

CRN ROUNDTABLE REPORT

3RD ZÜRICH ROUNDTABLE ON COMPREHENSIVE RISK ANALYSIS AND MANAGEMENT

How to Detect Emerging Risks

Zurich, 24 November 2006

organized by
the Crisis and Risk Network (CRN)

This report is available on the Internet: www.crn.ethz.ch

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1 THE CRN ROUNDTABLES: BACKGROUND AND OBJECTIVES

The 3rd CRN Roundtable, which took place on 24 November 2006 at ETH Zurich, continued the Roundtable series on Comprehensive Risk Analysis and Management of the Crisis and Risk Network (CRN). It was successfully launched in December 2005 as a new format of discussion and exchange within the CRN, and is part of an initiative for international dialog on national-level security risks and vulnerabilities. The first roundtable on the topic of national approaches to risk analysis was followed in May 2006 by a second roundtable on issues of risk communication.

The CRN today consists of several partner organizations in Switzerland and other European countries. It includes the Swiss Federal Office for Civil Protection, the Swedish Emergency Management Agency, the Norwegian Directorate for Civil Protection and Emergency Planning, the German Federal Office of Civil Protection and Disaster Assistance, the Danish Emergency Management Agency, and the Ministry of Interior and Kingdom Relations of the Netherlands. The CRN initiative is actively reaching

out to additional organizations in order to further expand its international circle of partners. The CRN Roundtables are intended as a platform for bringing together a select group of experts to explore the character and dynamics of the contemporary risk environment. By establishing a collaborative relationship and exchange among likeminded experts, they foster a continuous international risk dialog and contribute to a better understanding of the complex challenges confronting the risk analysis community today. The CRN Roundtables take place twice a year.

The CRN initiative is academically and logistically supported by the CRN research team, which is part of the Center for Security Studies at ETH Zurich, a renowned academic institute in the field of international and national security policy, guaranteeing top-quality organizational and academic support for the CRN initiative. More information about the CRN (www.crn.ethz.ch) and the Center for Security Studies (www.css.ethz.ch) can be found on the internet.

2 OPENING AND INTRODUCTION TO THE 3RD CRN ROUNDTABLE

2.1 Welcome Address and CRN Overview

CRN coordinator *Myriam Dunn* welcomed the participants of the 3rd CRN Roundtable on Comprehensive Risk Analysis and Management and expressed the hope that it would be an interesting and inspiring session. She reminded participants of the aims of the Roundtable series – exploring the characteristics and dynamics of the contemporary risk environment, establishing exchange between like-minded experts, fostering an international risk dialog, and enlarging the CRN initiative. She then provided background information about the CRN initiative, which greatly profits from its linkages to the Center for Security Studies

at ETH Zurich in terms of content (wide research focus in international and security politics), human resources (full-time senior researchers and doctoral candidates), and administrative support (organizing events and maintaining the CRN website). Dr. Dunn introduced the members of the CRN research team and the new website, which was launched in October 2006. She also gave an overview of recent and forthcoming publications by team members, as well as conferences in which the CRN team actively participated.

2.2 “Political Risk Analysis Handbook”

CRN senior researcher *Beat Habegger* presented the research project “Political Risk Analysis Handbook”. The premise of this publication is to examine a variety of methodological approaches of risk analysis from many different perspectives – across national, methodological, and community boundaries. He described the main goals, such as giving insight into the practice and methodological approaches of political risk analysis, initiating knowledge transfer among experts, and facilitating communication with decision-makers, as well as stimulating reflection on methods. He further explained that the term ‘political risk’ is to be understood in a very broad sense: On the one hand, the CRN always looks at risks

from a social science perspective, examining issues such as the emergence of risks, risk perception, or the transfer of risk analysis into decision-making processes. On the other hand, political risks are broadly defined as uncertain future events that are induced by human action and have negative effects on the goals and plans of individuals or institutions. This includes all risks emanating from the major social systems that we live in – the political system, the economic system, or the cultural system. It also implies that political risks, unlike natural or environmental risks, can be controlled, changed, or influenced by human behavior and decision-making.

The “Political Risk Analysis Handbook” will have two main parts: the first part will contain short lexical chapters on specific methods, specifically covering methods of creativity, decision-making, structuring, or scenario-building. The second part will contain contributions by authors whose professional tasks encompass the identification and assessment of political risks, coming from public administrations, security institutions, international

institutions, and private companies. The guiding questions for authors are the following: How does your organization identify and assess (emerging) political risks? What methods do you use and how do you proceed in your daily work? How is the outcome of analysis integrated into the organization’s decision-making process? How does political risk analysis contribute to your organization’s success?

3 HOW TO DETECT EMERGING RISKS: INTRODUCTION AND SELECTED KEY QUESTIONS

3.1 Topic of the 3rd CRN Roundtable

A recurring topic of discussions at CRN Roundtables is the question of how to anticipate and identify risks that are unknown to all or most observers, and how to integrate them into risk analysis and the decision-making process. The high degree of uncertainty surrounding newly emerging risks, in terms of their probability of occurrence as well as their damage potential, creates tremendous challenges for risk analysts and decision-makers alike.

At the first CRN Roundtable in December 2005, participants used the catchphrase “thinking the unthinkable” for establishing the idea that “creativity and imagination may help to think beyond the limits of the already known” (1st Zurich CRN Roundtable, Report, p. 9). It was suggested that different and more innovative methods be sought when trying to identify emerging risks. The expertise of a vari-

ety of disciplines in the social sciences, and especially the contributions of creative and innovative thinkers (for instance in the domain of futures studies), might contribute to better results in the sense of better reflecting the overall threat picture.

The feedback provided by some participants and their proposals for topics of upcoming CRN Roundtables emphasized the need for a more comprehensive look at methods and instruments for the identification of new risks. Moreover, it is widely recognized that more imagination and creativity are required in risk analysis, and that more study is required to compensate for this deficit. Thus, the topic of the 3rd CRN Roundtable, “How To Detect Emerging Risks”, is a timely and relevant response to the stated demand of CRN partner organizations.

3.2 Introduction to the topic

Defining emerging risks

Emerging risks are distinguished from acute risks by the fact that they have already been spotted ‘on the horizon’, but have not yet materialized into clearly definable or even quantifiable threats. They tend to be very dynamic, and the novelty of such risks means that there are no past experiences on which to base risk analysis and risk management. They are diffi-

cult to describe, to measure, and to quantify, and the further development of such risks is highly uncertain. Little information is available for assessing whether a specific risk will really develop into a concrete threat that must be managed actively, making it equally difficult to decide on the appropriate risk communication measures.

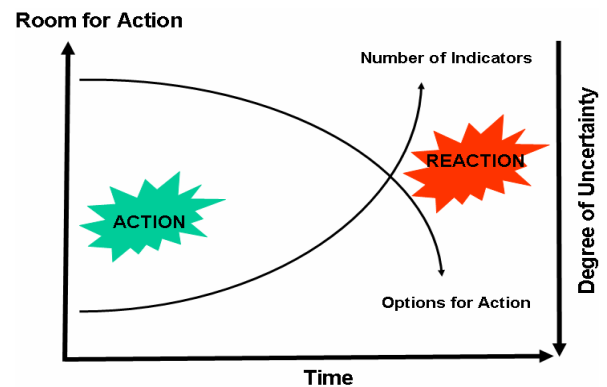
Rationale

The identification of risks is the first step in risk analysis and an essential element of effective risk management. Only if the risk landscape is observed in a broad manner can a holistic picture of the threat situation be drawn and the appropriate countermeasures planned and implemented. Therefore, an effective early-warning system is a necessary tool for decision-makers: it helps them to prevent risks from developing into issues that are likely to threaten stated goals, interests, or values; and it provides them with sufficient time to take the appropriate measures for tackling risks before they arise and appear on the political agenda. Thus, the early identification of emerging risks reduces 'surprise effects', increases the room for maneuver of decision-makers, and increases the overall flexibility of governance.

Conceptual approach

The conceptual starting point is the insight that emerging risks can usually be detected long before they turn into real threats. An effective early-warning system, acting as a 'strategic radar' in all environments relevant to an organization, can detect discontinuities in trends hitherto perceived as stable and unchanging. These discontinuities are foreshadowed in the form of 'weak signals'. Our concept builds upon the idea that risks do not emerge 'out of the blue', but always have a history of development. Consequently, the earlier the indicators pointing to discontinuities and

upcoming threats are detected, the more options for action are available, and accordingly better risk management measures can be initiated.



Information as the key resource

Collecting and processing information is the essential precondition for spotting upcoming issues at an early stage. The constant accumulation of information allows for more structured and explicit evidence of potential changes in an external environment. The challenge, therefore, is to broaden the scope of available sources, to access the relevant sources, and to use the collected information in a more creative way. There is a multitude of methods that can be expected to contribute to this end. However, the tools and techniques developed and used in futures studies are given particular emphasis at this point. They are designed as more formalized and systematic procedures for detecting the variety of possible future paths and developments.

3.3 SELECTED KEY QUESTIONS FOR SESSIONS II AND III

Session II

The challenge of identifying emerging risks: tools and techniques

- What is your organization's rationale for identifying and analyzing emerging risks?
- What is your approach and what tools and techniques do you use for detecting emerging risks?
- Are you aware of any shortcomings, and what are they?
- Are you sure that the risks that your organization is aware of are the ones that are really threatening you?
- Are the risks you consider to be relevant adapted to the real-world threat picture?
- How do you enhance your capabilities for thinking creatively about the future?
- Do you use external sources of knowledge for supporting or complementing your analyses?

Session III

Overcoming institutional obstacles: integrating emerging risks in the decision-making-process

- How does your organization deal with the usually long-term time horizon of emerging risks?
- How do you make decision-makers aware of your results and bring emerging risks to their attention?
- Is your organization appropriately equipped for dealing with emerging risks?
 - Do your staff members have the right mix of educational and professional backgrounds? Is the internal structure of your organization adequate, and does your IT-supported infrastructure meet your needs for identifying risks?

4 “FORESEEING RISKS”: KEYNOTE ADDRESS BY PROFESSOR MARJOLEIN VAN ASSELT

The 3rd CRN Roundtable was opened with a keynote address delivered by Professor *Marjolein van Asselt* of the Technology and Society Studies Group at the Faculty of Arts and Social Sciences at Maastricht University. Under the title “Foreseeing Risks”, she provided a variety of insights into the topics of new risks, uncertainty, and the corresponding methodological challenges. She described herself as an ‘undisciplined scientist’ and first provided the participants with an overview of her interdisciplinary research interests and experiences.

Prof. van Asselt started her presentation by conceptualizing ‘new risks’. While ‘traditional risks’ are ‘real’ in the sense that they have already occurred in the past, ‘new risks’ are uncertain and only insufficiently known or recognized. This implies a shift from the conventional probability orientation, based on the past and informed by statistics, to a future-oriented possibility approach. In such a perspective, all elements of the conventional description of risk as an equation of ‘probability x effect’ must be questioned. These new risks exhibit characteristics, such as absence or shortcomings of experience; complex causalities; multiple, heterogeneous, and long-term effects; and absence of historic or scientific

proof, that do not fit into traditional thinking about risk.

Prof. van Asselt presented different categories of uncertainty by linking ontological and epistemological sources of uncertainty. On the

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one hand, she pointed to uncertainty due to limited knowledge, originating from measurable elements (inexactness, lack of observations, practical immeasurability) to more radical uncertainty (conflicting evidence, ignorance, and indeterminacy); on the other hand, she highlighted the sources of uncertainty, which she attributed to variable factors such as natural randomness, ambiguity, behavioral variability, societal randomness, and technological surprise. She

also emphasized that uncertainty does not mean non-knowledge; in particular, experts often have quite good information or ideas about what is uncertain in terms of which uncertainties are important, the source of uncertainty, whether it can be reduced and how, or which interpretations seem valid in view of the current state of knowledge.

The pitfall, however, is the ‘uncertainty paradox’. Although the existence of uncertainty is generally acknowledged, the role of science is often framed as providing certainty. Experts often know what they know and what

they do not know, but policy-makers or judicial authorities resort to them for conclusive evidence and definite answers, cajoling or even forcing them to provide ‘plausibility proofs’ about inherently uncertain risks. This leads to a methodological challenge: The classical methodologies of risk assessment become inadequate in view of the future-oriented assessment of possibilities that is needed today. What is required is the development of an uncertainty-tolerant attitude (an attitude that takes uncertainty into account), thinking out of the box, and the use of different methodologies.

As one promising approach, Prof. van Asselt suggested borrowing from the methodologies of futures studies. While the field of futures studies itself is highly fragmented, and the risk community is usually separated from the futures community, it nonetheless tries to understand, map, and sketch the future. It is therefore useful for risk analysis professionals to be aware of approaches in this field. The key idea of futures studies is to systematically think about the times ahead and to ask questions such as what is imaginable, what is (im-)possible, and what is (un-)desirable.

There are two main approaches in futures studies – prognoses and scenarios. Because prognosis is probability-oriented, the most useful approach for risk assessment of emerging risks is scenario development. The ‘scenario’ is a concept borrowed from the theater that refers to the description and setting of scenes. Scenario development involves an experiment in thought, i.e., imagining a variety of courses of events and processes of the future, in as many different and diverse directions as

possible. Scenarios are usually developed in four steps: brainstorming (thinking out of the box and collecting ideas), structuring (organizing the collected ideas), story-telling, and scenario writing. There are many different forms of scenarios that can be roughly distinguished as being simple or complex, formal or intuitive, more explorative or more geared towards policy preparation.

Prof. van Asselt then explored two challenges for futures studies practice in more detail: uncertainty and discontinuity. Uncertainty is perceived in various ways: as negative (danger, threat), as beneficial, two-sided (danger or opportunity), sometimes it is inconsequential, ignored (as if it is certain), or is simply not evaluated. Generally, it is tremendously difficult to understand how people deal with uncertainty because it is hard to observe and measure. However, we can identify some characteristics of how human beings deal with uncertainty. These are: First of all, the construction of solidity through the transformation of particular interpretations of uncertainty into solid argumentative building blocks; secondly, the deployment of past experience and acquired know-how for the interpretation of uncertainty; third, the use of a numeric discourse by mobilizing the certainty-connotation of numbers and numeric models; and fourth, specific communication habits such as vagueness and postponing, delegating responsibility to other people or ‘the force of nature’ etc. Prof. van Asselt concluded that a process of ‘certainification’ often takes place in which initial uncertainty awareness is compromised by increasing uncertainty intolerance and solidify-

ing efforts that yield definite and solid accounts about the future.

The second challenge for the practice of futures studies is discontinuity, defined as a break in a dominant condition in society caused by the interaction of events and long-term processes. Prof. van Asselt claimed that the majority of scenario studies are discontinuity-poor. Human beings are reluctant to think about discontinuity due to cognitive limits and psychological predispositions, and due to our tendency to think in linear and evolutionary ways. However, for developing discontinuity-oriented scenarios, it is important to think in revolutionary rather than evolutionary terms. Research by her former Ph.D. student Philip van Notten suggests that this can be stimulated by putting together a group of people as diverse as possible, by using established methods in more varied ways, by integrating underdeveloped methods into the process, or by

comparing projections of the future in the past with the actual historical outcome.

Prof. van Asselt wrapped up her presentation by reminding the participants of the key challenge when dealing with new risks: to generate ideas about possibilities as a future-oriented form of risk analysis, leaving behind the classic scientific approach of probabilistic risk assessment centered on the verifying/falsifying paradigm. She encouraged the participants to think out of the box, to use analogies, to reason about speculations and worst-case scenarios, to explore changes in conditions and system changes, and to broaden their 'knowledge base'. The last point refers to the quality of being receptive to theoretical suspicions even without empirical evidence; to dissident views and framings; to testimonies and observations that cannot be explained; to analogies; to anecdotic material; to input from citizens, practitioners, stakeholders, and all kinds of organizations.

5 THE CHALLENGE OF IDENTIFYING EMERGING RISKS

5.1 Emerging Risks in the Insurance Industry

Bruno Käslin of the Institute of Insurance Economics at the University of St. Gallen had been invited to offer his insights into private-sector experiences for dealing with emerging risks, in particular from the perspective of the insurance industry. Due to circumstances, however, he was unable to attend. Fortunately though, he kindly agreed to share his slides with the CRN roundtable participants.

The key rationale for an early detection of risks is that it allows greater room and more time for action. Mr. Käslin underlined this by pointing to the asbestos problem, which had been known for at least a half a century, but was simply ignored by the insurers for a long time. If they had spotted the weak signals earlier, the industry could have avoided a lot of damage. The insurance industry's awareness of the significance of emerging risks as an external problem is clearly on the rise. This is especially evident in Mr. Käslin's definition of emerging risks as "new or already known risks that have an unknown, but large claims potential in the future, and therefore have a big impact on the insurance industry".

The management of emerging risks follows the logic of a four-step value chain, each step requiring a distinct set of methodological approaches: The first step is the identification of risks through the use of internal and exter-

nal as well as formal and informal sources. Mr. Käslin particularly emphasized the value of conferences or industry-networks for the exchange of experiences among practitioners and experts. He also highlighted the establishment of specific (online) databases for systematically collecting input from employees and other stakeholders. The second step is the assessment of risks, for which process a variety of tools and techniques can be used. The third step is the evaluation of risks in order to quantify and prioritize them through the use of, for instance, a risk matrix. The final step is the implementation of strategic and operational action, the development of concrete insurance products, and the necessary accompanying risk communication efforts.

Mr. Käslin characterized the insurance industry as a 'risk-taker' that is faced by a fast-changing and newly emerging risk landscape. He suggested using a proactive approach for systematically integrating emerging risks into the companies' operational and strategic management. He also recommended that emerging risk activities be communicated to stakeholders and the establishment of a forward-looking risk-sensing culture in order to ensure an effective management of emerging risks.

5.2 Presentations by Participants

The CRN Roundtables are intended as a platform for bringing together experts from various countries and professional communities in order to share their knowledge and experiences. With this goal in mind, several participants gave a short presentation on the topic under consideration and provided their colleagues with valuable input and thought-provoking insights.

The first speaker was *Stein Henriksen* of the Norwegian Directorate for Civil Protection and Emergency Planning. He distinguished between four different types of risks with different time horizons that may affect us: risks as ‘clear and present dangers’, but without adequate information (e.g., terrorism); short-term new risks that are somehow visible on the horizon (e.g., pandemic flu); long-term known potential risks (e.g., the effects of climate change); and possibly fast-moving new, undiscovered risks (e.g., alien invaders, astronomic events). The primary obstacle for detecting emerging risks is to be found in ignorance (“we do not want to know”), which has individual, cultural, or social roots. In the social domain, for instance, ‘power games’ matter because risk issues are often politically (fiscally) inconvenient. Emerging risks tend not to fit into established bureaucratic structures, and the upcoming issues are subject to all kinds of ‘delegation attempts’. Turning to the remedies, Mr. Henriksen emphasized that it is not the methods that are crucial, but the right social conditions, such as establishing a culture of risk aversion (rather than information aversion), and that a powerful culture of co-ordination

needs to be established. He further made concrete suggestions: through a ‘subversive’ approach, crises might be ‘exploited’ in order to scare decision-makers so that they “get their fingers moderately burned”. Alternatively, a clear strategy for detecting risks, systematically built into institutional structures, enables the detection of available information (or the lack of it) and the creation of institutional as well as individual capabilities.

Anja van Dam of the Netherlands Ministry of the Interior started with a brief characterization of the current situation in the Dutch administration. She diagnosed a fragmentation of analysis along departmental responsibilities, a lack of information concerning what signals might be missed, and a preparedness that is primarily organized along best guesses on risk issues and their importance. A recently developed strategy for national safety and security is intended to tackle these shortcomings by making the risk analysis process more systematic. It is partitioned into short-, medium-, and long-term time horizons, each with different methodological approaches. Moreover, from 2007 onwards, an issue-oriented perspective will be integrated into the process.

The third speaker was *Fred Burkhalter* of the Swiss Federal Office for National Economic Supply (NES). After giving a quick overview of the mandate and the organization of the NES, he outlined the Office’s rationale for identifying and analyzing emerging risks, which is to verify the strategy, measures, and tools employed and should help to justify its policies. In terms of tools used for detecting risks, he men-

tioned the general risk analysis undertaken every four years, as well as the annual reports of the different industry sectors that indicate future trends and possible threats. By emphasizing that presenting figures and numbers to decision-makers helps justifying the Office's mission, Mr. Burkhalter provided a good example of how the use of numbers and numeric models mobilizes a certainty-connotation when dealing with uncertainty. He also acknowledged that the Office's self-evaluation showed that the outcome of risk analysis is quite disappointing. One of the main reasons is the lack of motivation and commitment of the private-sector organizations involved, for whom the problems and needs of a Federal Office are not a priority. The lack of resources, coupled with often inadequate methodological approaches, further contribute to insufficient risk analyses. Mr. Burkhalter concluded by presenting some ideas about how to enhance capabilities for thinking more creatively about the future. He suggested, for instance, setting up a 'think tank' within the NES, and recommended that the difficulties of public-private-partnerships due to inherently differing interests be accepted as fact, while permanently trying to improve them.

The last speaker was *Pierre-Alain Schieb* of the OECD International Futures Programme (IFP), who underlined the double-sided character of risks as both opportunities and threats. The IFP's objectives are to monitor future trends, to identify and explore emerging policy issues, to promote cross-directorate work with the OECD, and to provide a crossroads for establishing a public-private-dialog on long-term issues. In order to support the OECD's pathfinder role, the IFP's strategic approach is to enable long-term economic and social development. All activities, which include tools such as scoping exercises, workshops, collaborative joint ventures, or publications, are always directed towards action. At the moment, the IFP is undergoing a structural transformation, driven by the need to adapt to technological progress, the lack of analytical depth, and the 'so what?'-factor. The relevance of all activities has to be proved by producing useful 'policy recommendations'. These recommendations are not directed exclusively towards governments anymore, but also include strategic advice to private companies, and might later be opened to civil-society actors as well.

6 INTEGRATING EMERGING RISKS INTO THE DECISION-MAKING PROCESS

As in previous CRN roundtables, the question of how to integrate risk analysis into the decision-making process came up repeatedly during the day. In a concluding roundtable discussion session, participants shared their knowledge and experiences on how to transfer the results of emerging risk management to decision-makers. Two questions were debated:

6.1 Challenges

- The detection of emerging risk occurs along a four-step process: signals received – signals perceived – signals understood – signals acted upon: all these steps contain possible obstacles for an effective risk management.
- A crucial challenge in the first place is to know what the (real) risks are.
- Uncertainty tolerance, or more precisely, the lack of it, is a hindering factor.
- Risks tend to be cross-cutting, but administrations are often built and managed

6.2 Solutions

- The mindsets of risk analysts and decision-makers need to be changed by bringing in new knowledge and new experiences.
- ‘Negative experiences’, such as flawed responses to real crises, may function as ‘wake-up calls’ for decision-makers, raising

first, what are the major challenges in ensuring that decision-makers take emerging risks into account? Second, how can these challenges be addressed? Both questions were discussed simultaneously, and the following summary only provides a snapshot of the many ideas presented.

along departmental boundaries. On an institutional level, therefore, a lack of collaboration and coordination between government departments jeopardizes effective knowledge transfer.

- Politicians may have incentives for dealing with immediate dangers, but usually not for dealing with longer-term risks.
- An inadequate communication culture limits adequate ‘risk thinking’ and does not allow for forward-looking action on risk issues.

their awareness of the need for effective risk management.

- Another solution might be to listen to people with a broad variety of professional, educational, or social backgrounds.

- It is important to build, maintain, and expand networks among risk analysts for exchanging experiences and for building knowledge capacity.
- The concrete transfer of knowledge may be facilitated by the use of different channels or by the use of a 'prestigious proxy', such as an important person or a conference presentation.
- An optimal solution is to obtain a 'clear political mandate' or to be able to involve decision-makers into the risk analysis process.
- 'Risk education' may be included into the curricula of educational institutions (universities, professional colleges, training activities of public administrations, etc.).
- On the individual level, a self-reflective, honest, and transparent approach of each risk analyst may also make it easier to deal with the identified challenges.

7 CRN OUTLOOK 2007

The main purpose of the CRN Roundtables is to facilitate the international dialog on risk and crisis issues by offering a platform for sharing experiences and exchanging views, opinions, methodological approaches, innovative solutions, etc. The participants of the 3rd CRN Roundtable agreed that the topic of how to detect emerging risks was an important one, and provided the organizers with positive feedback on the preparation and realization of this event.

The successful roundtable format will be continued in 2007. In order to live up to its new name, the Crisis and Risk Network (CRN) will organize a roundtable on crisis management in November 2007. The date and concrete topic will be communicated to all partner organizations in due time.

The next CRN event will be the CRN conference from 14 to 16 June 2007 on the topic of "Management of Political Risks in Government, Business, and Society". This conference, organized by the CRN research team, will focus on questions such as the following: How can po-

litical risks be managed in an interdependent world? How can risk analysts and decision-makers plan for an uncertain future in an uncertain international environment? What strategies should they follow, and what methodological approaches may help to identify, assess, and mitigate risks?

The objective of the CRN conference is to initiate and deepen an international dialog on the challenges, opportunities, and limitations of political risk management; to bring together experts from public administrations, security institutions, private companies, and international organizations; to foster the emergence of new ideas and innovative solutions; and to establish new contacts and networks and to cultivate existing ones.

More information on the CRN conference will be available beginning of next year. The CRN research team is already looking forward to this event and will be very happy to welcome its partner organizations and other persons and institutions interested in risk issues.

8 ROUNDTABLE PROGRAM AND PARTICIPANT LIST

8.1 Agenda of the day

09:00	Arrival of participants / Coffee & Tea
09:30 – 09:45	Opening of the 3RD Zurich Roundtable
09:45 – 10:00	CRN Introduction <ul style="list-style-type: none">• New Developments: <i>Myriam Dunn</i>• Political Risk Analysis Handbook: <i>Beat Habegger</i>
10:00 – 11:30	Session I – Keynote Address <ul style="list-style-type: none">• Forseeing Risks: <i>Marjolein van Asselt, Maastricht University</i>• Questions & Answers, Discussion
11:45 – 13:15	Lunch Break Dozentenfoyer, ETH Zentrum Hauptgebäude
13:30 – 15:15	Session II – The challenge of identifying emerging risks <ul style="list-style-type: none">• Emerging Risks in the insurance industry: A view from the private sector <i>Bruno Käslin, University of St. Gallen</i>• Short presentations by participants• Questions & Answers, Discussion
15:15 – 15:45	Coffee break
15:45 – 17:00	Session III – Integrating emerging risks into the decision-making process <ul style="list-style-type: none">• Discussion in two breakout groups (ca. 40 minutes)• Reporting back and discussion
17:00 – 17:15	Conclusions / Final Remarks

8.2 List of Participants

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The 3rd Zurich Roundtable took place on 24 November 2006 at ETH Zurich. It continued the Roundtable series of the Crisis and Risk Network (CRN), a Swiss-Swedish internet and workshop initiative for international dialog on national-level security risks and vulnerabilities.

The Center for Security Studies of the ETH Zurich (Swiss Federal Institute of Technology) was founded in 1986 and specializes in the fields of international relations and security policy. The Center for Security Studies is a member of the Center for Comparative and International Studies (CIS), which is a joint initiative between the ETH Zurich and the University of Zurich that specializes in the fields of comparative politics and international relations.

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. Originally launched as a Swiss-Swedish Initiative, the partner network today consists of partners from six countries: the Federal Office for Civil Protection and Disaster Assistance (BBK), Germany; the Danish Emergency Management Agency (DEMA), Denmark; the Directorate for Civil Protection and Emergency Planning (DSB), Norway; the Federal Office for Civil Protection (FOCP) at the Swiss Federal Department of Defense, Civil Protection and Sports, Switzerland; the Federal Office for National Economic Supply (NES) at the Federal Department of Economic Affairs, Switzerland; the Ministry of Interior and Kingdom Relations, Netherlands; and the Swedish Emergency Management Agency (SEMA), Sweden.

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)