Report</u>.

The Norwegian Ministry of Justice and the Police has responsibility for coordinating and supervising civil protection and emergency planning. The Directorate for Civil Protection and Emergency Planning (DSB) supports the ministry's coordinating and supervisory role in this area in the civilian sector. The Royal Decree of 24 June 2005 gives DSB the responsibility for coordinating supervision of activities, objects, and enterprises that have the potential for causing major accidents. This coordinating responsibility covers all sectors, including both those that come under DSB's special area of jurisdiction and those that are covered by other legislation.

International Peace Research Institute (PRIO): Policy Briefs. Available at: <http://www.prio.no>

The PRIO Policy Briefs examine the state of societal security in Norway. They deliver background information about policy initiatives regarding recent development of the societal security systems in Norway. In this context, contents of key documents and governments strategies only available in Norwegian are analyzed and presented in English.

The following official documents on the Norwegian concept of societal security and the Civil Crisis Response System were only published in Norwegian and are not accessible in English and/or are confidential:[32]

- White Paper no. 37 (2004–2005) on societal security;
- Civil Crisis Response System (SBS-05), CONFIDENTIAL;
- In spring 2008, the Norwegian Ministry of Justice and the Police announced plans to submit a white paper on civil protection.[33]

Finland

Finland (2004): *Finnish Security and Defence Policy 2004. **In: Government Report to Parliament, 24 September 2004.***

The Security and Defence Policy Report 2004 is the Finnish government's basic position, setting out the principles and objectives for Finland's security and defense policy and providing a framework for its implementation in the different sectors. The report conducts a thorough examination of the change in Finland's international environment and its effects on Finland's capability as well as on comprehensive security into the 2010s. The assessment of both external and internal risks to national security creates the basis for determining the course of action. Based on these considerations, the report shows the development and resource needs that focus on the different dimensions of the capability, external capability, especially crisis management capability, defense, maintenance of internal security, and the safeguarding of society's central basic functions.

Finland (2006): *The Strategy for Securing the Functions Vital to Society. **Government Resolution 23, November 2006.***

The Finnish government resolution on the Strategy for Securing the Functions Vital to Society upholds the goals of national sovereignty, the security of society, and the livelihood of the population in all security situations. Taking into account the internationalization of, as well as changes in, the security environment and structures of society, the document lists and defines society's vital functions, determines their desired end states, and assigns strategic tasks to ministries. Furthermore, the resolution presents nine scenarios describing the threats that jeopardize the vital functions of society and its stability. The threat scenarios included in the strategy are: disturbance in the electricity grid; serious disturbance affecting the health and income security of the population, serious disturbance in the functioning of the economy; major accidents and natural disasters; environmental threats; terrorism as well as organized and other serious crime; threats linked to migration; political, economic, and military pressure; and the use of military force.

---

32   This information is available at: <http://www.dsb.no/>.

33   See "*Inadequate coordination of the work involved in civil protection - Document no. 3:4 (2007-2008)*".

CSS
ETH Zurich

The **Center for Security Studies (CSS) at ETH Zurich** specializes in research, teaching, and information services in the fields of international relations and security policy. The CSS also acts as a consultant to various political bodies and the general public. The Center is engaged in research projects with a number of Swiss and international partners, focusing on new risks, European and transatlantic security, strategy and doctrine, state failure and state building, and Swiss foreign and security policy.

The **Crisis and Risk Network (CRN)** is an Internet and workshop initiative for international dialog on national-level security risks and vulnerabilities, critical infrastructure protection (CIP) and emergency preparedness.
As a complementary service to the International Relations and Security Network (ISN), the CRN is coordinated and developed by the Center for Security Studies at the Swiss Federal Institute of Technology (ETH) Zurich, Switzerland. (www.crn.ethz.ch)